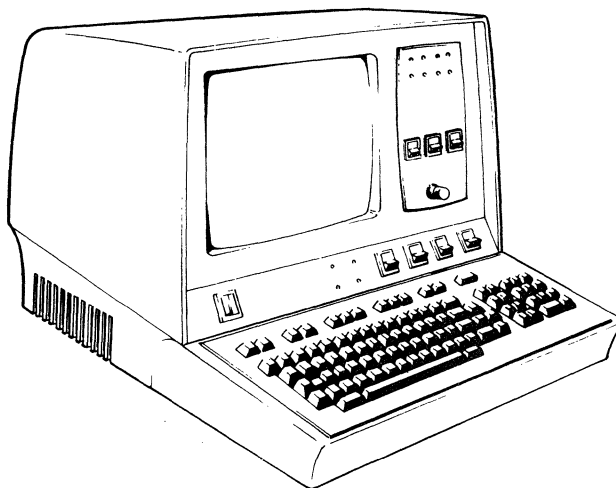




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**CONTROL DATA®**  
**751-10**  
**TERMINAL SUBSYSTEM**



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**VOLUME 1 OF 2**  
**General Description**  
**Operation**  
**Theory of Operation**  
**Diagrams**  
**Parts Data**  
**Spare Parts Data**  
**Appendix**

**HARDWARE MAINTENANCE MANUAL**



## REVISION RECORD

New features, as well as changes, deletions, and additions to information in this manual are indicated by bars in the margins or by a dot near the page number if the entire page is affected. A bar by the page number indicates pagination rather than content has changed.

REVISION	DESCRIPTION
A (07-27-76)	Final release. Reflects class A release engineering documentation. Includes ECO's: 10733, 10741, 10756, 10795, 10832, 10836, 10841, 10849, 10879, 10880, 10893, 10895, 10907, 10908, 10913, 10925, 10935, 10952, 10971, 10972, 10973, 10986, 10996, 11000, 11002, 11007, 11023, 11040, 11074, 11143, 11150, 11165, 11195, 11206, 11223, 11226, 11250, 11277, 11281, 11302, 11311, 11323, 11419, 11450, 11541, and 11567.
B (09-26-77)	Updated to include ECOs 11506, 11547, 11602, 11603, 11604, 11629, 11637, 11639, 11673, 11747, 11767, 11771, 11772, 11790, 11854, 11923, 11946, 12018, 12081, 12107, 12123, 12153, 12225, 12295, 12309, and 12351.
C (12-08-77)	Manual changed to include ECO 12492, interface adapter cabling information, and correction changes to cover and manual text.
D (06-30-78)	Interim change package added as three separate appendixes to include installation, checkout, and maintenance information for the 70-LPM Impact Printer. Volume 1 contains appendix D; Volume 2 contains E and F.
E (08-21-78)	Interim change - revises manual to incorporate Engineering Change Orders as follows; 12495, 12559, 12643, 12687, 12701, 12714, 12745, 12855, and 12827.
F (03-19-79)	Manual changed to include ECOs 11724, 12225A, 12385, 12624, 12629, 12995, and 13037. Service Bulletins incorporated are SB3664, SB3799, SB3822, and SB3935.
G (05-30-79)	Manual revised to incorporate ECO 13322 and Memorandum.
Publication No. 62962300	01989

Address comments concerning this manual to:

Control Data Corporation  
 Technical Publications Department  
 2401 North Fairview Avenue  
 St. Paul, Minnesota 55113

or use Comment Sheet in the back of this manual.

REVISION LETTERS I, O, Q AND X ARE NOT USED

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Volume 1  
v/vi





# MANUAL TO EQUIPMENT LEVEL CORRELATION

This manual reflects the equipment configurations listed below.

**EXPLANATION:** Locate the equipment type and series number, as shown on the equipment FCO log, in the list below. Immediately to the right of the series number is an FCO number. If that number and all of the numbers underneath it match all of the numbers on the equipment FCO log, then this manual accurately reflects the equipment.

EQUIPMENT TYPE	SERIES	WITH FCO'S	COMMENTS
CC614-A	01	11629	
	02	11639	
	03	—	11639 (ECO only)
	04	—	11747 (ECO only)
	05		
CC614-B	01	11629	
	02	11637	
	03	—	11639 (ECO only)
	04	—	11747 (ECO only)
	05	—	12687 (ECO only)
	06		
CC614-C	01	11629	
	02	11637	
	03	—	11639 (ECO only)
	04	—	11747 (ECO only)
	05	—	12687 (ECO only)
	06		
CC614-D	01	—	12687 (ECO only)
	02		
CC614-E	01		

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## MANUAL TO EQUIPMENT LEVEL CORRELATION (CONTD)

EQUIPMENT TYPE	SERIES	WITH FCO'S	COMMENTS
CC614-C	52	11765	CC6B1-A52 equipments were converted to the CC614-C52 equipment type per FCO 11765 (selective retrofit)
CC614-C	53	11765	CC6B1-A53 equipments were converted to the CC614-C53 equipment type per FCO 11765 (selective retrofit)
CC614-C	54	11765	CC6B1-A54 equipments were converted to the CC614-C54 equipment type per FCO 11765 (selective retrofit)
CC614-C	55	11765	CC6B1-A55 equipments were converted to the CC614-C55 equipment type per FCO 11765 (selective retrofit)
CC614-C	56	11765	CC6B1-A56 equipments were converted to the CC614-C56 equipment type per FCO 11765 (selective retrofit)
CC614-C	58	11765	CC6B1-A58 equipments were converted to the CC614-C58 equipment type per FCO 11765 (selective retrofit)
CC614-C	59	11765	CC6B1-A09 equipments were converted to the CC614-C59 equipment type per FCO 11765 (selective retrofit)
<p>Serial numbers of equipments affected and other necessary information documenting the above configuration material may be found in the pages of FCO 11765.</p>	<p><u>NOTE</u></p>		

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## MANUAL TO EQUIPMENT LEVEL CORRELATION (CONTD)

EQUIPMENT TYPE	SERIES	WITH FCO'S	COMMENTS
BE603-A	01	-	
BE603-B (unit licensed by FTZ as meeting VDE Standard 0871)	01	-	
BE603-C	01	-	
BE603-D (unit licensed by FTZ as meeting VDE Standard 0871)	01	-	
BE604-E	01		
BE604-F	01		
CL416-E	-	-	Supplied by Computer Peripherals Inc., Rochester Division. See their manuals, identified in Preface, for series and FCO information.
CL416-F	-	-	Supplied by Computer Peripherals Inc., Rochester Division. See their manuals, identified in Preface, for series and FCO information.
XA150-A	01	-	

01987-3

# MANUAL TO EQUIPMENT LEVEL CORRELATION (CONTD)

EQUIPMENT TYPE	SERIES	WITH FCO'S	COMMENTS
XA151-A	01 02 03 04	11604 11771 12302	
XA152-A	01 02	11790	
XA153-A	01	-	
XA154-A	01 02	12064	
XA170-A	01 02 03	11772 12081	
XA174-A	01 02	11889	
XA180-A	01	-	
XA195-A	01	-	

01987-3

## MANUAL TO EQUIPMENT LEVEL CORRELATION (CONTD)

EQUIPMENT TYPE	SERIES	WITH FCO'S	COMMENTS
CI114-A	01 02	12225 —	
CL114-B (unit licensed by FTZ as meeting VDE standard 0871)	01 02	12225	
CL114-C (unit licensed by FTZ as meeting VDE standard 0871)	01 02	—	12225 (ECO only)

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1. The first part of the document is a list of names and addresses.

2. The second part is a list of names and addresses.

3. The third part is a list of names and addresses.



## LIST OF EFFECTIVE PAGES

New features, as well as changes, deletions, and additions to information in this manual are indicated by bars in the margins or by a dot near the page number if the entire page is affected. A bar by the page number indicates pagination rather than content has changed.

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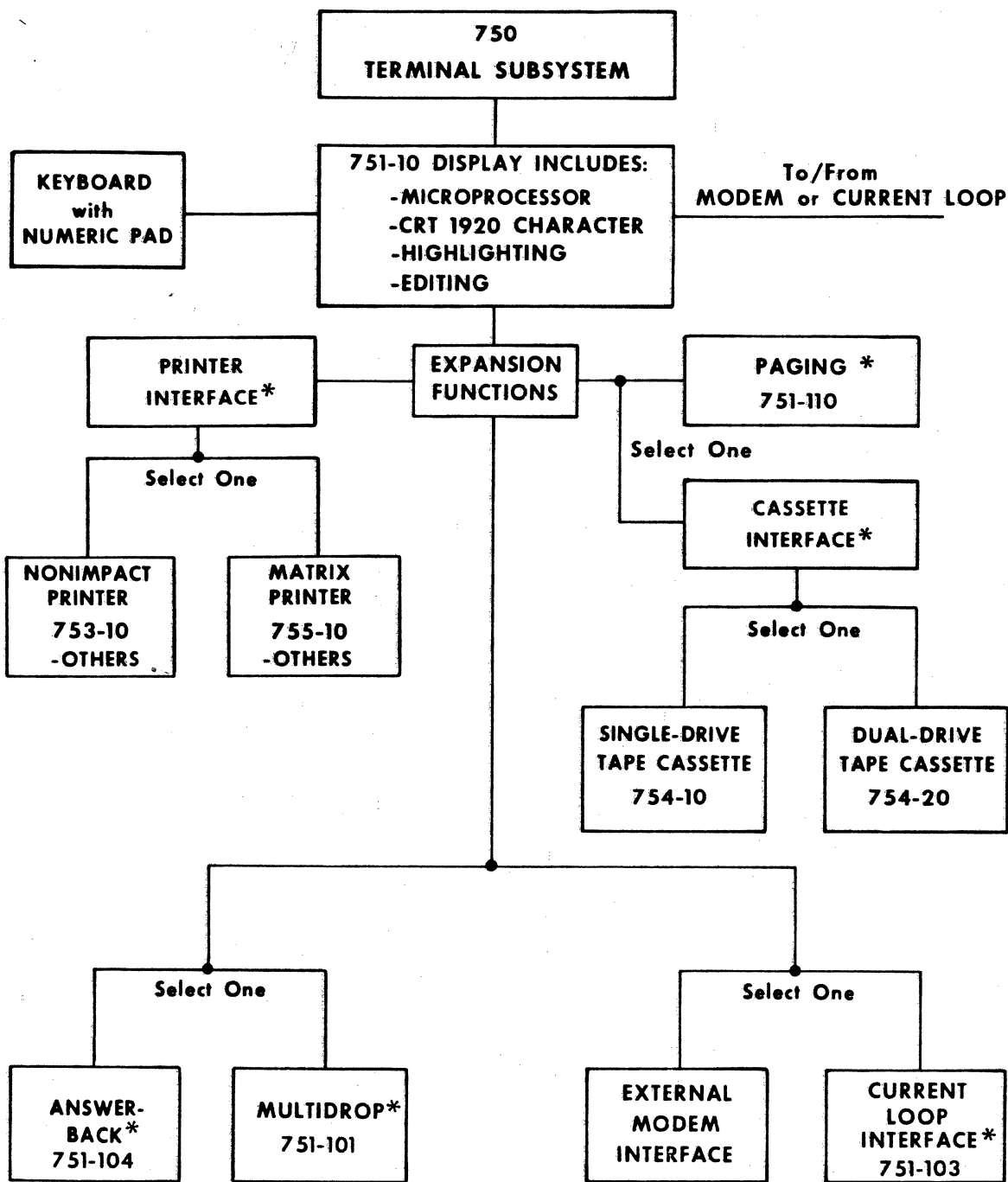
This two-volume manual assists those performing on-site maintenance of the CDC<sup>®</sup> 751-10 Terminal Subsystem (referred to in this manual as the terminal subsystem, or simply the terminal).<sup>\*</sup> The terminal is a remote data-communications subsystem that handles online data at speeds of 110 to 9600 baud over a standard CCITT V.24 or EIA RS-232-C modem (or current loop interface). The terminal operates in duplex or half-duplex communications networks. The terminal subsystem is expandable to meet various customer requirements. As such, it may exist in any one of the following configurations: 1) a stand-alone keyboard display terminal, 2) a keyboard display terminal with a peripheral character printer, 3) a keyboard display terminal with a peripheral tape cassette unit, or 4) a keyboard display terminal with both a peripheral character printer and a peripheral tape cassette unit. In addition to these various peripheral cabinet configurations, the basic keyboard display terminal cabinet will accept a variety of supplemental circuit boards, each which increases the operating and/or interface capability of the terminal. Some of the documentation for the terminal subsystem refers to any function or equipment beyond the very minimum required to have a viable terminal as an option. The term option is not meant to imply that the item referred to is a high-cost, special-effort, add-in feature. In fact, the full modularity of the architecture employed in this subsystem allows a shopping-list approach to configuring an applications-oriented subsystem. For any given subsystem, several so-called options may be included as part of the basic configuration.

This manual may be used to repair all configurations of the terminal in the field without special tools or test equipment (a voltmeter/ohmmeter is required). Volume 1 of this manual contains general descriptions, theory, diagrams, parts, and miscellaneous information including I/O definition, test patterns, data repertoires, and precautions. Volume 2 provides installation, checkout, and detailed maintenance information for the terminal subsystem. The level of maintenance herein is restricted to the card, module, and assembly level (with some modifications as deemed necessary for best overall maintenance). Certain large components, such as the cathode-ray tube and high-voltage transformer, are replaceable, but smaller circuit components on printed-circuit boards are not.

The following block diagram shows the configuration of the terminal subsystem including the various expansion functions. For additional information pertaining to equipment in the configuration, refer to the list of manuals which follows the block diagram.

---

<sup>\*</sup> Information is provided for installation, checkout, and maintenance of the 70-LPM Impact Printer. Appendix D (Vol. 1 of this manual) contains general description and specification information. Appendix E (Vol. 2) has installation-checkout and maintenance procedures for the 70-LPM Printer. Appendix F has information about printer supplies and format tape punching.



01974-5

\*DENOTES EXPANSION FUNCTION IN THE FORM OF A CIRCUIT CARD WHICH FITS INSIDE THE 751-10 CABINET. OTHER EXPANSION FUNCTIONS, IN THE FORM OF PERIPHERALS, HAVE THEIR OWN CABINET, E.G., PRINTER OR TAPE CASSETTE UNIT.

A 751-10, WHICH MAY CONTAIN INTERNAL CARD EXPANSION FUNCTIONS BUT IS WITHOUT ANY PERIPHERAL, IS DESIGNATED AS A 751-10 STAND-ALONE TERMINAL SUBSYSTEM.

## GENERAL SUBSYSTEM MANUALS

Manuals in this category describe terminals which are subsystems in a larger system. Such systems typically include a higher-level processor connected to a large number of subsystems by telephone communications lines. Subsystem manuals describe how the terminal communicates with the larger system and also how an operator uses the subsystem to perform tasks at the site and communicate information to the higher-level processor. On-site maintenance, which is the subject of this manual, is also described at the subsystem level.

Excluding this manual, the following list provides publication numbers of other subsystem manuals pertaining to the 751-10 Terminal Subsystem:

<u>Title</u>	<u>Publication Number</u>
CONTROL DATA® 751-10 Terminal Subsystem Operators Guide (describes subsystem operation of the terminal in all modes, whether performing tasks locally or communicating online with processor) . . . . .	62951400
CONTROL DATA® 751-10 Terminal Subsystem Reference Manual (describes message formats related to message handling and communications line protocol and also defines all control codes used to communicate with the subsystem) . . . . .	62962800
CONTROL DATA® 751-10 Terminal Subsystem Installation Instructions (provides information for customer installation of a terminal subsystem) . . . . .	62957200

## COMPONENT AND EQUIPMENT MANUALS

For further detail, other manuals describe the various equipment and components which may comprise a 751-10 Terminal Subsystem. These manuals contain detailed theory of operation and circuit analysis for repairing down to the discrete component level (such as may be done at a repair center). The following list identifies such maintenance manuals:

<u>Title</u>	<u>Publication Number</u>
CONTROL DATA® Basic Logic Module Subassemblies Hardware Maintenance Manual . . . . .	62961700
CONTROL DATA® Keyboard Module Hardware Maintenance Manual . . . . .	62961500

<u>Title</u>	<u>Publication Number</u>
CONTROL DATA® Bulk Power Supply Card Hardware Maintenance Manual . . . . .	62961600
CONTROL DATA® Video Display Unit Hardware Maintenance Manual . . . . .	62961800
CONTROL DATA® Random-Access Extended-Memory Option Repair Center Maintenance Manual . . . . .	62961900
CONTROL DATA® Receive-Only Printer Adapter Hardware Maintenance Manual . . . . .	62962000
CONTROL DATA® Edit Hardware Maintenance Manual . . . . .	62962400
CONTROL DATA® Tape Cassette Adapter Logic Hardware Maintenance Manual . . . . .	62950700
CONTROL DATA® Tape Cassette Mechanism Hardware Maintenance Manual . . . . .	62950800
CONTROL DATA® Power Supply Repair Center Customer Engineering Manual (Detailed theory for repairing tape cassette unit power supply) . . . . .	82186100
CONTROL DATA® Tape Cassette Cabinet Hardware Maintenance Manual (A repair center maintenance manual which describes the cabinet housing for the tape cassette, including its specifications and tape cassette logic) . . . . .	62951000
CONTROL DATA® Multidrop Option Hardware Maintenance Manual . . . . .	62962600
CONTROL DATA® Answerback Option Hardware Maintenance Manual . . . . .	62962700
CONTROL DATA® Current Loop Hardware Maintenance Manual . . . . .	62962100

<u>Title</u>	<u>Publication Number</u>
CONTROL DATA® Highlighting Hardware Maintenance Manual . . . . .	62956100
CONTROL DATA® Nonimpact Printer Hardware Maintenance Manual . . . . .	62952500
CONTROL DATA® Matrix Printer Operator Handbook . . . . .	76670900
CONTROL DATA® Matrix Printer Reference and Field Service Manual . . . . .	95390800
CDC® 70-LPM Impact Printer Reference and Field Service Manual . . . . .	95445026
CONTROL DATA® Matrix Printer Family Spare Parts List . . . . .	95366300
CDC® 70-LPM Impact Printer Parts Identification Manual . . . . .	95445025
CONTROL DATA® Matrix Printer Parts Identification Manual . . . . .	76671100

These manuals may be ordered from:

Control Data Corporation  
Literature and Distribution Services  
304 North Dale Street  
St. Paul, Minnesota 55103



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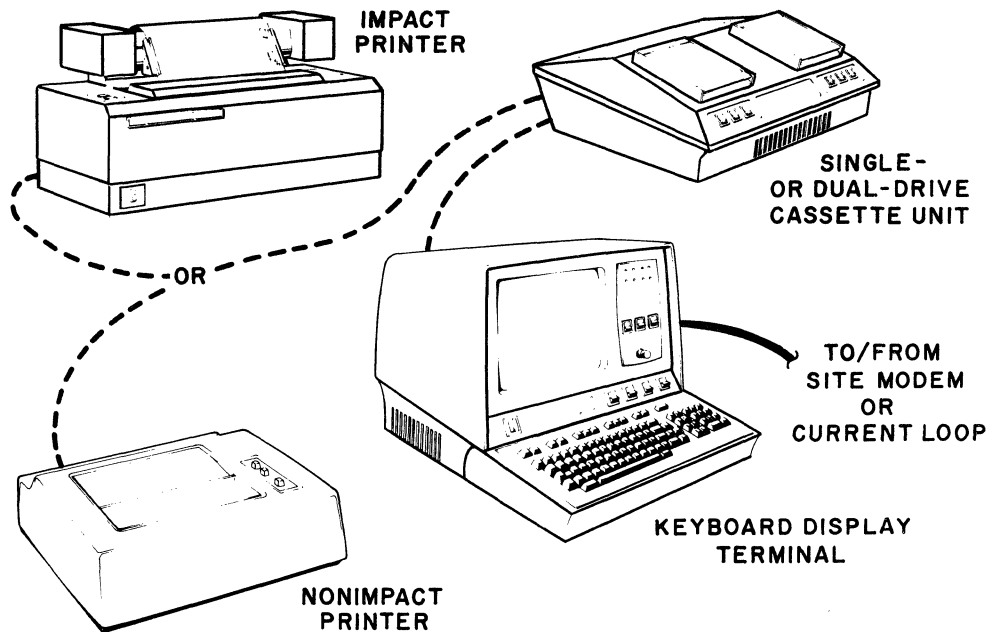
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This section identifies and defines the general composition of the terminal subsystem. This section begins with a brief description of the overall subsystem including configurations, purpose, capability, and features. The remainder of the section describes each equipment which may be used as part of the terminal subsystem. Specifications for each equipment which may be present in a subsystem appear in the last portion of this section.

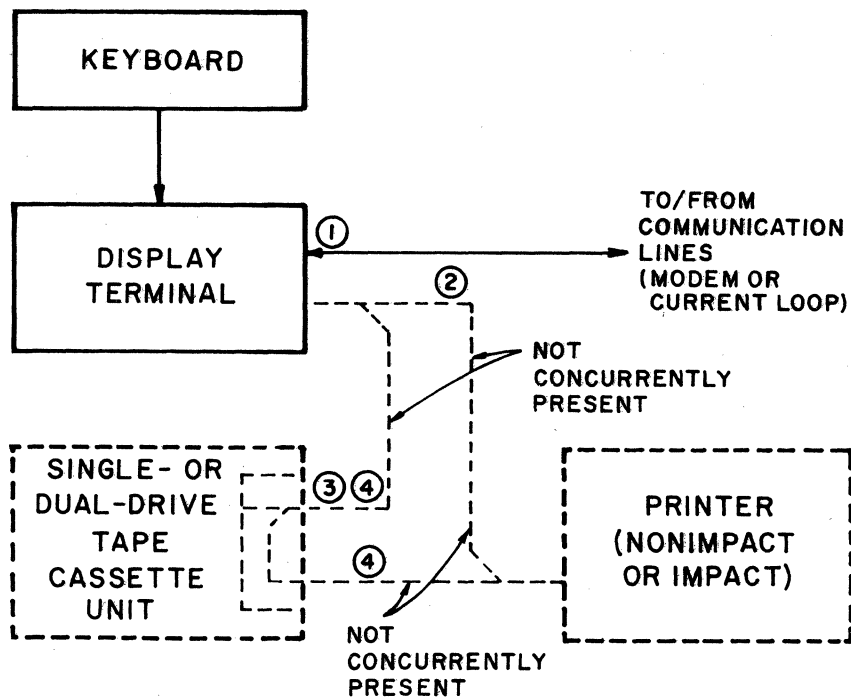
## SUBSYSTEM DEFINITION

The terminal subsystem consists of a keyboard display terminal and supporting peripheral equipment which may include either a nonimpact character printer or an impact character printer, and, in addition, either a single- or dual-drive tape cassette unit. Figure 1-1 shows the various cabinet configurations possible and figure 1-2 is a functional schematic of the configurations.



NOTE: BROKEN LINES SHOW INTER-CONNECTING CABLE PATHS.

Figure 1-1. Terminal Subsystem Cabinet Configurations



POSSIBLE TERMINAL SUBSYSTEM CONFIGURATIONS:

- ① STAND-ALONE KEYBOARD DISPLAY TERMINAL
- ② KEYBOARD DISPLAY TERMINAL WITH A PRINTER
- ③ KEYBOARD DISPLAY TERMINAL WITH A CASSETTE UNIT
- ④ KEYBOARD DISPLAY TERMINAL WITH A CASSETTE UNIT AND A PRINTER

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Figure 1-2. Terminal Subsystem Functional Schematic

The keyboard display portion will operate as either a stand-alone terminal or as the controlling entity of any of the expanded subsystems as shown in figures 1-1 and 1-2. In any of its configurations, the terminal subsystem is designed for interactive or remote-data-entry applications. Of course, the presence of either or both a printer and a tape cassette unit enhances the terminal capability. A printer produces hard copy of desired data/messages while a tape unit provides working storage for long or short messages. Printer or tape unit messages may originate from either the communications system (online) or from terminal operator composition (local).



Although physically small, the keyboard display terminal incorporates a complete processor and various levels of random-access and read-only memory for storing data and firmware control programs. The basic terminal, which has a minimum complement of internal functional modules and consists of the keyboard display cabinet only, is easily expanded by adding slide-in internal functional modules in spaces available inside the display cabinet and by connecting a desired printer and/or tape cassette unit to the PERIPHERAL connector at the back of the cabinet. The basic terminal is capable of transmitting and receiving messages to and from other terminals in duplex circuits (both full and half). It is compatible with requirements specified by other KSR (keyboard/send/receive) devices and permits data to be displayed on its crt screen and/or printed in hard copy at a printer and/or stored on cassette tape. Communication circuits are in accord with those specified by EIA (Electronic Industries Association) RS-232-C, Interface Between Data Terminal Equipment and Data Communication Equipment Employing Serial Binary Data Interchange standard (see appendix A for pin assignments for the various signals). An interface module can be included within the basic terminal to meet other communication network requirements (e.g., current loop).

The terminal subsystem is offered with the following functional features in addition to the basic configuration:

- 60-mA current loop interface
- Line and block transmission
- Edit capability (with wraparound)
- Protected data format
- External acoustic coupler
- Hardcopy (printer) control
- Tape cassette control
- Extended memory
- Multidrop (polled operation)
- Automatic answerback
- Character highlight
- Nonimpact or impact character printer
- Single- or dual-drive tape cassette unit
- Paging
- Interface adapter cabling (allows interconnection with RS-232-C compatible devices other than a modem)

A standard feature throughout the terminal (minimum to maximum configuration/functions) is the use of medium-scale to large-scale integrated circuits (MSI and LSI) of the latest technology. This includes TTL and large MOS-type chip technology. Another standard feature is the modular expansion capability of the DMA shared-bus scheme used by the processor located in the keyboard display terminal. In addition, the modular theme is employed throughout all equipments in the subsystem.

## EQUIPMENT GENERAL DESCRIPTIONS

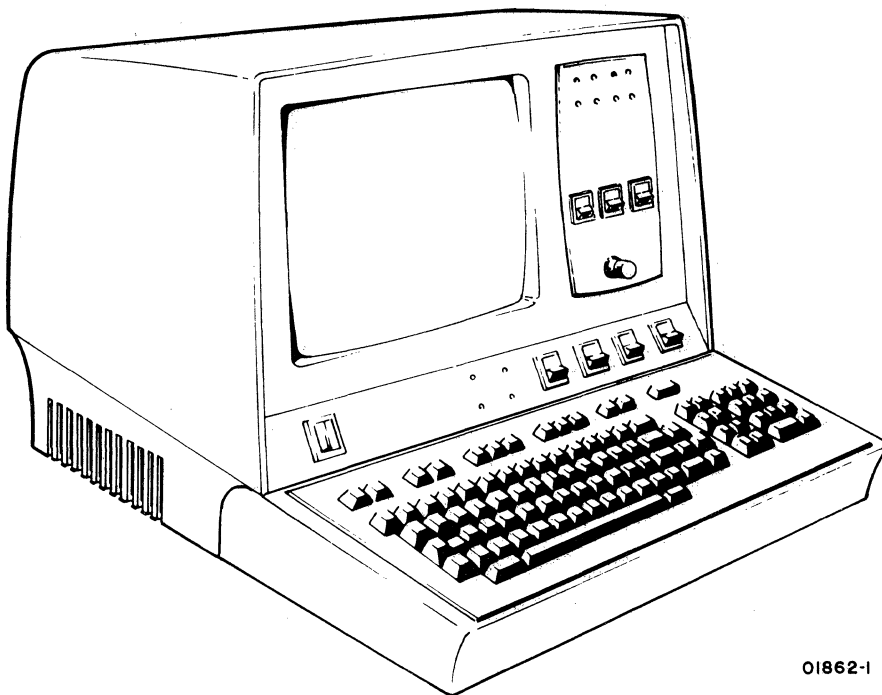
Following paragraphs describe the keyboard display terminal, identify the various additional features which may reside in it, and describe the various peripheral equipments which may be configured together with the keyboard display to form a terminal subsystem. These general equipment descriptions include:

- Keyboard display terminal
- Nonimpact character printer
- Impact character printer
- Tape cassette (single- or dual-drive) unit

### KEYBOARD DISPLAY TERMINAL

The basic keyboard display terminal (figure 1-3), without associated peripherals, includes the following major functional components:

- Detachable keyboard
- Television monitor
- Logic module
- Power supply

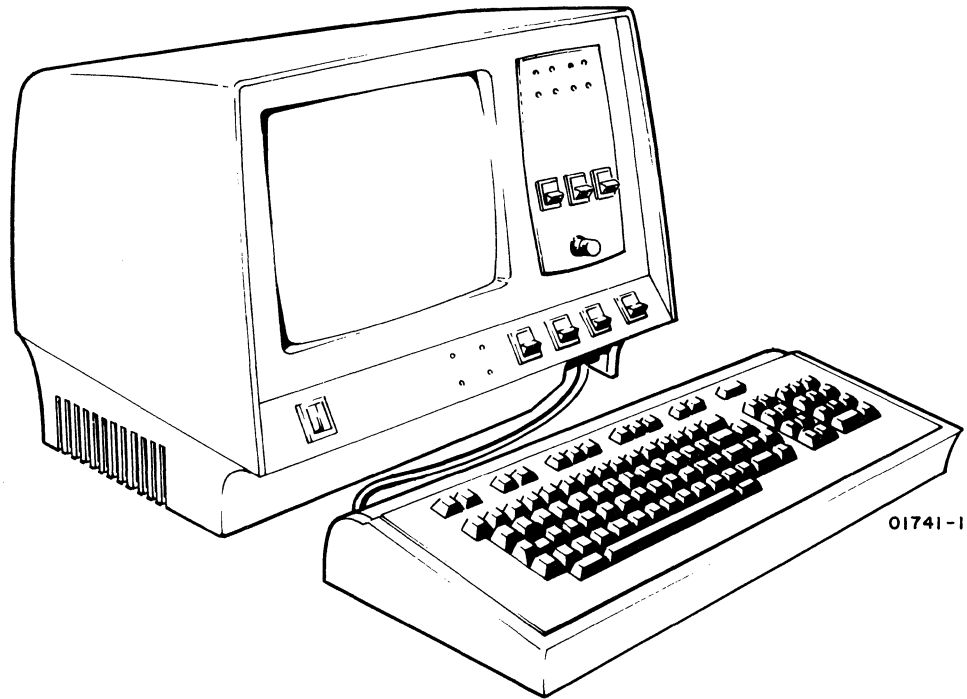


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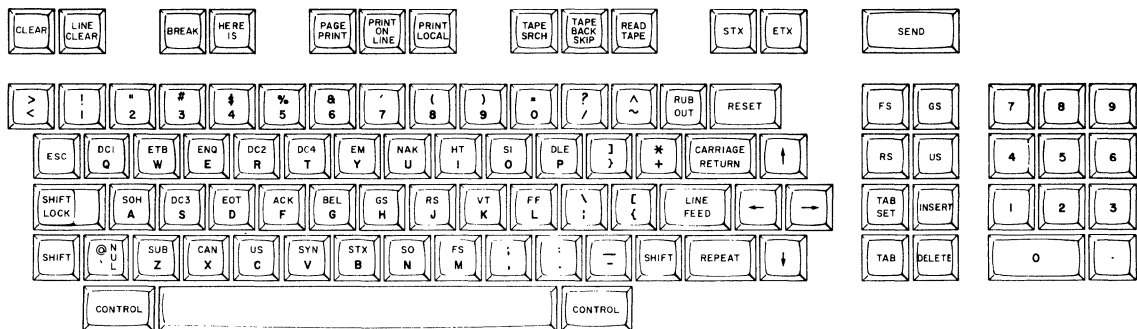
Figure 1-3. Keyboard Display Terminal

## Detachable Keyboard

The keyboard permits the operator to compose and send messages over the communication line. It also provides operator control over use of any associated peripherals. As shown in figure 1-4, the keyboard easily slides away from the basic cabinet. This feature improves operator mobility.



KEYBOARD ASSOCIATION WITH CABINET



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KEY LAYOUT

Figure 1-4. Keyboard

The keyboard generates 8-bit encoded signals to the logic module in the display cabinet when a key is pressed. (Certain control keys however, are not encoded signal generation keys, such as the PRINT keys.) The keyboard features N-key rollover which permits the 8-bit code to be generated by the key independent of the other keys. Thus, one key does not have to be released to generate another code and a code will be generated to the interface for each key pressed.

The keyboard can generate codes for lowercase as well as uppercase characters and will do so provided the 64 CHAR/96 CHAR switch is in the 96 CHAR position.

The CONTROL key can be used in conjunction with other keys to generate special character codes. As many as 128 distinct codes can be generated by the keyboard, using the SHIFT and CONTROL keys in conjunction with the other keys. Character codes can be repeated by pressing the REPEAT key in conjunction with the data key.

Appendix B identifies all the codes/characters which may be generated from the keyboard and displayed on the television monitor.

### Television Monitor

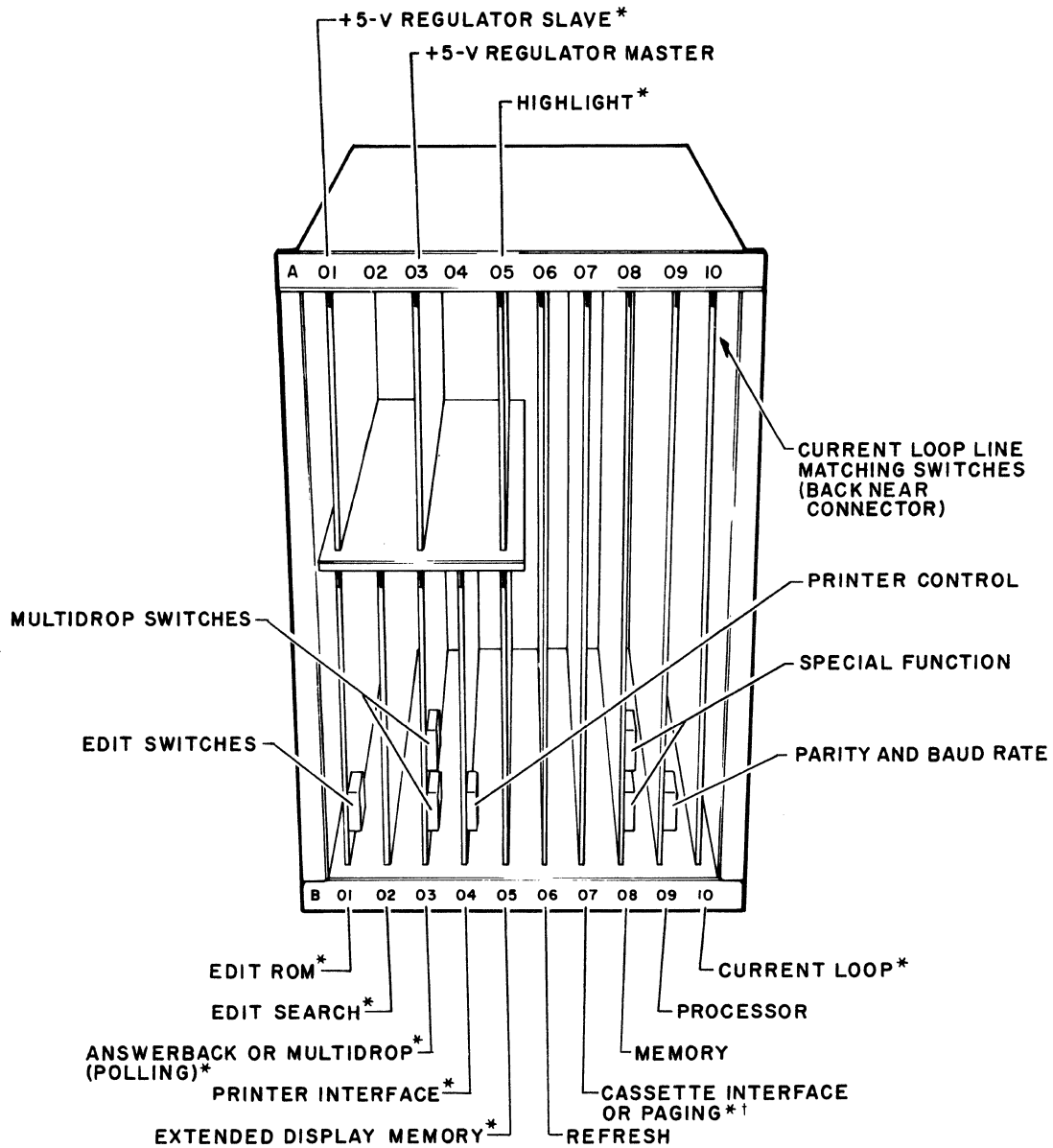
The monitor incorporates a 12-inch (diagonal) crt which is driven by video circuits mounted on a printed-circuit (PC) board. Approximately 12 000-V dc is developed from +15-V dc to drive the electron beam which illuminates the phosphor on the inside of the crt. Horizontal and vertical sweep circuits control the degree of deflection, and an incoming data signal from the logic module assembly (refresh board) causes the beam to be turned on and off sufficiently to create the dot pattern on the screen that constructs a representative character for the viewer.

The dot matrix used can display 128 different characters, including a space on the screen. Appendix B shows the displayable characters for this machine. The basic full-screen display is 12 lines of 80 characters (960 characters) in a 5-1/2- by 8-inch (13- by 20-cm) area on the screen called the raster. A terminal with extended memory (see description under Logic Module Assembly in section 4, Theory of Operation) can display 24 lines of 80 characters (1920 characters) in approximately the same raster area.

### Logic Module

The logic rack shown in figure 1-5 is structured to contain the logic circuit cards required for the basic keyboard display and the various additional features. It employs a microprocessor-based processor module which communicates with and controls all functions via a DMA, shared-bus backplane scheme. Function cards plug into this common-controlled bus. Each card is a separate module and each is

removed by releasing the holding cams (at top and/or bottom of card) and evenly pulling the card out of the rack. Inserting a card is done by the reverse and by using the holding cam(s) to carefully lever the card firmly in place in its receiving connector at the back of the logic chassis. As shown in figure 1-5, several cards are basic required functions while others are supplemental. For details of either the basic or supplemental cards, see section 4.



\* DENOTES SUPPLEMENTAL FUNCTION IN ADDITION TO THOSE REQUIRED FOR A MINIMUM, BUT OPERATIONAL, KEYBOARD DISPLAY TERMINAL. (EXTENDED DISPLAY MEMORY IS ALWAYS PRESENT FOR 24 DISPLAY LINES.)

† WHEN TAPE CASSETTE IS INSTALLED THE BATCH MODE SWITCH MUST BE DISABLED.

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Figure 1-5. Logic Module

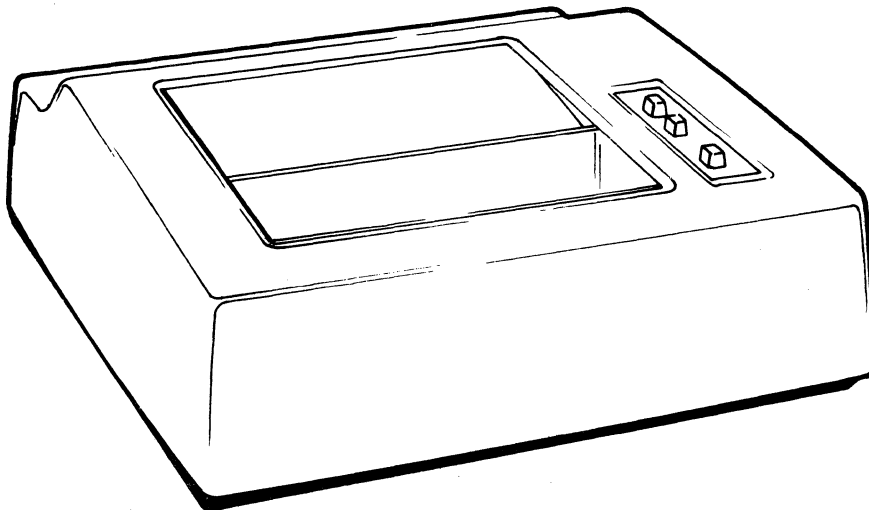
## Power Supply

The power supply consists of a bulk power supply circuit board, a transformer, and an ac entry panel. These assemblies, which are located in the bottom and back side of the display cabinet, provide five required primary voltages: -9-V dc, -12-V dc, -24-V dc, +12-V dc, and +23-V dc. From these voltages, a number of other voltages are created throughout the display terminal. Some of these other voltage circuits include:

- +5-V dc regulator (board in logic module)
- -5-V dc regulator (processor board in logic module)
- +15-V dc regulator (in television monitor)
- +5-V dc regulator on video (television monitor)

## NONIMPACT CHARACTER PRINTER

The nonimpact character printer (figure 1-6) operates as an output peripheral in conjunction with the keyboard display terminal. It prints a maximum of 30 characters per second in serial order. A full print line is 80 characters maximum. The printer has selectable parity (odd, even, or none) and checks received data according to the ODD PAR/NO/EVEN PAR switch setting. If a received code contains a parity error, the printer prints the ASCII vertical line character ( | ) for the erroneous code.



01848

Figure 1-6. Nonimpact Character Printer

The printer cabinet contains the following major functional components:

- Print mechanism
- Interface and control logic cards
- Power supply

These components appear in figure 1-7 and are briefly described in the following paragraphs.

### Print Mechanism

The print mechanism consists of the electromechanical components required to advance and print characters on single-copy, roll-type, thermal-sensitive paper. It includes a single printhead which contains a set of heat elements arranged in a 5- by 7-dot matrix. Printing is done, one character at a time, by bringing the printhead into contact with the heat-sensitive paper and quickly heating selected heat elements of the matrix. Which elements are heated depends on signals received from the signal processing (interface) logic card which recognizes each character for printing.

The dot matrix can print the 96-character subset (shown in appendix B), which includes both uppercase and lowercase characters/symbols (without descenders). Printing occurs in lines of up to 80 characters. The print mechanism will execute three device control codes which are: backspace, line feed, and carriage return (see appendix B for these ASCII-compatible device control codes).

When the printer receives the null code or any unrecognized code (for example, control codes other than BS, LF, or CR), no printer action occurs.

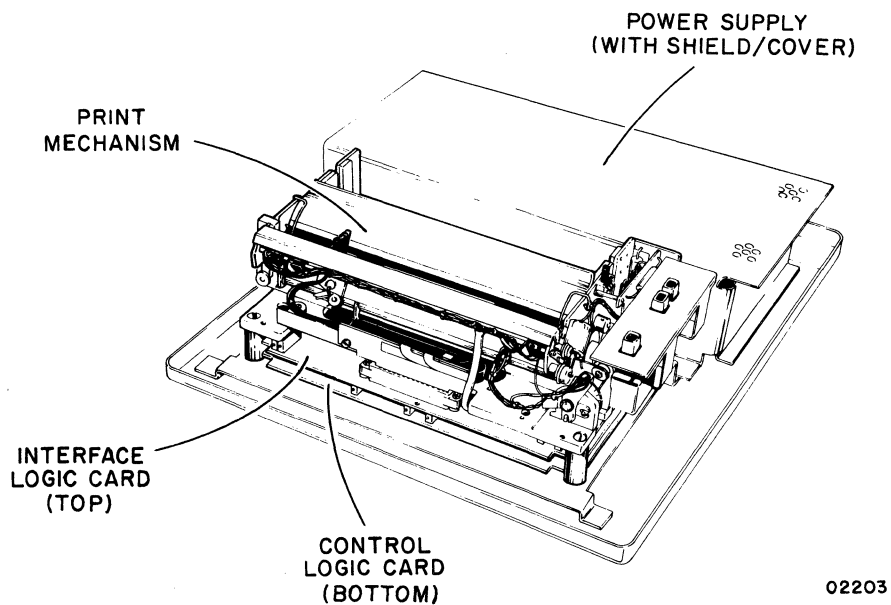


Figure 1-7. Nonimpact Printer Components

## Interface and Control Logic Cards

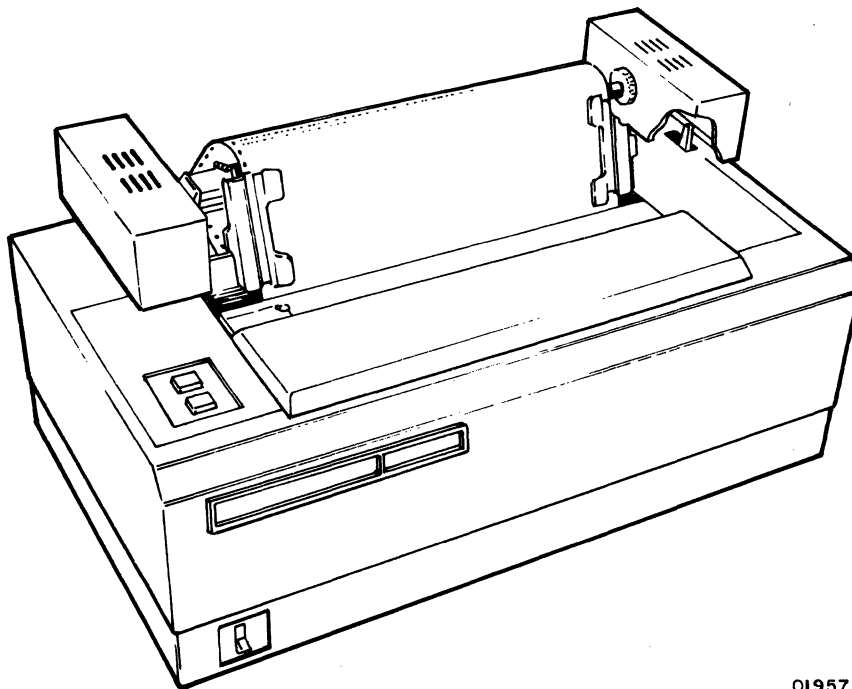
These two cards contain the logic circuits which control and direct nonimpact printer operations. The upper card does interface signal processing which includes recognizing usable control and printable codes as they are received and then issuing proper directions to the print mechanism for execution. The lower card provides timing control for all printer operations and includes those logic circuits necessary to govern the mechanical functions.

## Power Supply

The power supply, which is a single removable assembly, provides four regulated dc voltages for the printer: +5-V dc (for all logic circuits), +16-V dc (for print mechanism), +24-V dc (for print mechanism), and -24-V dc (for interface card ROM circuits). All outputs have overcurrent and overvoltage protection.

## IMPACT CHARACTER PRINTER

The impact character printer, shown in figure 1-8, operates as an output peripheral in conjunction with the keyboard display terminal. It prints characters in serial order at a nominal speed of 173 characters per second if supplied with 60-Hz input power, or a nominal speed of 180 characters per second for 50-Hz input power. A full print line is 132 characters maximum.



01957

Figure 1-8. Impact Character Printer



The printer cabinet contains the following major functional components:

- Print mechanism
- Interface and control logic chassis
- Power supply

These components appear in figure 1-9 and are briefly described in the following paragraphs.

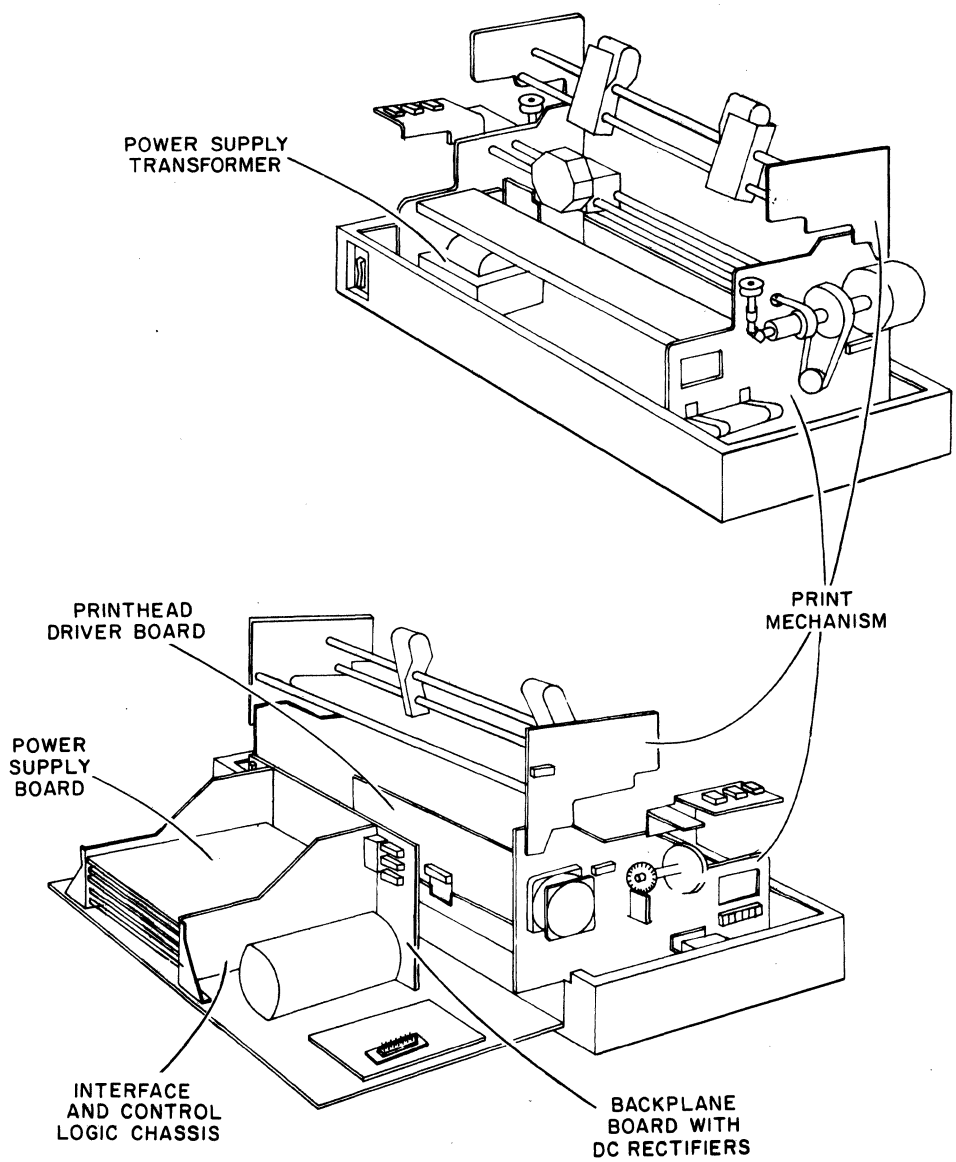
### Print Mechanism

The print mechanism consists of the electromechanical components required to advance and print characters on multiple-copy (up to five-part), standard, fanfold, continuous forms paper. It includes a single printhead which contains a set of impact pin elements arranged in a 1- by 7-dot matrix. Printing is done, one vertical column at a time, within a 7- by 7-dot character matrix, by bringing the required pins (which represent the needed dots in the present vertical column of the present character) into contact with an inked ribbon which, in turn, strikes the paper. Which pins are actuated (by electric solenoid) depends on signals received from the interface and control logic circuits which recognize each character for printing.

The dot matrix can print the 64-character subset shown in appendix B. (A 96-character subset which includes both uppercase and lowercase characters/symbols, without descenders, may be included in the printer's capability.) Printing occurs in lines of characters up to 132 characters per line. The print mechanism will execute four device control codes which are: carriage return, line feed, top of form, and vertical tabulation (see appendix B for these ASCII-compatible device control codes). For any other device control code, the printer does a character space.

### Interface and Control Logic Chassis

The logic chassis, shown in figure 1-9, contains the logic circuit cards required for the printer (with exception of the printhead driver board which resides in the print mechanism). Each card is a separate module and is removed by releasing the holding cams (at either side of card) and evenly pulling the card out of the rack. Inserting a card is done by the reverse and by using the holding cams to carefully lever the card firmly in place in its receiving connector at the back of the logic chassis. For card functions, see section 4.



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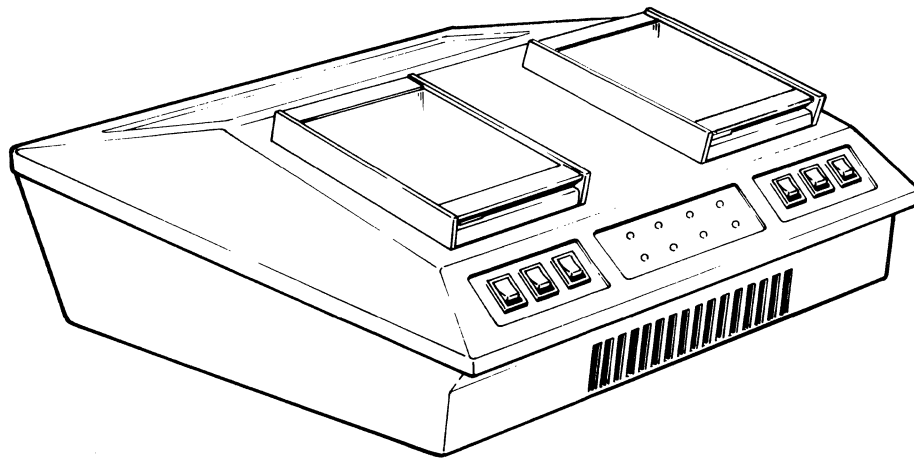
Figure 1-9. Impact Printer Components

Power Supply

The power supply in the impact printer consists of several separated elements which are: an ac input power transformer, a backplane rectifier board, and a dc regulator power supply board. The transformer converts either 60-Hz or 50-Hz ac input power to the following low level ac voltages required by internal circuits: 28, 24, 16, and 13-V ac. The backplane board contains rectifiers which supply +36-V and +12-V power. The power supply board supplies regulated +5 V for logic circuits. The power supply board also contains a -12-V rectifier/regulator circuit for controller board character ROM and interface board receiver/transmitter and drivers.

## TAPE CASSETTE UNIT

The tape cassette unit, see figure 1-10, operates as a bulk storage peripheral for the terminal subsystem. The unit stores digital data, in serial form, on an ANSI X3B1/638-compatible, Philips-type cassette cartridge. The unit may provide either one or two cassette drives. On a dual-drive unit, both drives may not operate simultaneously. Rather, they may operate alternately. Operating modes include: 1) data transfer to/from communication line — either operator or program controlled, 2) data transfer to/from keyboard display portion of subsystem — either online or offline, and 3) data transfer to a printer — if included as part of the subsystem.



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Figure 1-10. Tape Cassette Unit

The tape unit cabinet contains the following major functional components:

- Tape drive(s)
- Logic chassis
- Power supply

These components appear in figure 1-11 and are briefly described in the following paragraphs.

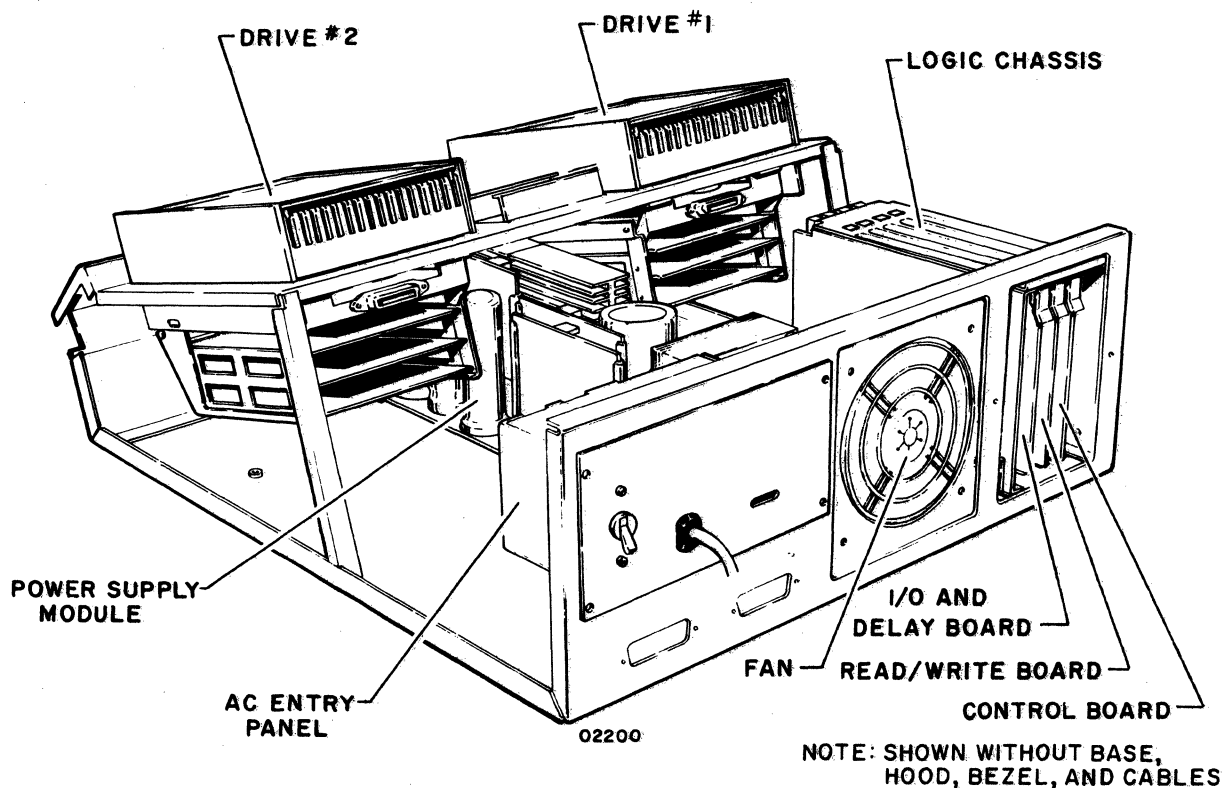


Figure 1-11. Tape Cassette Unit Components

### Tape Drive(s)

The tape cassette unit may contain either one or two tape cassette drive (transport) mechanisms. The drive is an electromechanical device capable of forward read, forward write, reverse, rewind, and idle operations. The head used is single-track, dual-gap, read-after-write which allows checking whether data just written is correct. Recording is by the Manchester principle of recording where a positive-going voltage on the write head records a 1 bit and a negative-going voltage records a 0 bit. The drive has photocell sensor circuits for tape with beginning of tape (BOT) and end of tape (EOT) holes. The drive device includes electronics which consist of a read/write amplifier circuit, motion control electronics, and capstan motor control electronics. Mechanically, the tape is moved at a controlled speed across the read/write head by solenoid-activated pinch rollers working against rotating capstans.

## Logic Chassis

The logic chassis contains three printed-circuit boards which provide the necessary logic for interfacing with the RS-232 type I/O line and for handling serial read/write data from/to either a single tape drive or two tape drives if both are present in the unit. The capability for handling two drives is always present in these circuits. Each card in the logic chassis is a separate module and is removed by releasing the holding cam and pulling the card out of the rack. Inserting a card is done by the reverse and by using the holding cam to carefully lever the card firmly in place in its receiving connector at the back of the logic chassis. For card functions, see section 4, Theory of Operation.

## Power Supply

The power supply, which is a single removable assembly, provides four regulated voltages: +5-V dc (for all logic circuits), +12-V dc (for tape drive mechanism), -12-V dc (for tape drive mechanism), and -5-V dc (not used). All outputs have current limiting protection. The +5-V dc output has overvoltage protection.

## SPECIFICATIONS

Following paragraphs define the environmental, physical, and electrical specifications for all portions of the terminal subsystem.

### SUBSYSTEM ENVIRONMENTAL SPECIFICATIONS

Each unit used in a subsystem (keyboard display, printer, or tape unit) requires the same environment as follows:

- Operating Temperature: +50° to +104°F (+10° to +40°C)
- Recommended Operating Temperature: +72°F (+22°C)
- Operating Maximum Temperature Change: 18°F (10°C) per hour
- Operating Relative Humidity: 20 to 80%
- Operating Maximum Humidity Change: 10% per hour
- Operating Altitude from Sea Level: -1000 to +9850 ft (-305 to +3000 m)
- Nonoperating Temperature: +14° to +122°F (-10° to +50°C)
- Nonoperating Maximum Temperature Change: 36°F (20°C) per hour
- Nonoperating Relative Humidity: 10 to 90%
- Nonoperating Maximum Humidity Change: Not specified
- Nonoperating Altitude from Sea Level: -1000 to +15 000 ft (-305 to +4573 m)

## KEYBOARD DISPLAY PHYSICAL AND ELECTRICAL SPECIFICATIONS

Following paragraphs define the physical and electrical specifications for the keyboard display terminal.

### Physical

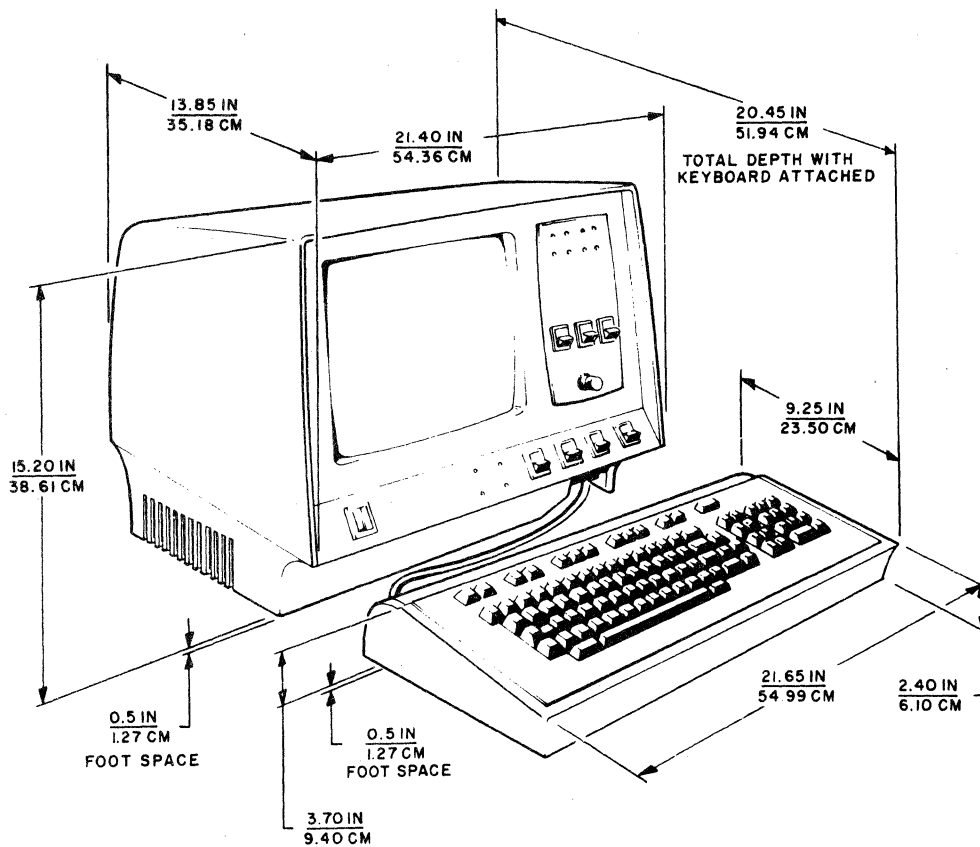
The keyboard display cabinet, with keyboard slid in place, has the following physical characteristics (see figure 1-12):

Height: 15.20 in (38.6 cm)

Width: 21.65 in (55.0 cm)

Depth (front edge of keyboard to back of cabinet): 20.45 in (52.0 cm)

Weight (of the basic cabinet): 61.5 lb (27.90 kg) approx



VALUES GIVEN ARE  
MAXIMUM DIMENSIONS

01862-3

Figure 1-12. Keyboard Display Dimensions

## Electrical

The keyboard display has the following input power requirements:

104 to 127-V ac, 59.0 to 60.6 Hz, single-phase, 1.5 A  
or  
198 to 268-V ac, 49.0 to 50.5 Hz, single-phase, 1.0 A

### NOTE

Supplemental modules added in the basic keyboard display increase the input amperage required to the cabinet to 1.8 A for 60 Hz and 1.2 A for 50 Hz.

Power use of the keyboard display ranges from 191 watts for the basic keyboard display unit (without supplemental modules) to a maximum of 300 watts for a keyboard display loaded with maximum number of maximum-current-drawing supplements. Heat dissipation for such minimum/maximum configurations is 665 Btu/hr up to 1024 Btu/hr.

In addition to the normally expected input power requirements, the keyboard display has an important internal requirement due to its add-in, supplemental function(s) capability. This internal requirement is the amount of current drawn from the internally located +5-V regulator before an additional +5-V slave regulator must be added to provide additional current capability for more supplemental-function circuit cards which may be added to the machine. Table 1-1 specifies the +5-V current required for the basic machine and gives the additional +5-V current requirement for each supplement which may be added. When the total +5-V current requirement approaches 10 amperes, as a result of adding various supplement cards, an additional +5-V regulator card must be slid into the logic module in the display cabinet (figure 1-5).

TABLE 1-1. KEYBOARD DISPLAY BASIC AND SUPPLEMENT +5-V REQUIREMENTS

MODULE	MODULE/SUPPLEMENT +5-V INTERNAL POWER REQUIRED (MAXIMUM)
Basic Logic Module (Processor, Refresh, RAM/ROM Memory, and +5-V Regulator)	5.0 A
Expanded Memory	600 mA
Highlight	500 mA
Edit (Edit ROM, Edit Search, Highlight, and Expanded Memory)	2.2 A (600 mA each edit ROM and expanded memory and 500 mA each edit search and highlight)
Answerback	350 mA
Multidrop	600 mA
Current Loop	100 mA
Printer Interface Control	600 mA
Tape Cassette Unit Interface Control	1.3 A
Paging	2.0 A

## NONIMPACT PRINTER PHYSICAL AND ELECTRICAL SPECIFICATIONS

Following paragraphs define the physical and electrical specifications for the non-impact character printer.

### Physical

The nonimpact printer has the following physical characteristics (see figure 1-13):

Height: 5.94 in (15.1 cm)  
Width: 17.62 in (44.8 cm)  
Depth: 15.94 in (40.5 cm)  
Weight: 30 lb (13.61 kg) approx

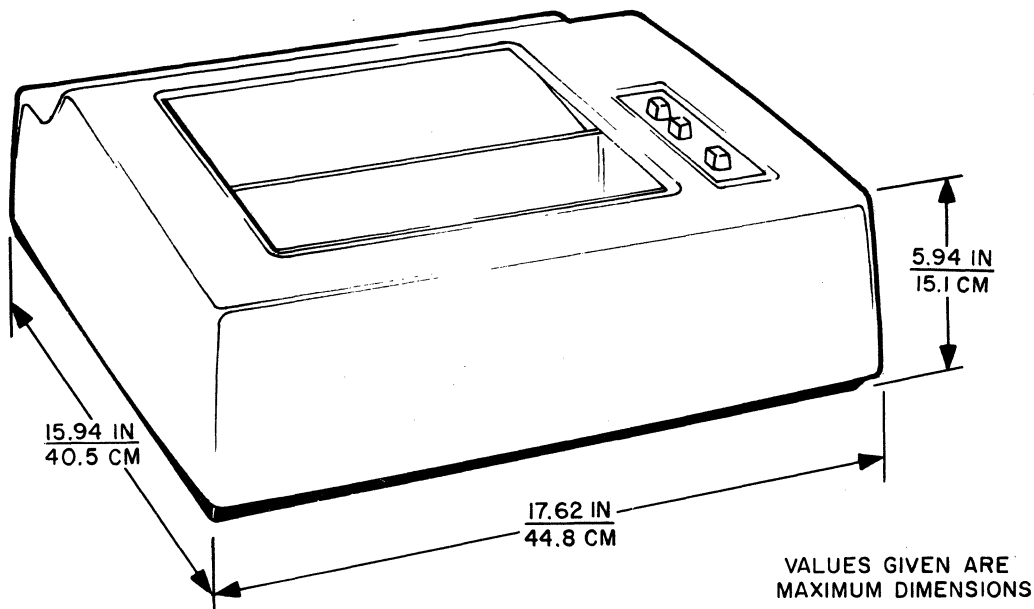


Figure 1-13. Nonimpact Printer Dimensions

### Electrical

The nonimpact printer has the following power requirements:

104 to 127-V ac, 59.0 to 60.6 Hz, single-phase, 2.0 A  
or  
198 to 242-V ac, 49.0 to 50.5 Hz, single-phase, 1.3 A  
216 to 264-V ac, 49.0 to 50.5 Hz, single-phase, 1.3 A

Power use of this printer is 100 watts operating and heat dissipation is 341 Btu/hr.



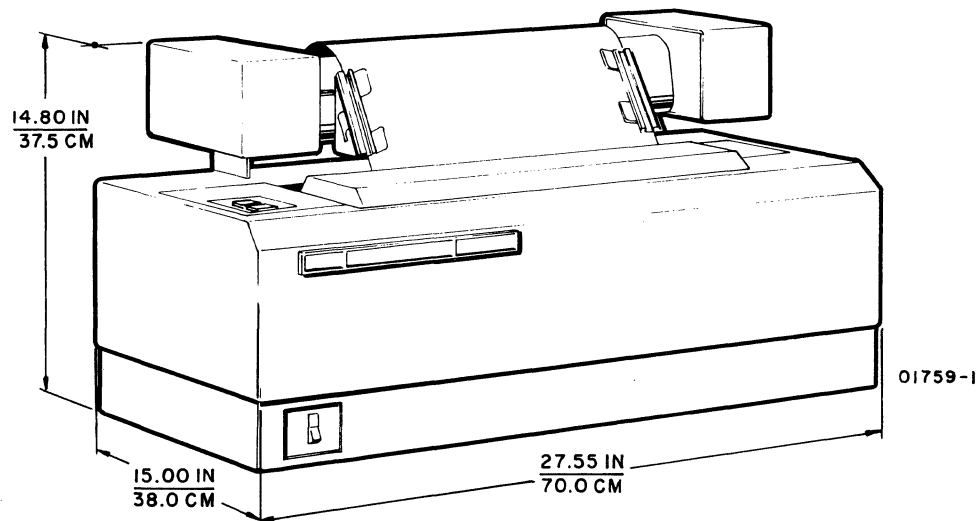
## IMPACT PRINTER PHYSICAL AND ELECTRICAL SPECIFICATIONS

Following paragraphs define the physical and electrical specifications for the impact printer.

### Physical

The impact printer has the following physical characteristics (see figure 1-14):

Height: 14.80 in (37.5 cm)  
Width: 27.55 in (70.0 cm)  
Depth: 15.00 in (38.0 cm)  
Weight: 78 lb (35 kg) approx



VALUES GIVEN ARE  
MAXIMUM DIMENSIONS

Figure 1-14. Impact Printer Dimensions

### Electrical

The impact printer has the following power requirements:

104 to 127-V ac, 59.0 to 60.6 Hz, single-phase, 4.2 A  
or  
198 to 268-V ac, 49.0 to 50.5 Hz, single-phase, 2.1 A

Power use of this printer is 250 watts operating and heat dissipation is 854 Btu/hr.

## TAPE CASSETTE UNIT PHYSICAL AND ELECTRICAL SPECIFICATIONS

Following paragraphs define the physical and electrical specifications for the tape cassette unit.

### Physical

The tape cassette unit has the following physical characteristics (see figure 1-15):

Height: 8.00 in (20.3 cm)  
Width: 19.50 in (49.5 cm)  
Depth: 20.75 in (52.7 cm)  
Weight: Single-drive unit - 35 lb (15.88 kg)  
Dual-drive unit - 40 lb (18.14 kg)

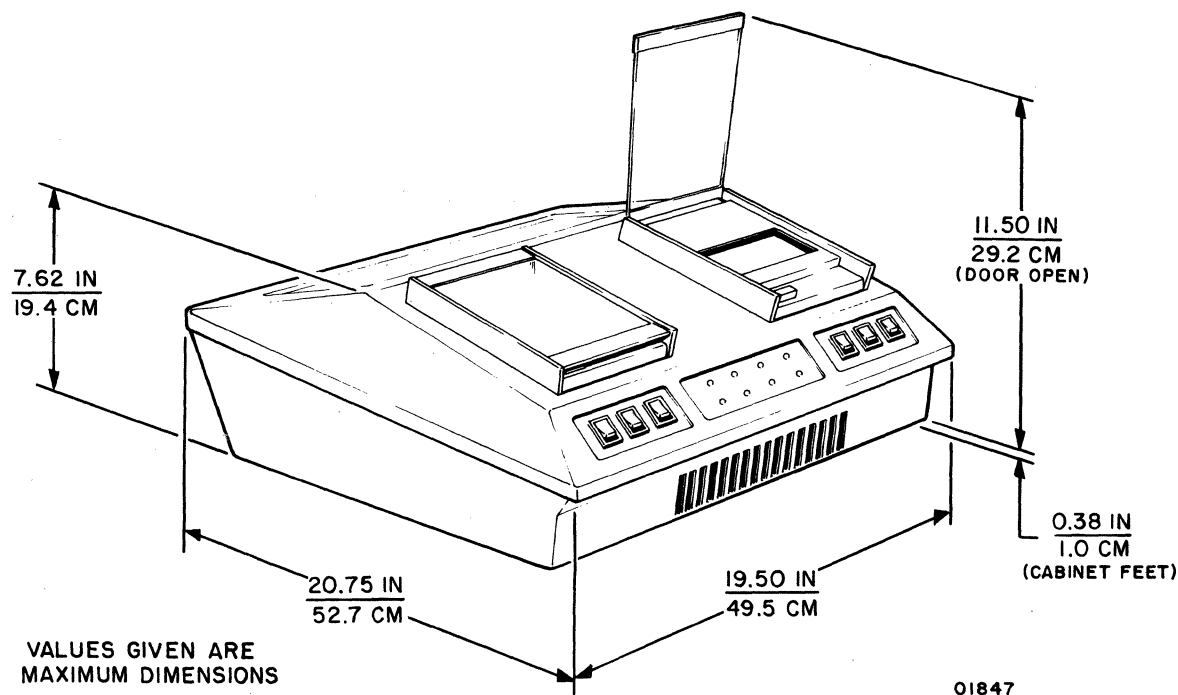


Figure 1-15. Tape Cassette Unit Dimensions

### Electrical

The tape cassette unit has the following power requirements:

104 to 127-V ac, 59.0 to 60.6 Hz, single-phase, 1.0 A  
or  
198 to 268-V ac, 49.0 to 50.5 Hz, single-phase, 0.5 A

Power use of this unit is 85 watts operating and heat dissipation is 300 Btu/hr.

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Operator procedures are discussed in detail in the operators guide. Switches and indicators are described both in the reference manual and the operators guide (see preface of this manual for publication numbers).

### NOTE

When the POWER ON/OFF switch is turned OFF, it should not be turned ON again within 90 seconds or the circuit breaker may trip.



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In order to best perform maintenance on the terminal subsystem, a basic knowledge of the subsystem operation as a whole and of each individual equipment cabinet is essential. To help meet this requirement, this section provides functional theory at three levels: the subsystem, the cabinet-level equipment, and major functional areas (modules/subassemblies) within the equipment cabinets. Since the maintenance philosophy followed in this manual is to troubleshoot and replace to the modular (sub-assembly) level (if at all possible), the theory contained in this section generally avoids discussion of circuit operations down to the IC chip level or individual component/part level (with some exceptions where it is necessary for understanding operation at the higher levels). For a detailed description of internal operation of a specific module/subassembly in the terminal subsystem, refer to the appropriate component and equipment manual listed in the preface.

#### TERMINAL SUBSYSTEM COMMUNICATIONS

The terminal subsystem, in its various configurations as defined in section 1, General Description, is a remotely-located, input/output terminal based on a keyboard display with a self-contained terminal communications processor. As such, the terminal is able to communicate with a higher-order processor over asynchronous communications lines which are compatible with EIA Standard RS-232-C (see appendix A for identification of these communication line signals). For such system interface, the terminal subsystem will connect directly to an RS-232-C compatible data set (modem), and thereby communicate over common carrier lines. An alternate interface is achieved by sliding a current loop adapter module into the DMA, shared-bus logic rack in the display cabinet. This allows communications via a battery-operated, current loop type communications line (see Current Loop Board paragraph, this section, for definitions of these types of signals).

Variations in terminal responses, as may be required by specific communication systems protocol, are achievable by sliding either an answerback or a multidrop function module into the logic rack in the display cabinet. The answerback module allows manually setting (programming) an automatic answerback message response consisting of up to 21 seven-bit words. The multidrop module adapts the terminal to operate with polling type communications systems such as the Bell System 85A1 Selective Calling Service Stations (or equivalent).

Operation of the terminal subsystem with communications systems is discussed thoroughly in the terminal subsystem reference manual (see preface for publication number). For information regarding I/O message sequencing and techniques compatible with this subsystem, see the subsystem reference manual. For any specific terminal subsystem installation, it is recommended to consult with operating and supervisory personnel at the site regarding the protocol required to communicate with the particular communications system.

## CABINET-LEVEL OPERATING THEORY

In addition to the thorough general description in section 1 of the various cabinet-level equipments which may be interconnected to form a terminal subsystem, following paragraphs provide brief functional theory information. The equipment cabinets are, of course, the same as identified in section 1; e.g., keyboard display terminal, nonimpact character printer, impact printer, and tape cassette unit (single- or dual-drive).

### KEYBOARD DISPLAY TERMINAL

The keyboard display terminal houses a powerful microprocessor-based terminal processor which is the control center for the entire subsystem. The processor is an 8-bit parallel type with an instruction repertoire of nearly 100 instructions. The processor uses terminal control firmware which may be stored in various ROM modules located along a DMA shared bus. Besides a basic keyboard display control firmware program stored in a basic memory module required for any viable terminal operations, expansion function modules (in the form of cards) may be added which carry their own firmware control programs in ROM. The basic control firmware program looks for the presence of such expansion modules in a predetermined scheme. When it comes across one that is present, it jumps out to use/perform the appropriate expansion instructions contained in the added functional module. In addition to ROM modules, the processor uses RAM which may also be located along the bus. Basically, required RAM contains 1 K address locations and is for screen refresh storage of 12 lines of 80 characters per line (960 characters). This leaves 64 locations for the processor to use as external temporary storage (stack) of 8-bit bytes. Adding the extended memory function on the bus adds 1 K more RAM which provides screen refresh storage for 12 more lines of 80 characters to make a total of 24 lines of 80 characters possible on the screen (1920 characters). It also provides 64 additional temporary storage addresses for processor use. Table 4-1 defines the predetermined addressing scheme for types of memory modules which may be installed along the bus.

TABLE 4-1. LOGIC MODULE MEMORY ADDRESSING STRUCTURE

ADDRESS (HEXADECIMAL)	FUNCTIONAL MEMORY AREA BEING ADDRESSED*
0000 — 0FFF	Processing control ROM (4K).
2000 — 27FF	Display RAM (2K; includes 1K for basic 960-character display and 1K optional extended for additional 960 characters for 1920-character display. Also provides 64 addresses in each 1K for use as temporary storage by the processor).
2800 — 2FFF	Search RAM for edit function (2K, 3-bit words).
3000 — 33FF	Printer ROM (1K).
3400 — 3414	Diode matrix ROM (21 words) for answerback function.
3800 — 3BFF	Multidrop ROM (1K).
3C00 — 3FFF	Multidrop RAM (1K).
4000 — 43FF	Cassette RAM (1K).
4400 — 47FF	Cassette RAM (1K).

\* One 8-bit word is at each address unless otherwise specified.

Normally the processor has control of the shared bus. However, other modules present on the bus may request control of the bus from the processor for DMA operations or I/O control. The processor provides overall program control for other modules using the bus. The shared bus includes an 8-bit data bus, a 16-bit address bus, and a variety of interrupt, status, and control lines, all of which are used by the processor to direct overall terminal operations via the circuits located in the display logic module. For details of the various functional modules in the keyboard display terminal, see the modular level descriptions following later in this section. For details of the shared-bus scheme, including the processor instruction repertoire and cycles, refer to the component and equipment manual on the basic logic module subassemblies (see preface for publication number).

The keyboard display terminal has switches which control/set the online/offline condition of the subsystem with respect to the communications system. Switches on the keyboard display also control the online/offline condition of the peripheral printer which may be present. Furthermore, switch positions control how much data may be transmitted to the system at a time: character-by-character consistent with teletype conventions (either half or full duplex), line-by-line, or a block up to and including the total display memory size of 960 or 1920 characters. In addition, various switches operate in conjunction with expanded function boards in the display logic rack to allow editing, highlighting, and protected field keyboard display operations. For switch operation, see the subsystem operators guide (see preface for publication number). Also see expanded function descriptions in Logic Module Assembly paragraphs later in this section.

## NONIMPACT CHARACTER PRINTER

The nonimpact printer operates as a hardcopy peripheral to the keyboard display terminal. It does so through the printer interface control board installed on the processor-controlled shared bus in the display logic module. This printer operates exclusively as a slave receive-only device. For printing to occur, it must receive all its device control and print character codes from the terminal. Such information may originate from either the communications system, the keyboard, or the tape cassette unit (if present). The particular data source depends on the presence/absence of the tape cassette peripheral and the condition of various switches/controls on/in the keyboard display terminal. The operators guide and reference manual for the terminal subsystem both contain detailed descriptions of data routing to the printer depending on the various control settings possible (see preface for publication numbers). For details of the functional modules within the nonimpact printer, see the modular level descriptions following later in this section.

## IMPACT CHARACTER PRINTER

The impact character printer operates as a slave hardcopy device in the same manner as the nonimpact printer does (see preceding description). It will, however, accept data over the printer interface at a faster rate than the nonimpact printer.

## TAPE CASSETTE UNIT

The tape cassette unit operates as a slave mass storage device in the terminal subsystem. As such it will record or play back records of information upon command from the display keyboard terminal. Recording information may originate from the communications system or from the keyboard display. Playback data may go to either: the display and the communications system; the display, communications system, and printer; the display and printer; or the display only. Which path(s) taken depend on the peripherals present in the subsystem and the condition of various switches/controls on/in the display keyboard terminal. The operators guide for the terminal subsystem and the reference manual both contain detailed descriptions of data routing depending on the various control settings (see preface for publication numbers). Also see the modular level descriptions for the tape cassette later on in this section.

## MODULAR-LEVEL FUNCTIONAL THEORY

The following paragraphs define and functionally describe the replaceable modules and subassemblies within the cabinets of the keyboard display terminal, nonimpact printer, impact printer, and tape cassette unit. Each of these four is a device which may be a part of the terminal subsystem installation.



## KEYBOARD DISPLAY TERMINAL

The keyboard display terminal is the controlling entity of a terminal subsystem. It consists of four major functional subassemblies, some containing a large number of modules within them. These major subassemblies are:

- Detachable keyboard
- Video monitor
- Logic module assembly
- Power supply

The following paragraphs describe the modules and parts of these major subassemblies. At the end of this discussion, important minor components are defined.

### Detachable Keyboard

The detachable alphanumeric keyboard portion of the keyboard display terminal is the main operator control device in a terminal subsystem. It allows for operator entry of specific character/symbol and control codes which are subsequently displayed or transmitted depending on the settings of the FULL DUPLEX/HALF DUPLEX and CHARACTER/LINE/BLOCK switches. Display terminal and peripheral (e.g., printer and tape cassette unit) function control keys are also present on the keyboard. Operation of these function keys depends on the presence or absence of the peripherals and on the specific operating mode of the terminal. All of the various keys, functions, and operating modes are thoroughly described in the terminal subsystem operators guide and reference manual (see preface). Refer to those publications to learn all the possible variations/uses of the keys provided when used in conjunction with the various mode/function switches available in the terminal.

Pressing any alphanumeric character/symbol or control key generates an 8-bit binary code which transfers to the control logic circuits in the display logic module. The keyboard employs what is termed N-key rollover, which means that a code transfers as each key is actuated regardless of the state of the other keys. The keyboard generates codes at three levels. The first level consists of the codes generated by pressing any code-producing key singly by itself. These codes are termed lowercase. The second level involves pressing any code-producing key while a SHIFT key is active. This produces uppercase codes. The third level is achieved in either of two ways. One is by pressing any code-producing key while CONTROL key is active. The other is by pressing any code-producing key while both SHIFT and CONTROL keys are active.

All these variations available allow generating up to 96 character/symbol codes and 32 control codes. These are the ASCII X3.4-1968 compatible character set codes from 040<sub>g</sub> through 177<sub>g</sub> and the ANSI X3.32-1973 compatible control set codes from 000<sub>g</sub> through 037<sub>g</sub> (see appendix B). Note, however, that the display terminal has

an external switch (64 CHAR/96 CHAR switch) which disables codes 140g through 176g. If this switch is in the 64 CHAR position, the display logic circuits interpret all level 1 codes (normally lowercase) generated by the keyboard as uppercase codes.

As shown in figure 4-1, the keyboard consists of a replaceable keyboard subassembly, a short detachable cable (approximately 2 feet/61 cm long outside the housing), and a two-piece molded housing.

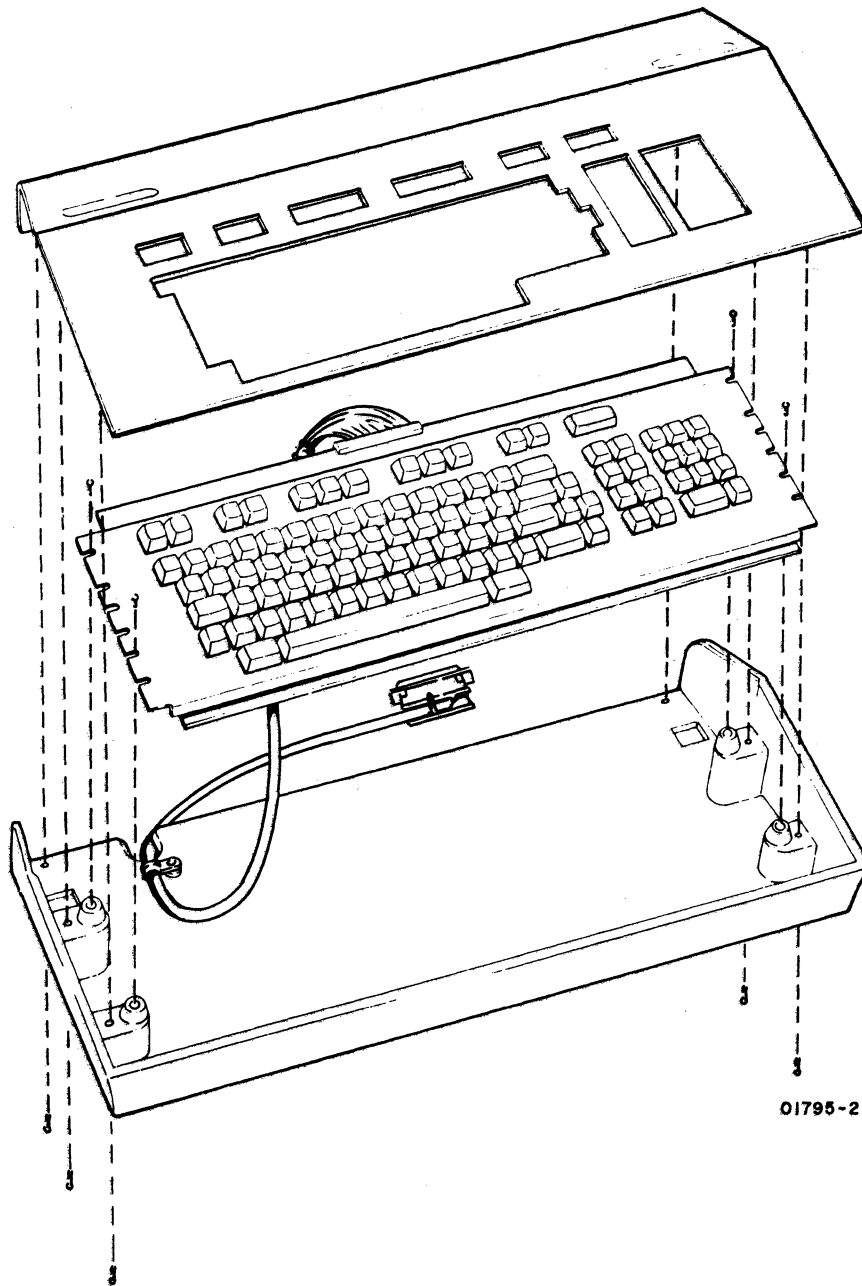


Figure 4-1. Detachable Keyboard (Exploded View)

## Video Monitor

The primary purpose of the monitor is to create a visual display showing graphically information transmitted electrically. It operates similarly to television sets except for certain refinements. The video signal is created at the refresh board in the logic module and is locked to a display line pattern before it enters the video module; therefore, in the display terminal the "picture" does not "roll" on the screen vertically as it does occasionally on a television screen. In television, this roll is caused by an out-of-sync condition of the vertical oscillator with the incoming video signal. In the display terminal, the vertical oscillator was eliminated. A screw adjustment (potentiometer) does exist on refresh board 06 in the logic module to fine-tune the circuits to eliminate any possible "blooming" (displayed image expands and contracts in a pulsating manner).

Figure 4-2 shows the video monitor components.

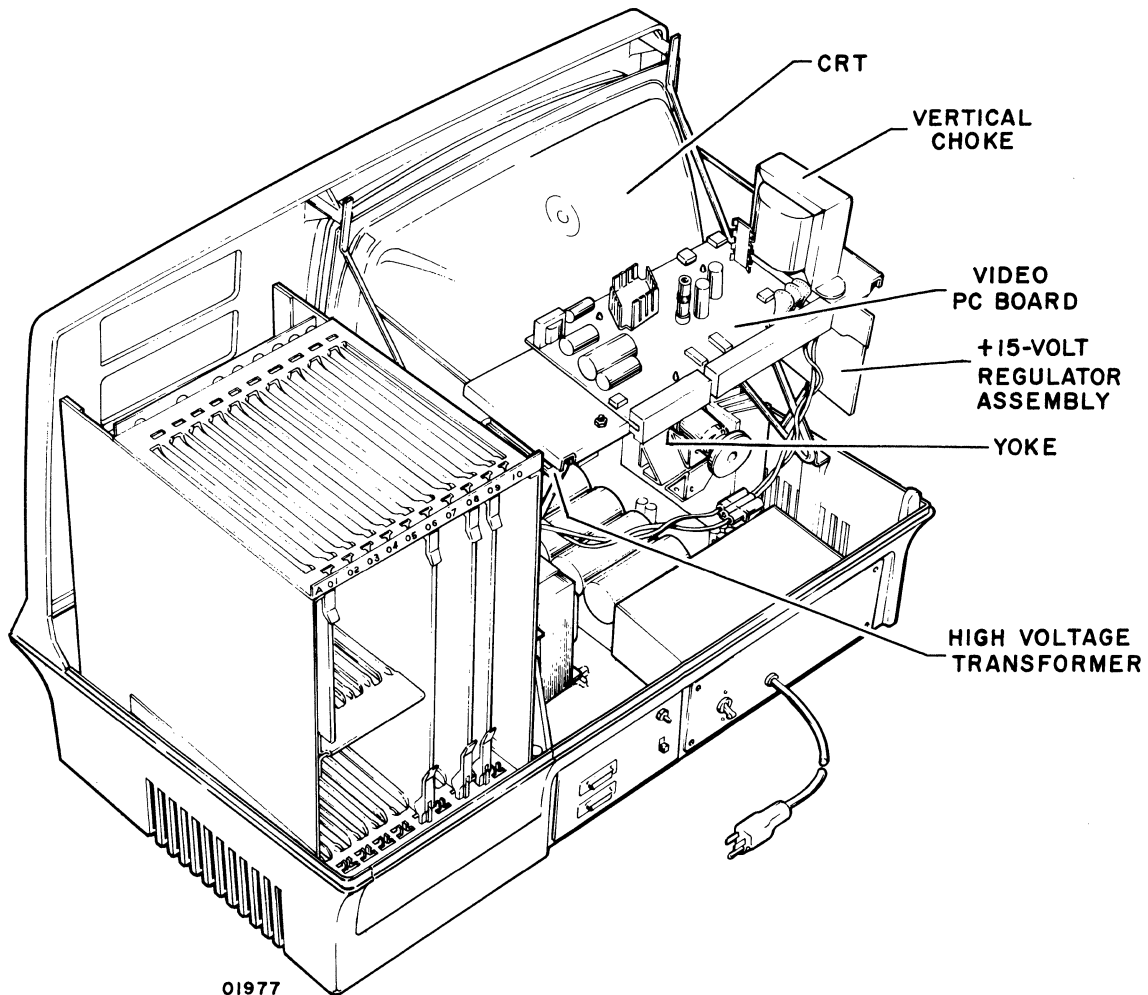


Figure 4-2. Video Monitor Components

These components are:

- Cathode-ray tube (crt)
- High-voltage transformer
- Video printed-circuit board
- Vertical choke
- Yoke assembly
- +15-V regulator assembly

The following paragraphs describe these parts of the video monitor.

### Cathode-Ray Tube (CRT)

The crt is a standard black and white type television tube which measures approximately 12 inches (30.5 cm) diagonally. It has a standard P4 phosphor coating inside the tube face for illumination by the electron beam.

### High-Voltage Transformer

The high-voltage transformer produces the high voltage required by the crt anode (approximately 12 000-V dc) and the three high voltages used on the video printed-circuit board (+465-V dc, -190-V dc, and +45-V dc). It does this by using the horizontal output from the video printed-circuit board to power its primary.

### Video Printed-Circuit Board

The video printed-circuit board contains the control circuits for driving and controlling the electron beam in the crt. These circuits include those for the horizontal and vertical sync and their amplifiers. They also include the video amplifier circuits for blanking/unblanking the electron beam.

The horizontal and vertical sections differ from that of a normal TV set in that they do not use horizontal or vertical oscillators. Therefore, if the horizontal sync is not present from the refresh board in the logic module, no raster will appear on the screen. The output stage of the horizontal circuits provides the yoke with the proper horizontal scanning current. By powering the primary side of the high-voltage transformer, it also develops the necessary crt support voltages (12 to 13 kV high voltage, 465 V G2, and -190 V brightness/focus), and provides B+ (+45 V) for the video amplifier through use of the flyback power supply.

In addition, this board contains a +5-V dc regulator which uses the +15-V dc from the +15-V dc regulator assembly to generate +5-V dc for use by logic circuits on the video board. The board contains several adjustments (potentiometers) for creating clear and distinct characters on the crt screen. These adjustments include contrast, width, height, focus, intensity range, and vertical linearity. A Brightness potentiometer is located on the display cabinet front panel to vary the intensity of the raster.

## Vertical Choke

The vertical choke coil helps ensure proper vertical electron beam movement down the face of the crt by suppressing unwanted oscillations in the vertical yoke coil.

## Yoke Assembly

The yoke assembly produces horizontal and vertical deflection of the electron beam while the beam is on its way to the face of the crt. The horizontal coil in the yoke is driven by the horizontal amplifier output from the video printed-circuit board and the vertical coil is driven from the vertical amplifier on the same board. The yoke has adjustment rings (centering tabs) for centering the raster on the face of the crt, and a copper sleeve inside the yoke to provide for horizontal linearity adjustment.

## +15-Volt Regulator Assembly

The circuits of the +15-volt regulator assembly maintain a constant +15-V dc  $\pm 5\%$  supply to the video printed-circuit board. The regulator assembly requires a +23-V dc  $\pm 7\%$  dc input from the bulk power supply board (discussed later in this section) to create the +15-V dc output.

## Logic Module Assembly

All keyboard display terminal logic functions (basic and supplemental) are contained in the logic module card rack. The basic logic required to operate a keyboard display terminal includes a processor board (slot 09), a memory board (08), a refresh board (06), and a +5-V dc regulator (A03). Other slots in the card rack are reserved for other supplemental functions/features (see figure 4-3).

## Processor Board

The processor board contains a microprocessor with an instruction repertoire of nearly 100 instructions. It also contains the logic necessary to support the functions of the microprocessor and to generate a regulated -5-V dc supply required on the board.

The microprocessor is an 8-bit-per-byte parallel type which uses off-board program-store (ROM) and operating memory (RAM). These are provided by the memory board discussed next. The processor adapts to the memory access time of these associated ROM and RAM circuits. It communicates with the higher-order processor via an on-board RS-232-C type interface. Other off-board, higher-order, interface modules may be added in the logic card rack to adapt this interface to other types of communication systems interfaces. Communications with lower-order devices, equipments, etc., are via the shared data/control bus and through appropriate off-board interface modules (located in the logic card rack). Once the processor

circuits are initiated to perform an operation, they are the controlling entity for such sequences, communications, calculations, etc., as are necessary to complete the particular operation. As such, they: 1) secure any needed information from the associated ROM program-store memory and execute such information, 2) use associated operating RAM as required (for temporary storage), and 3) request/accept/transmit I/O communications associated with the operation. The processor board has on-board operating controls/switches as follows: one Mark/Space Parity rocker switch, four High-Range Baud Rate switches, and four Low-Range Baud Rate switches. These baud rate switches allow selecting a high range and a low range I/O communication system rate. One of these two rates is in turn selectable by the HIGH RATE/300/LOW RATE switch on the display cabinet front panel. Baud rate range for both high and low is from 110 to 9600 baud. The use of the on-board switches is described in detail in the subsystem reference manual (see preface).

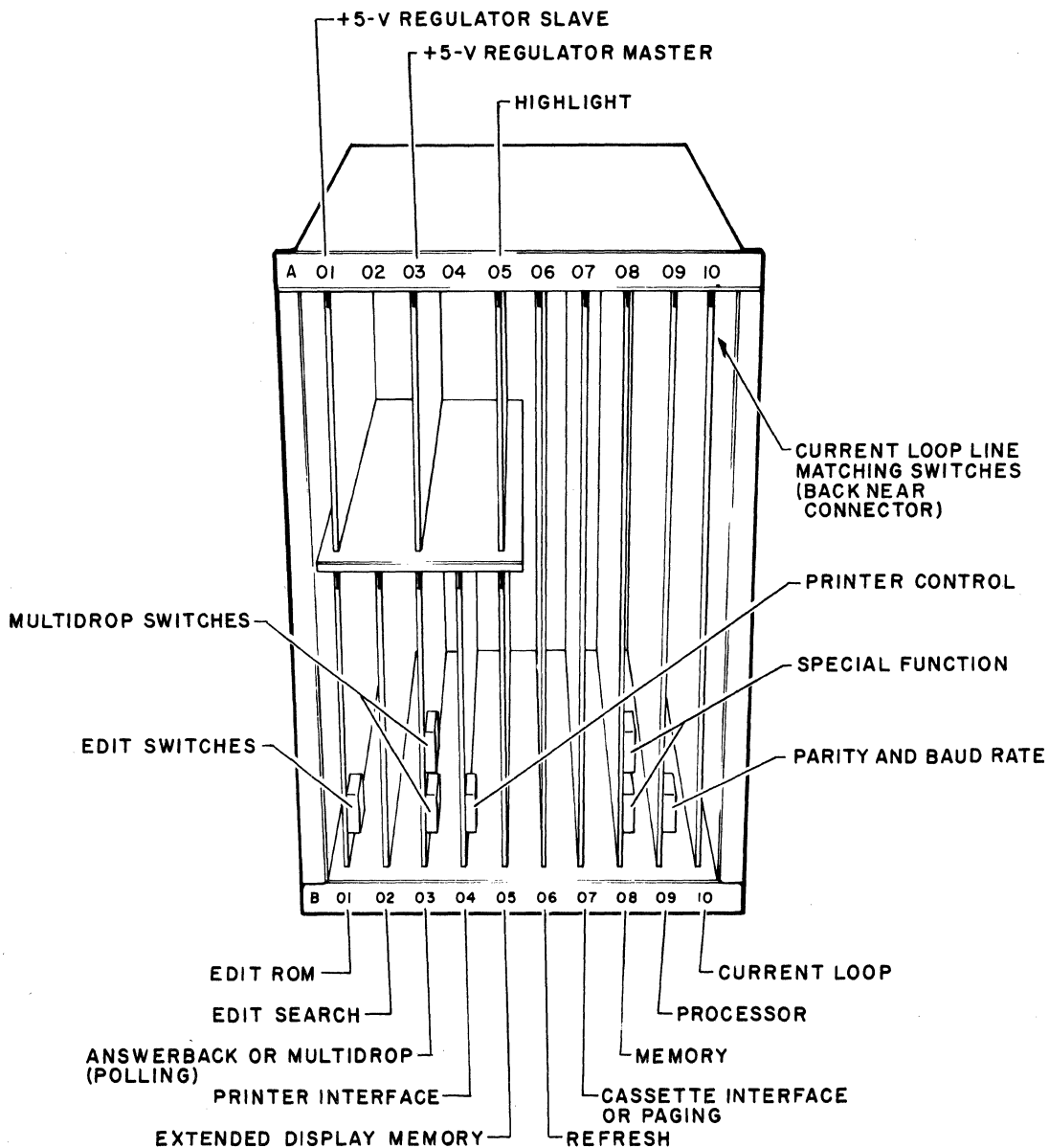


Figure 4-3. Logic Module Assembly/Card Rack

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## Memory Board

The memory board contains the read/write memory (RAM) required to hold incoming data for display on the crt. As many as 1028<sub>10</sub> 8-bit character codes can be stored for display, allowing 12 lines of characters (80 characters per line) to be displayed continually on the basic machine. This can be doubled by adding the extended memory board for a 24-line display (80 characters per line).

The memory board also contains read-only memory (ROM). ROM holds the control program which controls operation of the terminal functions. In this machine, the ROM program is electrically burned in and is called firmware.

## Refresh Board

The refresh board contains the logic necessary to convert character codes received from random-access memory (RAM) into electrical pulses to create the correct dot pattern on the display for the various characters. Logic circuits lock the video signals into sync with the predefined display-line pattern. The board contains a variable resistor for frequency synchronization adjustment.\*

## +5-V dc Regulator Board (Master or Slave)

The +5-V dc regulator board maintains the logic voltage level required by most of the logic. It also provides the current which trips the circuit breaker when an overvoltage condition is detected.

Indicators on the board, when illuminated, indicate that various voltages are present. If the red LED indicator is on, current is in the +5-V circuits. If the yellow LED indicator is on, current is in the +23-V dc circuits. If the green LED indicator is on, current is in the -24-V dc circuits. (The +23-V dc and -24-V dc voltages originate on the bulk power supply board.) When more features and options are required, another +5-V dc regulator can be added, as a slave in the rack, to provide additional current capacity. Each +5-V dc regulator board will supply 10 amperes of current.

## Extended Display Memory Board

This supplemental function board, which fits in the logic module, adds refresh RAM which accommodates an additional 12 lines of 80 characters over the basic (minimum) 12 lines of 80 characters provided by the RAM on the memory board described in a preceding paragraph. With the extended memory in place, total display capacity is 24 lines of 80 characters (1920 characters). The extended memory board has no on-board controls or switches.

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\* This adjustment potentiometer is not used on series 04 units and up. A phase lock loop circuit is used instead.

## Highlight Board

This supplemental function board for the logic module allows displaying any/all areas of the screen at reduced intensity and/or blinking between high and low intensity. Location and length of such highlighted areas are determined by delimiting codes stored at display character locations in refresh memory (RAM). These codes may be entered from either the keyboard, the tape cassette unit (if present), or the system interface. When entered, these codes appear as blanks on the display screen unless the CONTROL key is pressed. With the CONTROL key active, these codes appear and have the following meaning:

- $S_0$  — Begin reduced intensity and terminate blink (if active)
- $S_1$  — Terminate reduced intensity and/or blink
- $E_B$  — Begin blink field (if not contained in a reduced intensity field)

The highlight board has no on-board controls or switches.

## Edit Search and Edit ROM Boards

These two boards operate together to add editing capability to the logic module. Use of these two boards requires that both extended memory and highlight boards are present in the module. With all four boards present in the logic module (edit search, edit ROM, extended memory, and highlight), the edit capabilities added to the terminal are as follows:

- X-Y positioning
- Character insert and delete
- Line insert and delete
- Fixed format (using FORMAT mode switch)
- Tab and backtab functions

The terminal subsystem operators guide and reference manual (see preface) describe in detail the use of the terminal for edit functions. Refer to those manuals for information regarding edit mode and protected field (format mode) operations. The edit boards have one on-board control/switch, which is the Wraparound Enable switch located on the edit ROM board. The use of this switch is described in the subsystem reference manual.



## Answerback Board

Adding this board to the display logic module provides automatic identification (ID) of the terminal subsystem in response to either: 1) an ENQ code (005g) from the communication system, or 2) pressing the HERE IS key on the terminal keyboard. The ID code consists of a series of up to 21 7-bit, manually-programmable character codes which the terminal automatically transmits. The exact characters and number of them (up to 21) depend on the associated system requirements. Any data received by the terminal while transmitting the ID is ignored with the exception of a break condition. For a break, the answerback ID sequence aborts after transmitting the word in process. ID encoding occurs by pluggable-diode insertion/removal in a retention-socket matrix on the answerback board (see Checking/Setting Auto Answerback ID Code procedure in section 6 provided in volume 2). Answerback is not usable concurrently with the multidrop (polling) board in the display logic module.

The answerback board has a two-position toggle switch which, when ON, allows showing those selected ID characters, which are displayable, on the display screen for maintenance checking purposes. With this switch OFF, the ID code series transmits to the system I/O. Parity, baud rate, and I/O control are controlled by the basic logic module circuits. Keyboard lockout conditions of the basic (minimum) logic complement also apply to the HERE IS key used with the answerback function.

## Multidrop (Polling) Board

This supplemental function board for the display logic module provides for a fixed message envelope and specific automatic status responses to specific inquires. The fixed message envelope is a certain sequence of characters (or a single character) which automatically enters the data stream immediately preceding and following the transfer of data entered by the terminal operator. In addition, multidrop allows special conditioning of the terminal so specific code sequences (or single codes) received from the communications system may initiate specific functions, expand the terminal capability, and even limit or negate features provided by the basic terminal. Any/all such terminal modifications are, furthermore, specifically designed to fulfill communications system requirements.

In particular, the multidrop circuits will make the terminal compatible with the Bell System 85A1 Selective Calling Service Stations user protocol. This protocol operates on multipoint data systems using half-duplex, private-line communications routes at data rates up to 9600 baud. Such a system has a customer-supplied line control unit (LCU) which controls all data I/O with the terminal. For details of the specific 85A1 message format which the multidrop circuits are compatible with, see the reference manual for this terminal subsystem (see preface). For operator control modifications caused by the multidrop board being in the display logic module, see the operators guide (see preface).

The multidrop board has eight on-board rocker switches which will enable/disable the following conditions: unblind on SOH, stop on SOH, stop on STX, stop on ETX, poll acknowledge, SIC response, test poll ready to send/receive, and switched carrier. In addition, the board has seven rocker switches which operate together to select one of 128 addresses for a common station code character (SCC) and station identity code (SIC). The use of each of these on-board switches is described in detail in the terminal subsystem reference manual (see preface).

### Current Loop Board

Adding this board to the display logic module adapts the normal RS-232 modem type interface provided on the processor board to the requirements of a current loop type of system interface. Current loop type communications lines referred to here are those which use the presence/absence of current flow from a system battery to specify a serial stream of data. Such external system power must conform to the following:

- Open circuit system voltage — 120-V dc maximum  
10-V dc minimum
- System current (for marking condition) — 60 milliamps maximum  
20 milliamps minimum
- Voltage drop across transmitter — 2-V dc maximum
- Voltage drop across receiver — 2-V dc maximum

Loss of power at the local display terminal does not cause an open circuit condition in the system loop if the battery open-circuit voltages are held at a value greater than 10-V dc.

Word size, word format, parity, and baud rate of current loop communications are all under control of the local display terminal controlling circuits which use the current loop interface module for I/O communications.

The current loop interface module may not be used in a display terminal which is connected to a modem. Modem type I/O control signals in the host terminal using the current loop module are, by design of the current loop module circuits, tied off as follows:

- Request To Send connected to Clear To Send
- Data Terminal Ready connected to Data Set Ready and to Received Line Signal Detector

This module consists of electronic circuits which provide electrical isolation and signal conversion between low-voltage, RS-232-C/CCITT V.24 signal levels and the high-voltage, dc, unipolar\* and bipolar\* signal levels of current loop lines. In such a system, no current (unipolar) or reverse current (bipolar) specifies a spacing condition and current flow (unipolar) or forward current flow (bipolar) specifies a marking condition. The operating modes of the module include: unipolar half duplex, unipolar full duplex, and bipolar full duplex. Selection of one of the operating modes is made by setting the eight line-adapter rocker switches on the module (see the check/set procedure in section 6).

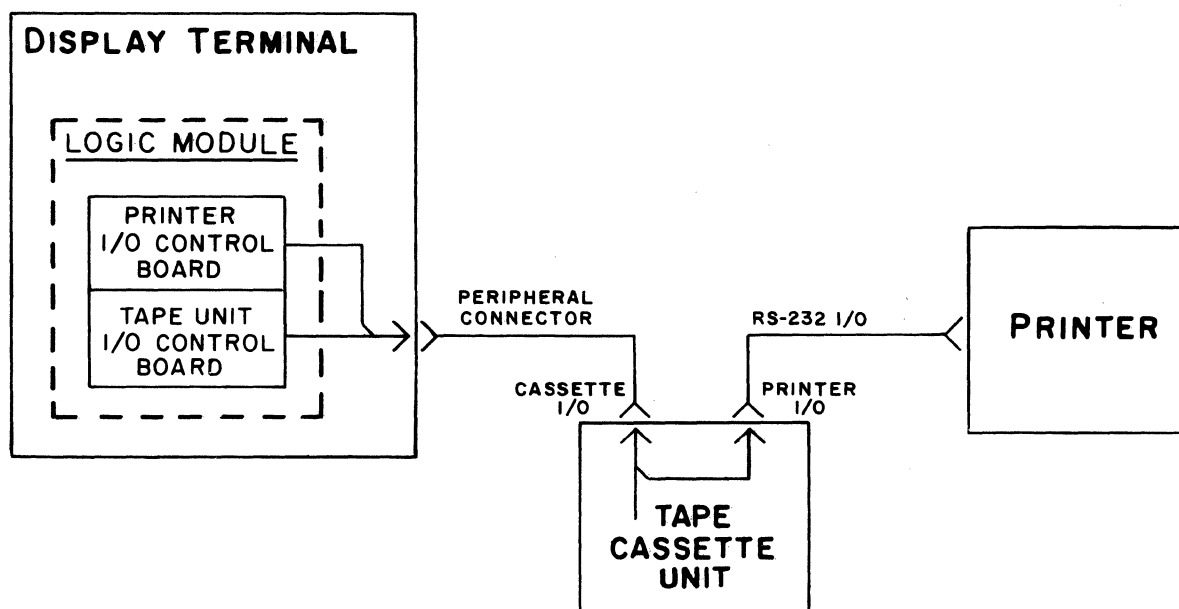
#### Printer Interface Control Board

Adding this supplemental function board to the display logic module allows using a receive-only printer as a peripheral in the terminal subsystem. The interface signals conform to RS-232-C and CCITT V.24 for the interface between a modem and remote terminal as applied to a receive-only device. Connection to the peripheral printer is through the PERIPHERAL CONNECTOR on the display rear panel, or if a tape cassette unit is part of the subsystem, connection is jumpered through the tape cassette connectors. Figure 4-4 illustrates how the printer interface control board fits in the subsystem and appendix A identifies the PERIPHERAL CONNECTOR pins put to use by this function in the subsystem. With a printer connected in the subsystem (see Nonimpact Printer and Impact Printer descriptions later in this section), several controls on the keyboard display take on special significance. The keys involved are: PRINT ON LINE, PRINT LOCAL, and PAGE PRINT. The terminal subsystem operators guide describes use of these keys and use of a printer when one is in the subsystem. The subsystem reference manual describes how the keyboard display terminal logic issues control and data codes via the printer control interface to operate a peripheral printer. Refer to these two manuals as necessary to understand printer operations.

The printer interface control board provides several on-board switches which set the peripheral printer's operating characteristics. These switches are: Autoprint Enable/Disable, four baud rate selection switches which allow selecting printer interface data flow rate from 110 baud to 9600 baud, Parity Enable/Inhibit, and Even/Odd Parity Selection. The use of each of these switches is described in the subsystem reference manual. Refer to Nonimpact Printer or Impact Printer theory of operation descriptions later in this section for information on either of the receive-only character printers which may be attached in the subsystem and run from this printer interface control board.

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\* Unipolar and bipolar are terms which identify different types of current loop systems. Such systems are illustrated in figures following in Checking/Setting Current Loop Line-Adapter Switches procedure in section 6.



NOTE: MAXIMUM SUBSYSTEM SHOWN. IF EITHER THE TAPE UNIT OR PRINTER IS ABSENT, ONLY ONE CABLE IS REQUIRED (E.G., TO PRINTER RS-232 I/O DIRECT OR TO CASSETTE I/O DIRECT.)

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Figure 4-4. Subsystem Peripheral Interface

#### Tape Cassette Unit Interface Control Board

With this supplemental function board in the display logic module, a tape cassette unit may be used as a peripheral in the terminal subsystem. The interface control board contains 2K of instructions in ROM which control tape unit operation. The board also has 1K of RAM which acts as a buffer for 128 character records of data to/from the tape unit. The interface uses the secondary RS-232-C and CCITT V.24 signals left over on the PERIPHERAL CONNECTOR after those assigned for printer use. Figure 4-4 shows how the tape cassette unit interface control board fits the subsystem and appendix A identifies the PERIPHERAL CONNECTOR pins put to use by this function in the subsystem. With a tape cassette unit connected in the subsystem (see Tape Cassette Unit description later in this section), several controls on the keyboard display take on special significance. The keys involved are: READ TAPE, TAPE BACK SKIP, and TAPE SRCH. The terminal subsystem operators guide describes use of these keys and use of a tape cassette unit in the subsystem. The subsystem reference manual describes how the keyboard display terminal logic issues control and data codes and receives status and data codes via the tape cassette unit interface control to operate a peripheral tape cassette unit. Refer to these two manuals as necessary to understand tape unit operations.

The tape unit interface control board contains one on-board control/switch: Enable/Disable Device Control Code. The use of this switch is described in the subsystem reference manual.

Refer to Tape Cassette Unit theory of operation in this section for information on how the tape cassette unit interface control board circuits operate together with a tape cassette (either single- or dual-drive unit).

### Paging Board

The paging board operates together with the extended memory board to provide refresh RAM for two additional 1920-character pages (display screen filled with 24 lines of 80 characters per line). With paging and extended memory present in the logic module, the online (communications system) or local (operator use) paging capabilities added to the terminal are as follows:

- Flip display to next page (page one to page two or page two to page three).
- Initialize displayed page to page one.

Figure 4-5 illustrates paging theory of operation.

The paging board has no on-board controls or switches.

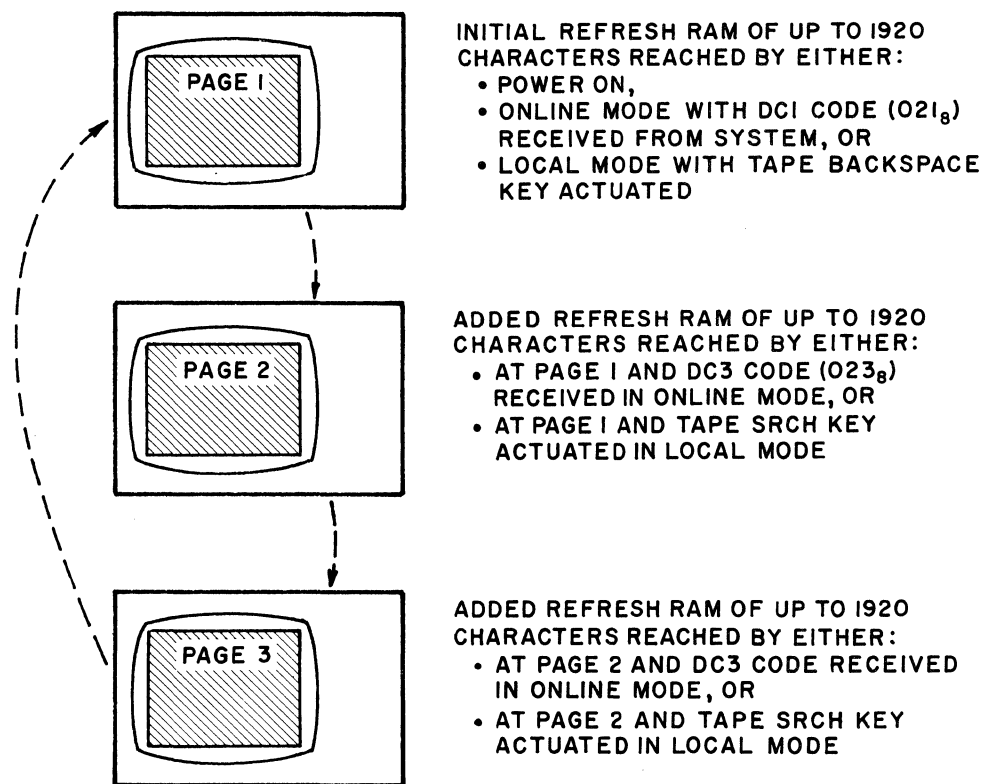


Figure 4-5. Illustration of Paging Theory

## Logic Module/Modem Interface Adapters

Adapter cables are available which allow the modem interface to be interconnected with RS-232-C/CCITT V.24 compatible devices other than a modem. These devices may be an acoustic coupler or another display terminal (or other comparable device) which is within 50 feet (15.24 meters) of the host display terminal.

Most of the adapter cables are 18 inches (45.72 centimeters) long and are designed to be inserted between the external data set cable furnished with the host display terminal and the host display terminal's data set connector. The data set connector is mounted on the connector panel located at the rear of the terminal.

The pin assignments of the data set connector are listed in the Communications Line Signals table, of Appendix A. With a modem interconnection, the data set cable is plugged directly into the data set connector and all the interface signal connections listed in the table are connected between the terminal and modem on a one-to-one basis.

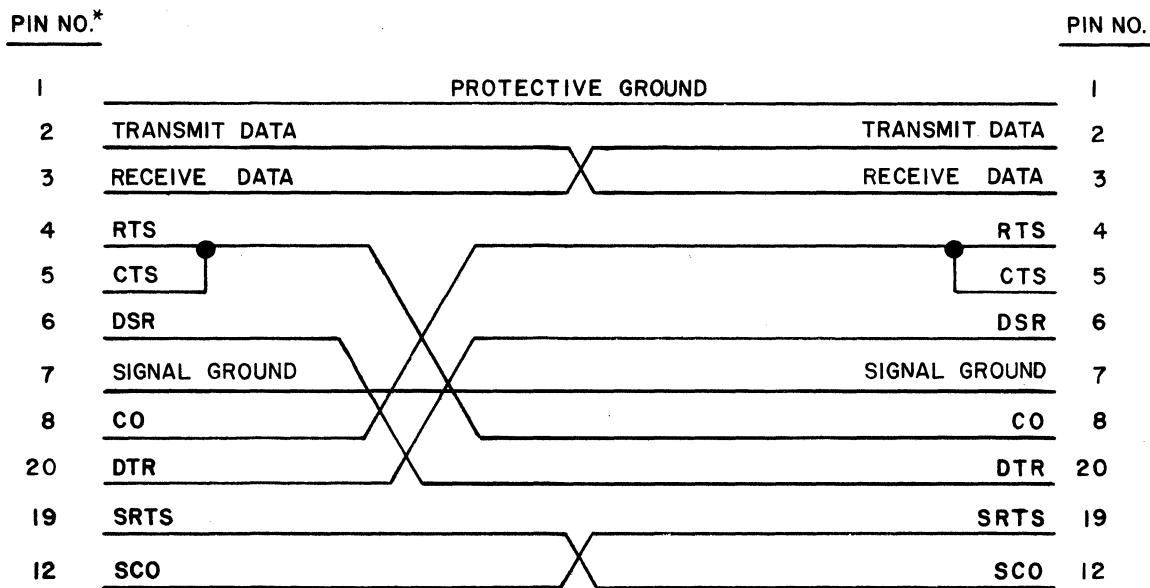
With the modem interface adapter interconnections, some of the interface signal connections are altered/deleted by the corresponding adapter cable. A list of these interconnections follows:

- Bell Data Set Model 113A interconnection-adapter cable (part number 61407806) makes all connections of the interface signals (as listed in the Communications Line Signals table, Appendix A) except for pins 8 and 20 that connect Data Set Ready to the Carrier On signal.
- Anderson Jacobson Acoustic Coupler, Model ADAC 1200 Interconnection-adapter cable (part number 61407807) will connect all interface signals (as shown in the Communications Line Signals table, Appendix A) except pins 11 and 19 that connect Secondary Request to Send signal.

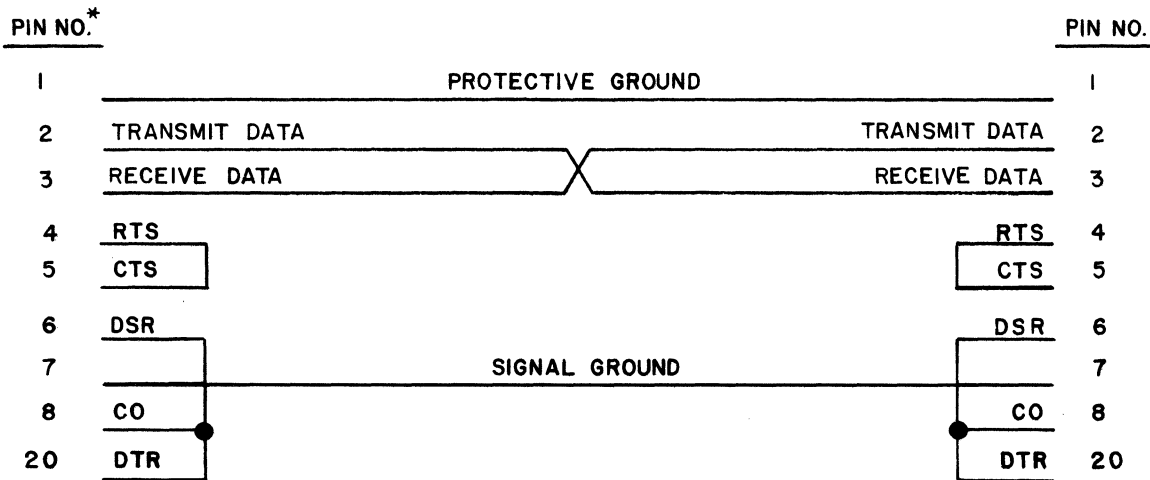
- Anderson Jacobson Acoustic Coupler Model ADAC 242 Interconnection-adapter cable (part number 61407808) is used and all the interface signal connections in the Communications Line Signals table, Appendix A are resultantly connected, except for pin 23 which is left open.
  
- Direct back-to-back interconnection with another display terminal or comparable device that requires a switched Receive Line signal detector (Carrier On signal) — adapter cable (part number 61407809) is used and the interface signals result in being connected as shown in part A of figure 4-5.1.
  
- Direct back-to-back interconnection with another display terminal or comparable device that requires a constant Carrier On signal—adapter cable (part number 61407810) is used and the interface signals are connected as shown in part B of figure 4-5.1.
  
- Female to male converter interconnection—adapter cable (part number 61407811) uses a Reversed Pin signal configuration and requires a data set cable (part number 61407832/41) for hookups in Great Britain.
  
- 1743-2 Interface interconnection—adapter cable (part number 61407812) uses five signal paths to adapt the 755 Printer to the 1743-2 System. The adapter cable connects between the 755 Printer and the 1743-2 Controller.

Refer to Section 7 of this manual for more information on the adapter cables. Section 7 contains parts data, spare parts lists, the adapter cables matrix and wire lists.

PART A



PART B



\* ALL OTHER PINS (REFER TO THE COMMUNICATIONS LINE SIGNALS TABLE IN APPENDIX A) PIN TO PIN

02718-1

Figure 4-5.1. Interface Connection Routing of Back-to-Back Adapter Cables



## Power Supply

The power supply in the display terminal is truly modular in that each stage is replaceable without disturbing other stages. The primary supply is the bulk power supply board (figure 4-6) which generates all basic (low) voltages from the ac voltage received from the ac entry transformer. The power supply also includes the +5-V dc regulator card in the logic card rack (see previous discussion), and a number of individual voltage regulators. Individual voltage regulators used for special purposes include the +5-volt regulator on the video (monitor) printed-circuit board and the -5-volt regulator on the processor board.

The following power supply components are replaceable individually:

- Bulk power supply board
- AC entry transformer
- AC entry panel
- +5-V dc regulator board

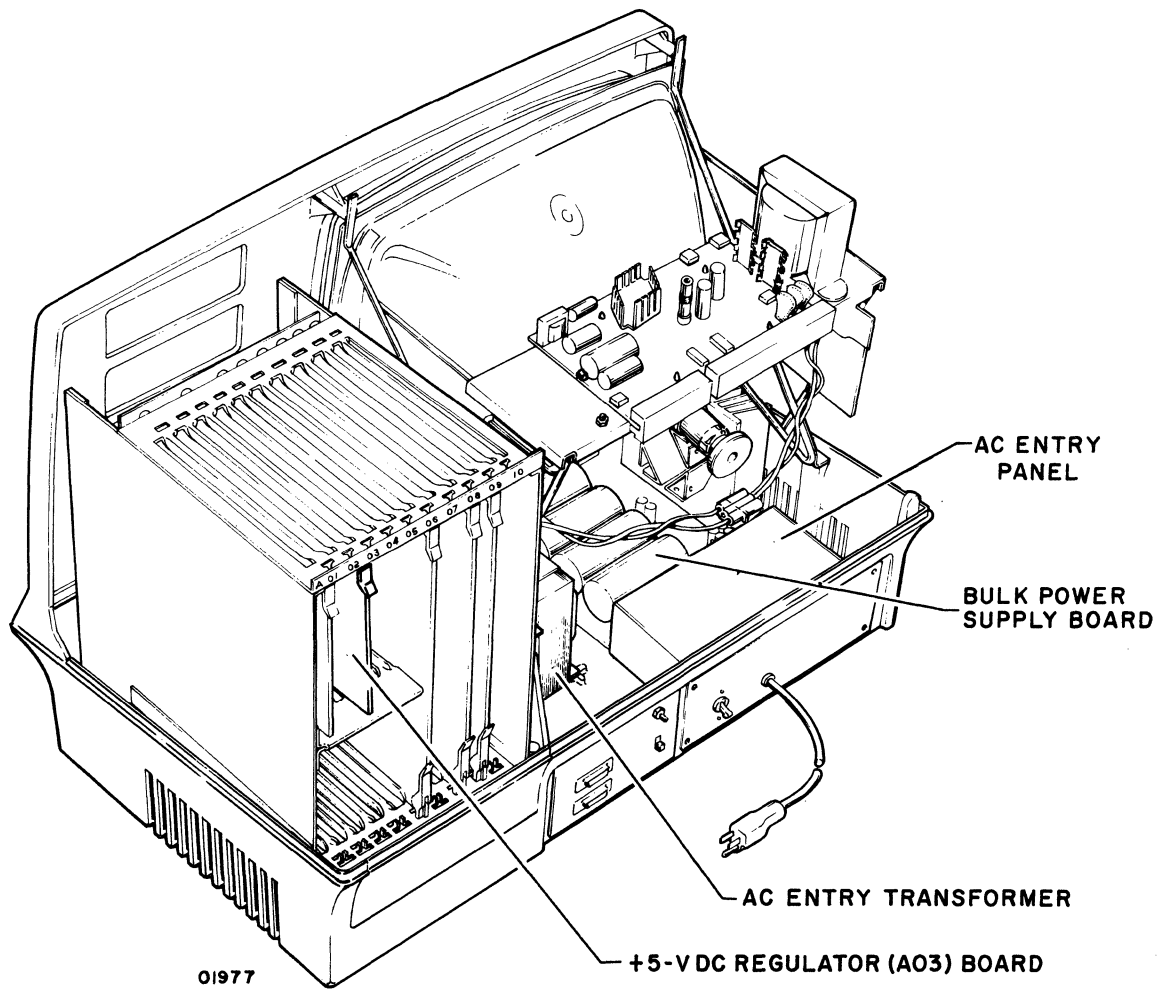


Figure 4-6. Power Supply Components



## Bulk Power Supply Board

The bulk power supply board provides -9-V dc, +12-V dc, -12-V dc, +23-V dc, and -24-V dc to the logic module and video monitor.

There are three indicator lights on the bulk power supply board which light when the three basic voltages are present (lights do not indicate correct voltage levels). If two green lights illuminate, -9-V dc and -12-V dc are present. If the yellow indicator illuminates, +12-V dc is present. For more detailed description and illustration, refer to section 6 in volume 2.

## AC Entry Transformer

The ac entry transformer receives ac input voltage from the ac entry panel on its primary windings and provides the required ac voltages to the bulk power supply board.

## AC Entry Panel

The ac entry panel contains the circuit breaker and the ac entry power cord. When the power cord or circuit breaker is faulty, the entire unit (box) is replaced. On 50-Hz versions, the panel includes a switch which places input power on different primary windings of the ac entry transformer, depending on whether the 50-Hz input voltage is normal (216- to 268-V ac) or low (198- to 246-V ac).

## +5-V dc Regulator Board

The +5-V dc regulator board is a module in the logic module assembly (see previous paragraph entitled Logic Module Assembly).

## Miscellaneous Components

The following components are a part of the display terminal in addition to the modules and subassemblies already described (keyboard, video, logic, and power supply assemblies). All are replaceable components.

- TEST mode switch
- MASTER CLEAR switch
- Switches and indicator panel
- INTENSITY knob
- Audible alarm

## NONIMPACT PRINTER

The nonimpact printer is a serial-input, RS-232-C-compatible, thermal printing device capable of printing at speeds up to 30 characters per second. A single printhead, containing a 5- by 7-dot matrix, is used to print one character at a time over an 80-character print line. Characters are formed by bringing the printhead into contact with heat-sensitive paper and heating selected elements of the matrix. The printer is capable of performing the following operations in response to input data commands.

- Character Print — The printhead is moved down to contact the paper and selected printhead elements are heated. After printing, the head is raised from the paper and moved to the next column.
- Backspace — The printhead is moved one column to the left.
- Line Feed — The paper is advanced one or two lines, depending upon the setting of the Space switch.
- Carriage Return — The printhead is returned to the first column. Anytime that the printhead attempts to move past column 80, an automatic carriage return and line feed operation is performed.

The interface connectors, power connectors, fuse holder wiring, and internal cable routing for the nonimpact printer are identified in figure 4-7. The replaceable power supply is shown in proper relationship to the connectors in/near the printer cabinet rear panel. Likewise, the connectors and cables are shown in their proper locations. For the input power requirements, see Specifications in section 1. For the pin assignments of the RS-232-C interface connector, see appendix A. The J5 connector shown is not normally used by the printer in this subsystem.

Since this printer does not contain many complex subassemblies, the information provided on it in section 1, General Description, suffices to identify the major subassemblies. And since the maintenance philosophy for the power supply contained in the printer is to replace it entirely upon failure, its theory is not required here. It is sufficient to note that the four regulated voltages provided by the power supply for use by the printer circuits are required to be within  $\pm 5\%$  of their nominal +5-V dc, +16-V dc, +24-V dc, and -24-V dc. This leaves only the theory of operation for the interface and control logic boards and the electromechanical printer mechanism for discussion. The following paragraphs cover this remaining area of the nonimpact printer with detailed operating theory descriptions.

The major functional components of the printer mechanism are identified in figure 4-8. Refer back to this figure to locate the various functional portions of the mechanism as they are mentioned in the operational descriptions contained in the following paragraphs.

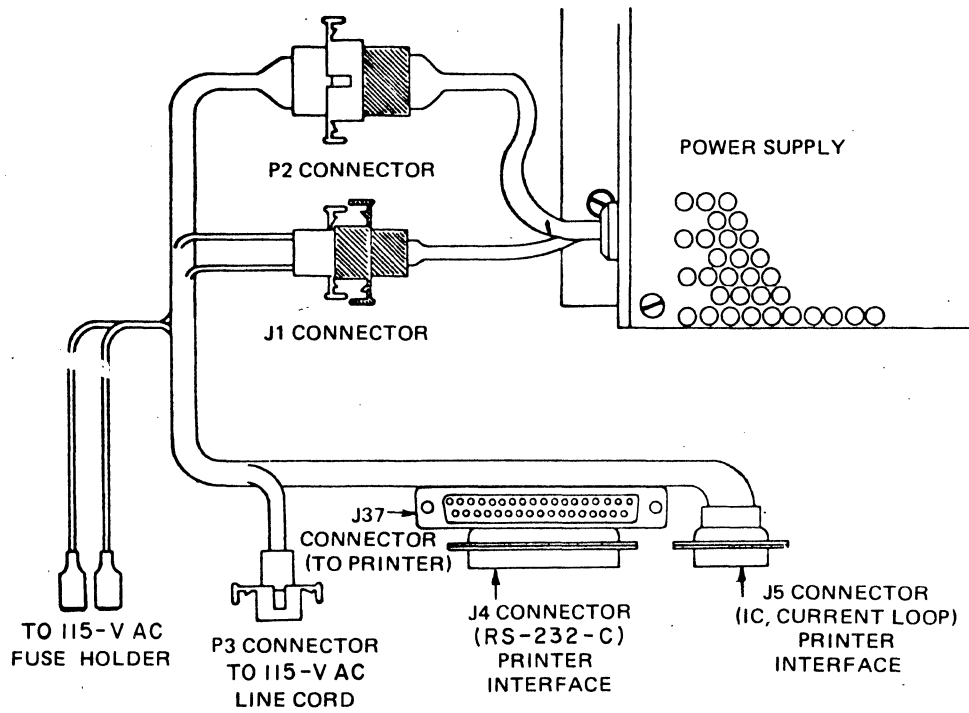


Figure 4-7. Wiring Harness Connections

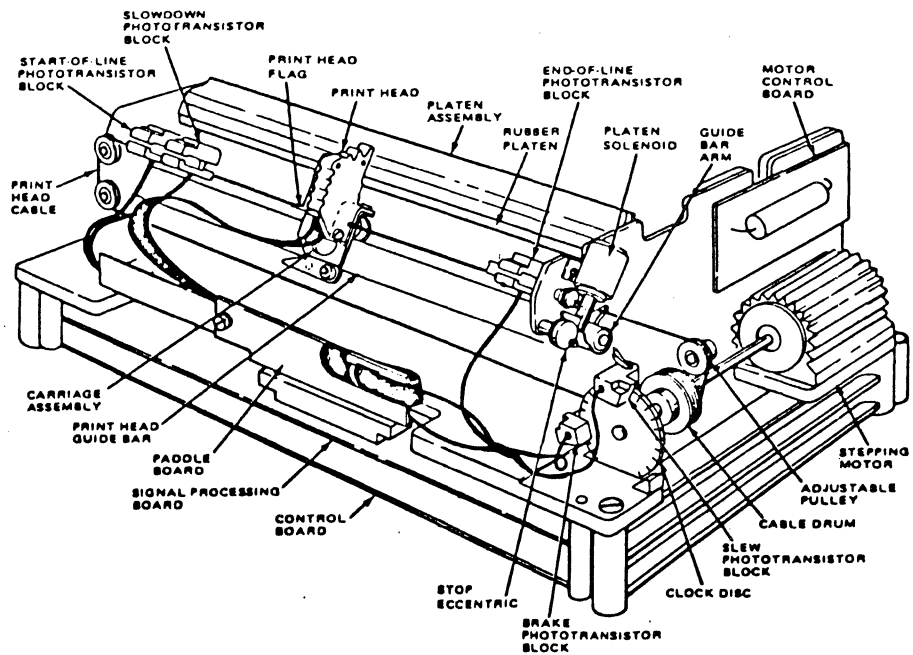


Figure 4-8. Printer Components

The print mechanism and its electronics, power supply, and paper roll holder are enclosed as a stand-alone tabletop unit.

The printer character set consists of a modified ANSI 96-character set as shown in appendix B of this manual.

A block diagram of the printer is shown in figure 4-9. Serial input data is fed to a serial-to-parallel converter. When the stop bit for the character being transmitted is received, the data is shifted in parallel format to the decoder-encoder and a Start pulse is sent to the command logic. Parity is checked during the stop bit time. If a parity error is detected, an error code is shifted in parallel format to the decoder-encoder and a Start pulse is sent to the command logic. After generation of the Start pulse, the command logic sets flip-flops in accordance with information from the decoder-encoder. The states of the flip-flops in the command logic control the type of operation performed by the printer. The Busy Output line rises true when an operation is started and remains true for 31 to 32 milliseconds.

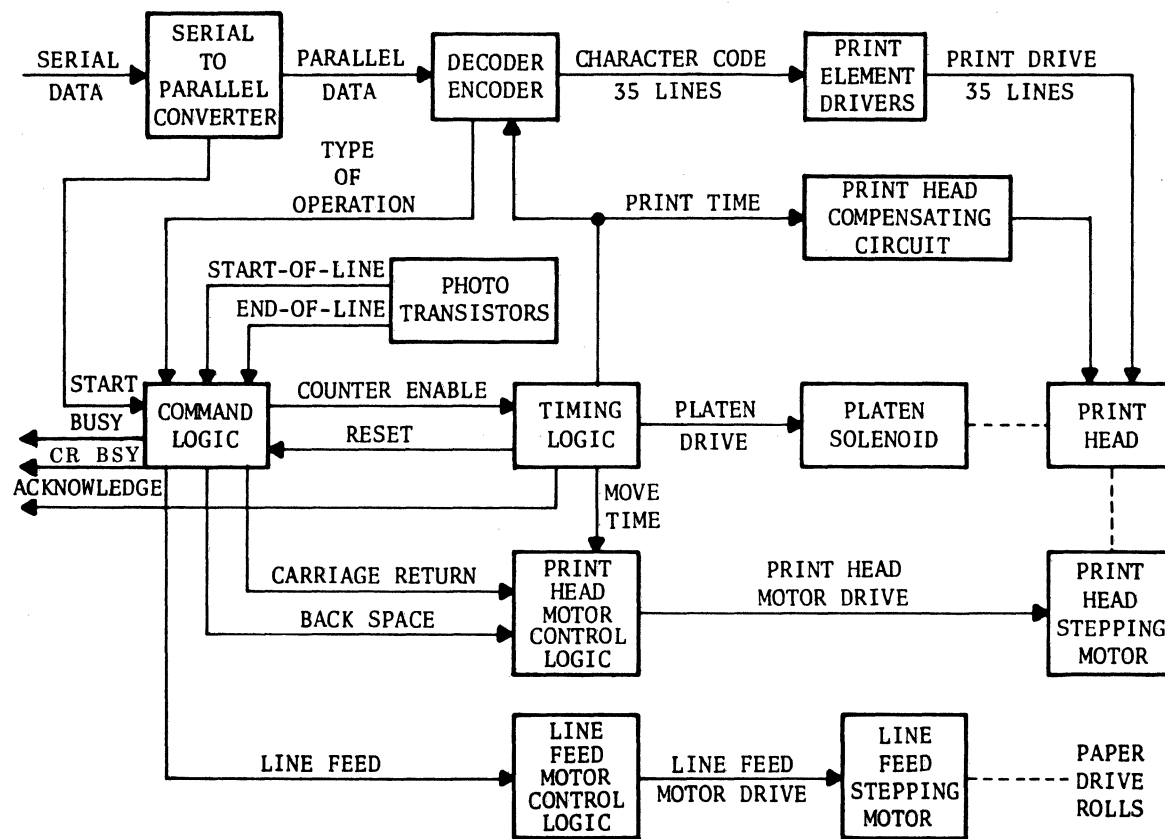


Figure 4-9. Nonimpact Printer Block Diagram

If the requested operation is a character print, a counter in the timing logic is enabled. The counter generates signals to control the operation timing. For a character print operation, the timing logic first generates a Platen Drive signal to energize the platen solenoid. This starts the printhead moving down toward the paper. See figure 4-10 for a timing diagram of a character print operation.

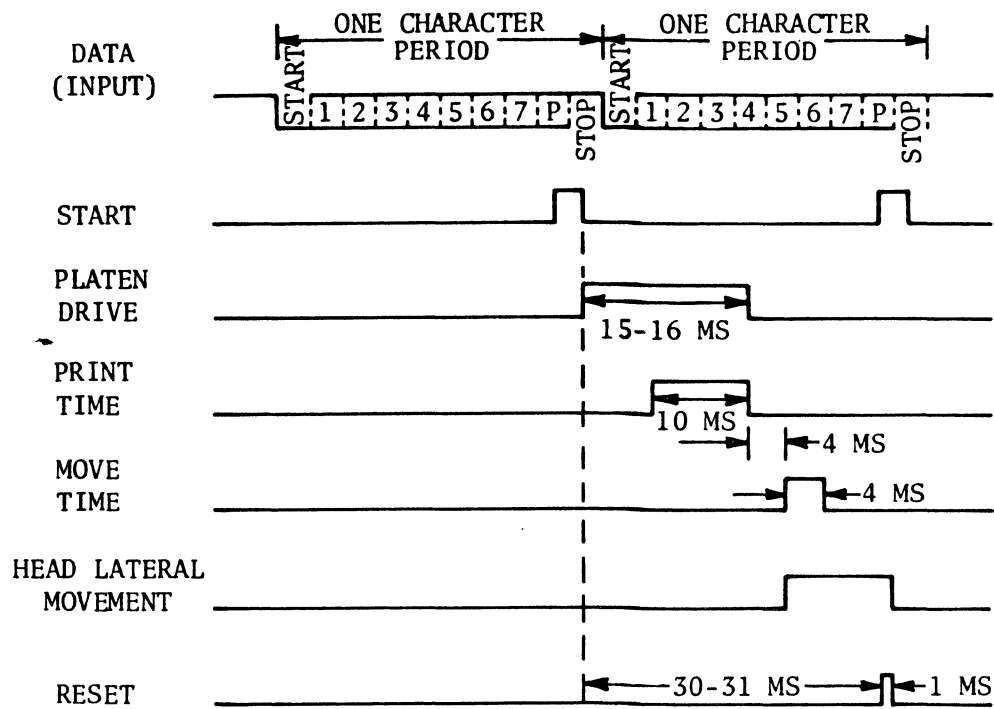


Figure 4-10. Nonimpact Printer Character Print Timing

When the printhead reaches the paper, the timing logic turns on the Print Time line. With Print Time true, the decoder-encoder and print element drivers are enabled. Also, with Print Time true, the printhead compensating circuit is energized to complete the printhead element circuit. This circuit controls the time that the printhead elements are heated in proportion to temperature and printing speed. The elements in the printhead representing the desired character are then heated to cause printing. After printing has occurred, the Print Time and Platen Drive signals are terminated by the timing logic and the printhead is removed from the paper by spring action of the platen solenoid. The timing logic drops the Output Acknowledge line false at this time to indicate to the external controller that printing has occurred and the data may be removed from the input lines.

As the printhead is returning to its upright position, the timing logic generates a Move Time pulse. When the Move Time pulse is received by the motor control logic, the appropriate winding of the printhead stepping motor is energized to move the printhead to the next column position. When the operation has been completed, the timing logic sends a Reset pulse to the command logic. This resets the flip-flops in preparation for the next operation and drops the Busy line false.

For a backspace operation, the timing logic performs in the same manner as for a character print. However, printing will not occur since the backspace code will not cause any of the printhead elements to be heated. When the command logic senses a backspace operation, the Backspace line to the motor control logic goes true. Therefore, when the Move Time pulse is received from the timing logic, the appropriate stepping motor winding will be energized to step the printhead one column to the left.

The counter in the timing logic is also enabled for a line feed operation. A line feed operation is initiated if a line feed code is present on the parallel input lines when a Start pulse is received. Also, an automatic line feed operation is initiated if the printhead attempts to move past column 80. The outputs from the timing logic, with the exception of reset and acknowledge, are inhibited during a line feed operation. This prevents printhead movement. When a line feed operation is initiated, the line feed term to the motor control logic goes true. The motor control logic then generates signals to energize the line feed stepping motor windings in sequence to turn the paper drive rolls. The paper will be advanced one or two lines depending upon the setting of the Space switch. See figure 4-11 for a timing diagram of a line feed operation.

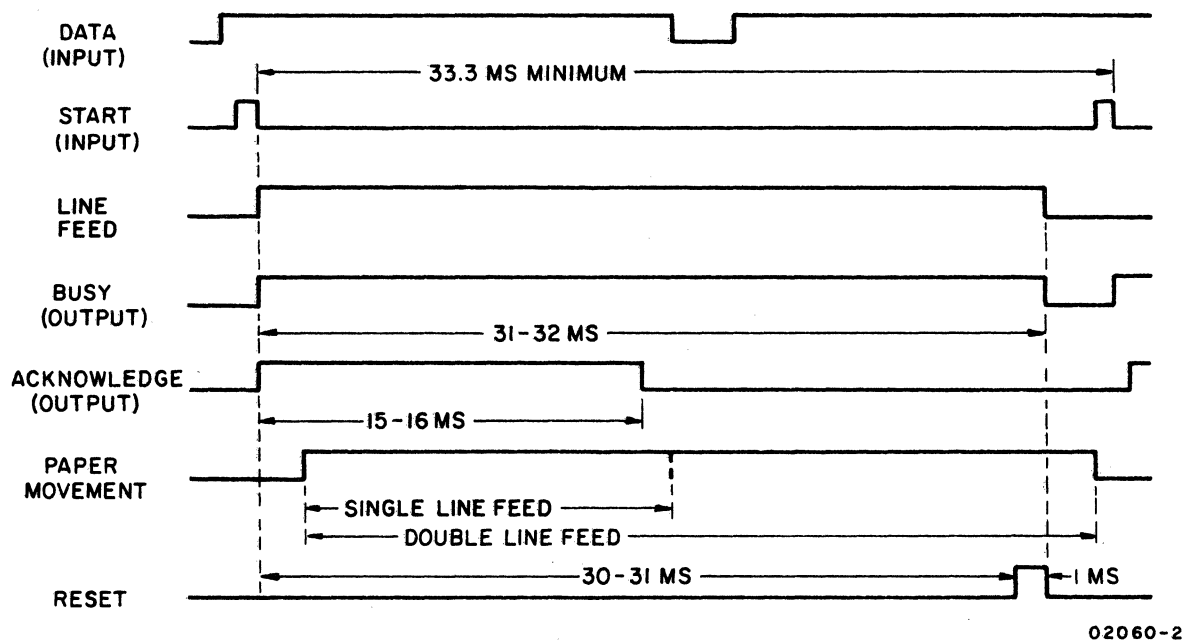
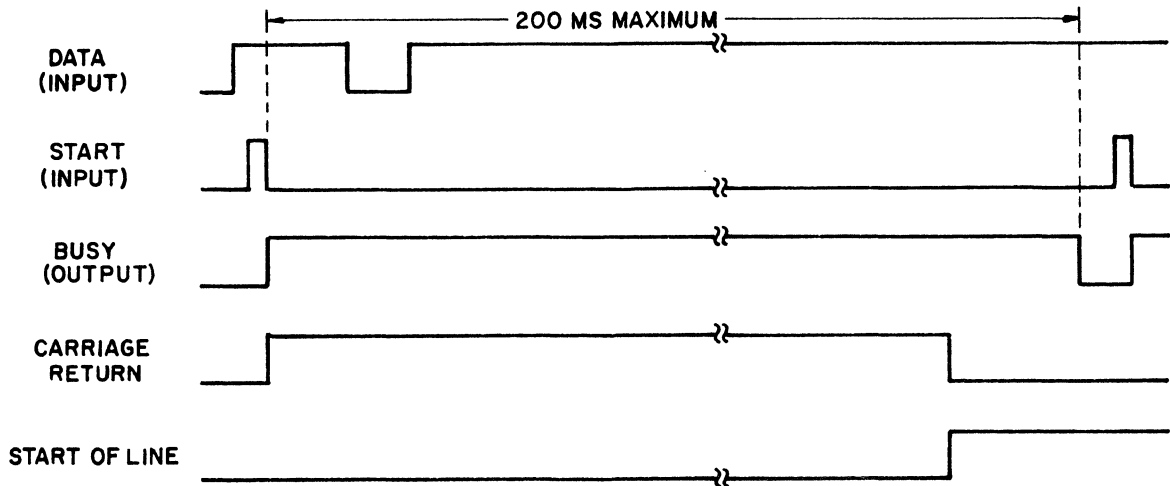


Figure 4-11. Nonimpact Printer Line Feed Operation Timing

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If a carriage return code is decoded from the data input lines and a Start pulse is received, the printhead will be returned to column one. The command logic sends a Carriage Return signal to the printhead motor control logic which generates Motor Drive signals to return the printhead to column one. The timing logic is not enabled for this operation. When the printhead reaches column one, a start-of-line photo-transistor signals the command logic, and the Carriage Return line to the motor control logic is dropped false. The Output Busy line, however, is held true by a one-shot in the command logic for a period sufficient to ensure that the printhead is stable and ready for a print operation. See figure 4-12 for a timing diagram of the carriage return operation.



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Figure 4-12. Nonimpact Printer Carriage Return Operation Timing

## IMPACT PRINTER

The impact printer reference and field service manual (see preface for publication number) contains theory of operation for the impact printer. Since that publication is intended to be a companion manual to this one at a customer site, this manual provides no further theory of operation description beyond that in section 1, General Description.

## TAPE CASSETTE UNIT

The tape cassette unit operates as an information storage and retrieval peripheral in the terminal subsystem. It operates under the direction of the keyboard display terminal which has the tape cassette unit interface control board installed in its logic module. The interface control board contains the tape unit control program stored in 2 K of on-board ROM, and it also provides 1 K of RAM to act as the buffer for tape unit data. The keyboard display terminal, with the tape interface board installed, directs reading from or writing to the tape cassette unit of records consisting of 128 characters.

The interface connectors, power connectors, and internal cable routing for the tape cassette unit are identified in figures 4-13, 4-14, and 4-15. For the input power requirements, see Specifications in section 1. For the pin assignments of the interface connectors, see appendix A. The connector labeled CASSETTE I/O connects with the controlling keyboard display and carries all peripheral interface signals for both the tape cassette unit and a receive-only printer which may be part of the subsystem. The printer signals are the primary RS-232 level interface lines and daisy-chain right on through the tape unit cabinet via the PRINTER I/O connector. The tape unit signals are carried on the secondary RS-232 level interface lines and enter the tape unit logic.

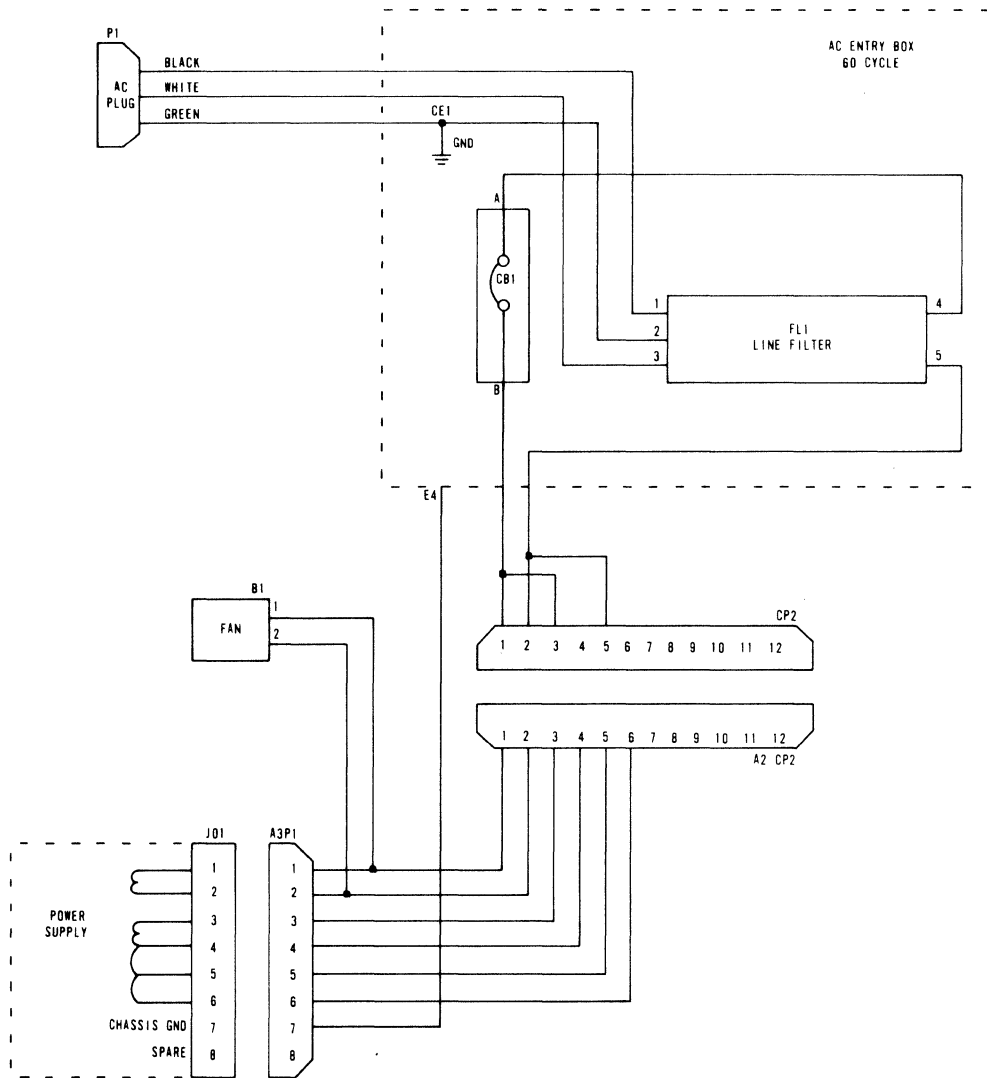
#### NOTE

When the tape cassette option is installed, the Batch Mode switch is made disabled.

Since this tape cassette unit does not contain many complex subassemblies, the information provided on it in section 1, General Description, suffices to identify the major subassemblies. And since the maintenance philosophy for the power supply contained in the tape unit is to replace it entirely upon nonadjustable failure, its theory is not required here. It is sufficient to note that the three regulated voltages provided by the power supply for use by the tape unit circuits are required to be within  $\pm 5\%$  of their nominal +5-V dc, +12-V dc, and -12-V dc. This leaves only the theory of operation for the logic chassis circuits and the electromechanical tape drive(s) for discussion. The following paragraphs cover this remaining area of the tape cassette unit with detailed operating theory descriptions.

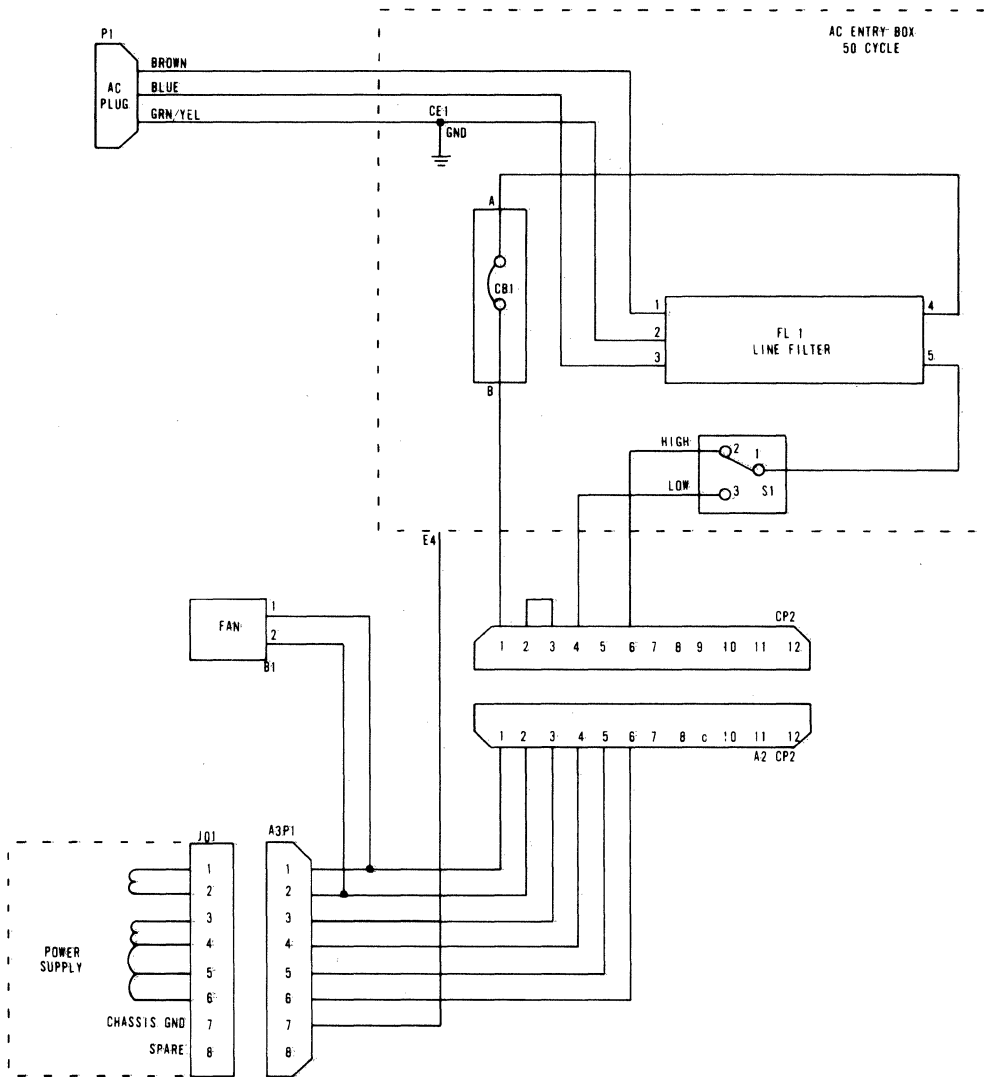
Figure 4-16 identifies the major functional components of the tape unit interior. Figure 4-17 is a functional block diagram of the unit. Refer to these figures to locate the various functional portions of the unit as they are mentioned in the operational descriptions contained in the following paragraphs.

The tape cassette unit may house either one or two tape drive devices. Each drive will handle one standard, computer-grade, digital-data, tape cassette cartridge of the Philips type. Such cassettes must be compatible with ANSI X 3B1/638 and have BOT and EOT pierced holes. Bit transfer rate to and from tape is 5855 bits per second. The maximum interface speed for continuous data is 1200 baud. Within a record, the interface rate may exceed 1200 baud (up to 9600 baud) if dead time is provided such that the physical record transfer rate is at 1200 baud. Capacity to record on a cassette tape is variable depending on record length. However, for this tape unit as used in this subsystem, a typical example is 1200 records per track (tape side) with 128 characters per record and 11 bits per character. Recording density by the dual-gap, single-track head (and read/write electronics) is 1560 flux reversals per inch (780 bits per inch by the phase-encoding method). Each character on tape



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Figure 4-13. Tape Cassette Unit AC Interconnection Diagram



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Figure 4-13. Tape Cassette Unit AC Interconnection Diagram (Contd)

POWER SUPPLY A3P03 CABLE W3 OR W6*	SIGNAL IDENTIFICATION	TAPE DRIVE	OPERATOR PANEL
1	DRIVE #1 +5 VOLTS	ABP4-20	
1	DRIVE #1 +5 VOLTS	ABP4-22	
2	DRIVE #2 +5 VOLTS	A9P4-20	
2	DRIVE #2 +5 VOLTS	A9P4-22	
6	DRIVE #1 +12 VOLTS	ABP4-23	
6	DRIVE #1 +12 VOLTS	ABP4-24	
7	DRIVE #2 +12 VOLTS	A9P4-23	
7	DRIVE #2 +12 VOLTS	A9P4-24	
8	DRIVE #1 -12 VOLTS	ABP4-13	
9	DRIVE #2 -12 VOLTS	A9P4-13	
10	DRIVE #1 GROUND	ABP4-11	
10	DRIVE #1 GROUND	ABP4-12	
11	DRIVE #2 GROUND	A9P4-11	
11	DRIVE #2 GROUND	A9P4-12	
12	UNIT #2 SWITCH GROUND		S5-1, S4-1, S6-1
12	UNIT #2 POWER ON INDICATOR		A4L6

\*NOTE IF CABLE W6, SINGLE DRIVE IS USED ALL A9P4 AND S5-1, S4-1, S6-1 CONNECTORS ARE OMITTED.

POWER SUPPLY A3P02 CABLE W4	SIGNAL IDENTIFICATION	LOGIC CHASSIS	OPERATOR PANEL
1	+5 VOLTS	A1E1	
2	LED +5V		A4L9
6	+12 VOLTS	A1A5-6	
8	-12 VOLTS	A1A5-8	
10	GROUND	A1E2	
11	UNIT 1 POWER ON INDICATOR		A4L7
11	UNIT 1 SWITCH GROUND		S2-1, S1-1, S3-1
12	LOGIC TO FRAME GROUND	A2E4	

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Figure 4-14. Tape Cassette Unit DC Interconnection Diagram

D C B A

REV B  
 DWG NO 62197700  
 CROSS REF NO  
 SHEET 17  
 CODE IDENT 15920  
 SIGNAL DISTRIBUTION  
 CON. TO DATA

BACK PANEL PIN NO.	SBID INPUT/OUTPUT CARD D1	SBID READ WRITE CARD D2	SBKD UNIT CONTROL CARD D3
1	+5	+5	+5
2	+5	+5	+5
3	+5	+5	+5
4	+5	+5	+5
5	+12		
6	+12		
7	-12		
8	-12		
9	START MOTION	-BOT/EOT UNIT 1	-BOT/EOT UNIT 1
10	SELECT UNIT 2	READ DATA 1 UNIT 1	READ DATA 1 UNIT 1
11	FORWARD	READ DATA 0 UNIT 1	READ DATA 0 UNIT 1
12	TERMINATE WRITE	-WRITE ENABLE UNIT 1	-WRITE ENABLE UNIT 1
13	BOT/EOT	DRIVE 1 WRITE PROTECT 1	DRIVE 1 WRITE PROTECT 1
14	PLAY	READY UNIT 1	READY UNIT 1
15	LINE/LOCAL	-GO UNIT 1	-GO UNIT 1
16	RECORD	PED TO DECK	PED TO DECK
17	READY		
18	RECORD GAP	-BOT/EOT UNIT 2	-BOT/EOT UNIT 2
19	RECEIVE CLK	READ DATA 1 UNIT 2	READ DATA 1 UNIT 2
20	READ DATA	READ DATA 0 UNIT 2	READ DATA 0 UNIT 2
21	READ	-WRITE ENABLE UNIT 2	-WRITE ENABLE UNIT 2
22	WRITE	DRIVE 2 WRITE PROTECT 2	DRIVE 2 WRITE PROTECT 2
23	WRITE DATA	READY UNIT 2	READY UNIT 2
24	TIMES 16 CLK	-GO UNIT 2	-GO UNIT 2
25	DELAY CNT ENABLE	DELAY CNT ENABLE	
26	SELECTED UNIT READY	SELECTED UNIT READY	
27	-SELECTED BOT/EOT	-SELECTED BOT/EOT	STOP/GO
28	-STOP READ	-STOP READ	FORWARD/REV
29	RECEIVE CLK	RECEIVE CLK	SLOW/FAST
30	READ NRZ DATA	READ NRZ DATA	WRITE SELECT
31	GO F/F	GO F/F	READ ENABLE
32	-GO F/F	-GO F/F	WRITE DATA
33	WRITE ENABLE	WRITE ENABLE	READ DATA
34	END WRITE	END WRITE	-READ DATA
35	READ ENABLE	READ ENABLE	BOT/EOT
36	DATA FROM DISPLAY	DATA FROM DISPLAY	READY
37	TIMES 16 CLK	TIMES 16 CLK	WRITE ENABLE
38	SELECT DELAY CLK	SELECT DELAY CLK	SIDE A/B
39	-CLR RECORD GAP	-CLR RECORD GAP	
40	-CLR RAMP DOWN	-CLR RAMP DOWN	
41	-READY + BUSY UNIT 1	-READY + BUSY UNIT 1	
42	SELECT UNIT 1	SELECT UNIT 1	
43	-READY + BUSY UNIT 2	-READY + BUSY UNIT 2	
44	SELECT UNIT 2	SELECT UNIT 2	
45	-PU CLR	-PU CLR	-PU CLR
46	RECORD GAP	RECORD GAP	RECORD GAP
47	-OUT OF TAPE UNIT 1		-OUT OF TAPE UNIT 1
48	-OUT OF TAPE UNIT 2		-OUT OF TAPE UNIT 2
49	-REWIND		-REWIND
50	FORWARD		FORWARD
51	WRITE		WRITE
52	UNLOAD UNIT 1		UNLOAD UNIT 1
53	UNLOAD UNIT 2		UNLOAD UNIT 2
54			
55			
56			
57	OUT OF TAPE IND 1		STOP/GO
58	UNLOAD UNIT 1		FORWARD/REV
59	READY + BUSY IND 1		SLOW/FAST
60	LINE/LOCAL UNIT 2		WRITE SELECT
61	READ ACTIVE IND		READ ENABLE
62	PLAY UNIT 1		WRITE DATA
63	WRITE ACTIVE IND		READ DATA
64	RECORD UNIT 1		-READ DATA
65	UNLOAD UNIT 2		BOT/EOT
66	RECORD UNIT 2		READY
67	OUT OF TAPE IND 2		WRITE ENABLE
68	PLAY UNIT 2		SIDE A/B
69	READY + BUSY IND 2		
70	LINE/LOCAL UNIT 2		
71			
72			
73			
74			
75			
76			
77	GND	GND	GND
78	GND	GND	GND
79	GND	GND	GND
80	GND	GND	GND

- △ I/O CABLE
- △ INDICATOR AND SWITCH CABLE
- △ TAPE DRIVE #1 CABLE
- △ TAPE DRIVE #2 CABLE

I/O CABLE P10 CABLE W1	SIGNAL IDENTIFICATION	BACK PLANE A1A5J1
1	FRAME GROUND	
2	PLAY	01-14
3		
4		
5	BOT EOT	01-13
6		
7	DC GROUND	
8		
9	LINE/LOCAL	01-15
10		
11	RECEIVE CLK	01-19
12	READY	01-17
13	RECORD GAP	01-18
14	WRITE	01-22
15	WRITE DATA	01-23
16	START MOTION	01-9
17	FORWARD	01-11
18	TERMINATE WRITE	01-12
19		
20		
21	READ	01-21
22	SELECT UNIT 2	01-10
23	TIMES 16 CLK	01-24
24	READ DATA	01-20
25	RECORD	01-16

TAPE DRIVE #1 AB04 CABLE W6 OR W3	SIGNAL IDENTIFICATION	BACK PLANE A1A7J1
1	CONNECTED TO ABP4-14	
2	WRITE DATA	03-32
3		
4	BOT EOT	03-35
5	READY	03-36
6	SLOW/FAST	03-29
7	READ ENABLE	03-31
8		
9	-READ DATA	03-34
10		
11	GROUND	
12	GROUND	
13	-12	
14	CONNECTED TO ABP4-1	
15	WRITE ENABLE	03-37
16	SIDE A/B	03-38
17	WRITE SELECT	03-30
18	STOP GO	03-27
19	FORWARD REV	03-28
20	+5	
21	READ DATA	03-33
22	+5	
23	+12	

TAPE DRIVE #2 ASP4 CABLE W3	SIGNAL IDENTIFICATION	BACK PLANE A1A7P2
1	CONNECTED TO ASP4-14	
2	WRITE DATA	03-63
3		
4	BOT/EOT	03-66
5	READY	03-67
6	SLOW/FAST	03-60
7	READ ENABLE	03-62
8		
9	-READ DATA	03-65
10		
11	GROUND	
12	GROUND	
13	-12	
14	CONNECTED TO ASP4-1	
15	WRITE ENABLE	03-68
16	SIDE A/B	03-69
17	WRITE SELECT	03-61
18	STOP/GO	03-58
19	FORWARD/REV	03-59
20	+5	
21	READ DATA	03-64
22	+5	
23	+12	

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Figure 4-15. Signal Interconnection Diagram (Contd)

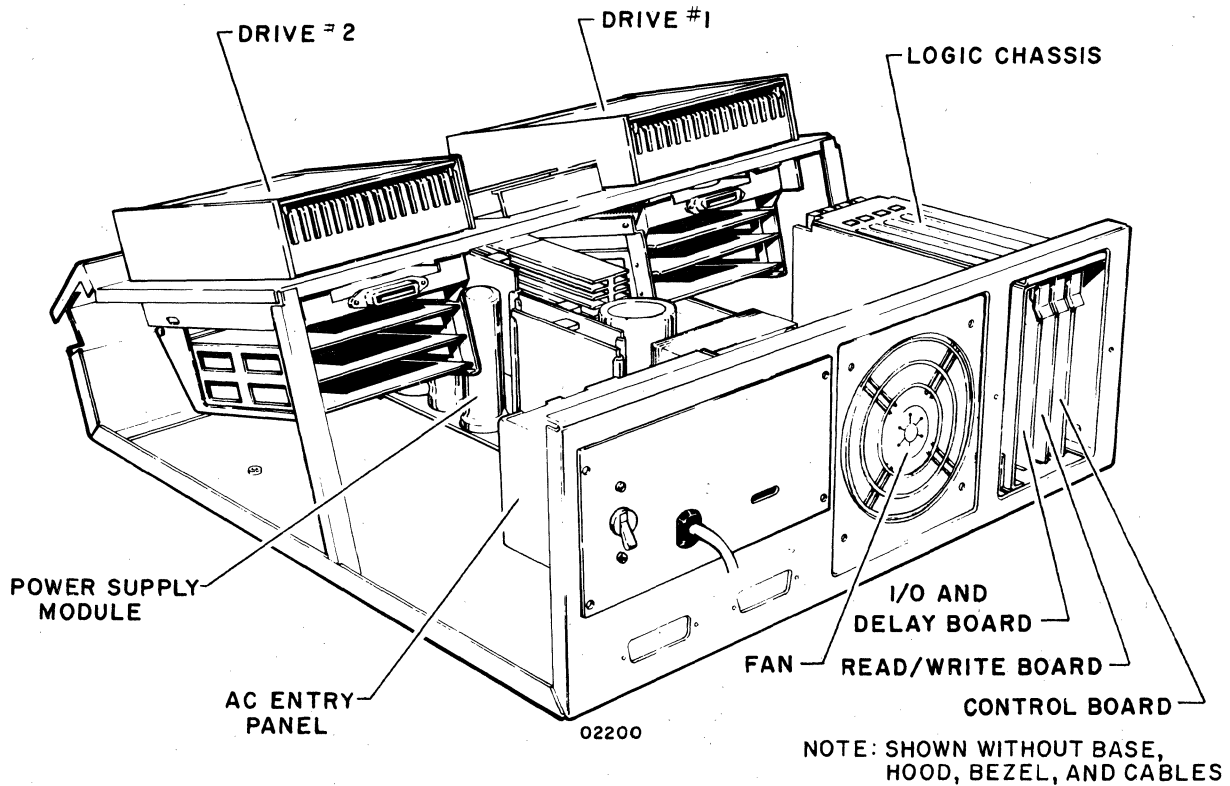


Figure 4-16. Tape Cassette Unit Components

consists of 11 bits as follows: start bit, 8 data bits with the least significant being first, parity bit, and stop bit. The start bit is written as a 0 (space) and a stop bit is written as a 1 (mark). The parity bit is either a 1 or a 0 so that when it is added to the 8 data bits an even number of 1 bits is obtained (even parity). The sequence of 11-bit characters written in any 128-character record is written from start to finish in the normal left-to-right fashion. The recording method used automatically provides an erase for the first record at the beginning of the tape and during all interrecord gaps.

A 0 bit on tape is defined as a flux transition to opposite polarity from that of the interrecord gap when reading in the forward direction. A 1 bit is defined as a flux transition to the polarity of the interrecord gap.



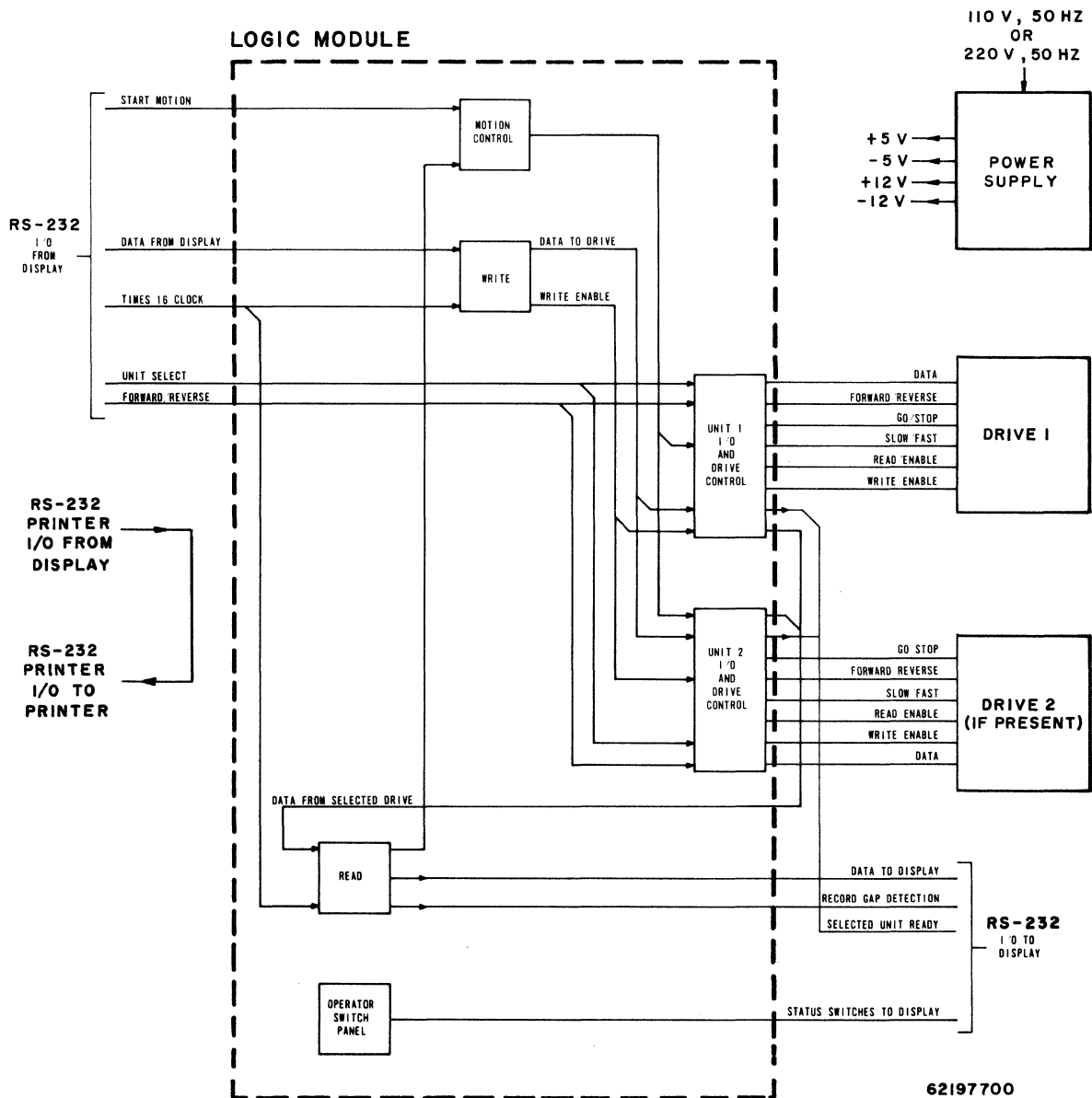


Figure 4-17. Tape Cassette Unit Block Diagram

The tape cassette unit is capable of performing the following operations in response to commands received from the keyboard display terminal:

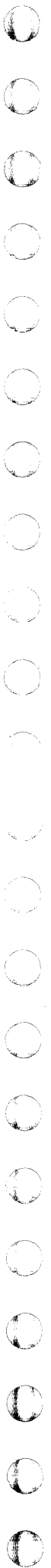
- **Rewind** — Firmware initiated. On the selected drive, tape is moved reverse at high speed (50 inches per second) to clear leader, then forward at slow speed (7.5 inches per second) to BOT hole. Maximum rewind time for a standard 300-foot (91.2-meter) tape is 70 seconds.
- **Read** — On the selected drive, tape is moved forward at slow speed and 11-bit characters are sequentially read (1 bit at a time) and sent to the buffer in the tape interface control circuits in the keyboard display logic rack. Those circuits (and their firmware program) assemble the data into 8-bit data bytes, check the character parity and stop bits, and issue error conditions for display on the screen. This process continues for all 128 characters in a record.
- **Write** — On the selected drive, tape is moved forward at slow speed and data from the buffer in the tape interface control circuit in the keyboard display logic module is serialized out, one bit at a time, and written on tape. Of course, each 8-bit data byte serialized out is preceded on tape by a start bit and followed by a parity bit and a stop bit when actually written. This process continues until all 128 characters of the record are written out from the buffer in the display. At that time, the tape drive writes the record gap and stops. After the first few characters of any record are written, the read portion of the read/write head starts reading the characters just written. This read- after-write data returns to the cassette interface control board in the display for parity and framing error checking.
- **Search** — On the selected drive, tape is moved either forward or reverse while the read mode is active. Read forward will produce data, but reverse read will not. On reverse read for search, record gaps only are recognized. It is the duty of the firmware and circuits on the cassette interface control board in the display to count record gaps and/or keep track of headers to know where the tape is.
- **Erase** — On the selected drive, tape is written on with an extended record gap (one, or marking level) for approximately 6.5 inches (16.5 cm). Erase is not possible on a tape which is write protected (plug/tab removed). It may be ordered by the display cassette interface control circuits for a bad area of tape. Is always ordered just prior to the first record on a tape.

The tape cassette unit is capable of performing the following operations in response to operator actions taken at the tape cassette unit cabinet only (not those which result from using keyboard display keys/switches):

- Rewind — When an operator opens and subsequently closes the cover on a tape drive, the drive will automatically (provided power is on and the I/O cable is connected to the keyboard display which also has power on) rewind to clear leader at high speed. It will then advance to BOT hole at slow speed and stop.
- Unload — When an operator presses the UNLOAD switch below a drive, the drive will automatically (provided power is on and the I/O cable is connected to the keyboard display which also has power on) rewind to clear leader at high speed and stop.

A photocell in the tape drive unit recognizes the BOT hole in tape and causes a BOT/EOT status along with a ready status. The firmware in the tape cassette interface control circuits in the display must issue the command to write an erase gap on the first write when positioned at BOT.

A photocell in the tape drive unit recognizes the EOT hole in tape and causes a BOT/EOT status. This will occur for a read, a write, or an erase operation. The Philips type cassette used by the drive has about 13 inches (33.02 cm) of usable tape past the EOT hole. There are no hardware limitations in the tape cassette unit to prevent reading or writing past the EOT hole. It is possible, therefore, to run tape past EOT and up to clear leader. At clear leader, ready status will end, tape motion will stop, and the TAPE OUT indicator on the tape unit front panel will light.



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This section contains power and signal distribution diagrams for the keyboard display terminal and tape cassette unit portions of the terminal subsystem. Figure 5-1 is a cabling decal diagram for the keyboard display terminal. Figure 5-2 is the card placement chart diagram for the logic module rack in the keyboard display.

For cabling diagrams on either the nonimpact or impact character printer, refer to the maintenance manual for the particular printer. These are the Nonimpact Printer Hardware Maintenance Manual and the Matrix Printer Reference and Field Service Manual (see preface for publication numbers).

The following power and signal distribution diagrams appear on pages within this section as follows:

<u>Keyboard Display Diagram</u>	<u>Page</u>
AC Power Distribution Diagram 60 Hz	5-4
AC Power Distribution Diagram 50 Hz	5-5
Signal Distribution Diagram (2 sheets)	5-6
Schematic Diagram, Video Display	5-8
Schematic Diagram, Video Display	5-10
Schematic Diagram, P.S. Filter & -9V	5-12
Schematic Diagram, +5 V & 10A	5-13
 <u>Tape Cassette Unit Diagram</u>	
Signal Distribution Diagram	5-14
DC Power Distribution Diagram	5-16
AC Power Distribution Diagram 60 Hz	5-17
AC Power Distribution Diagram 50 Hz	5-18

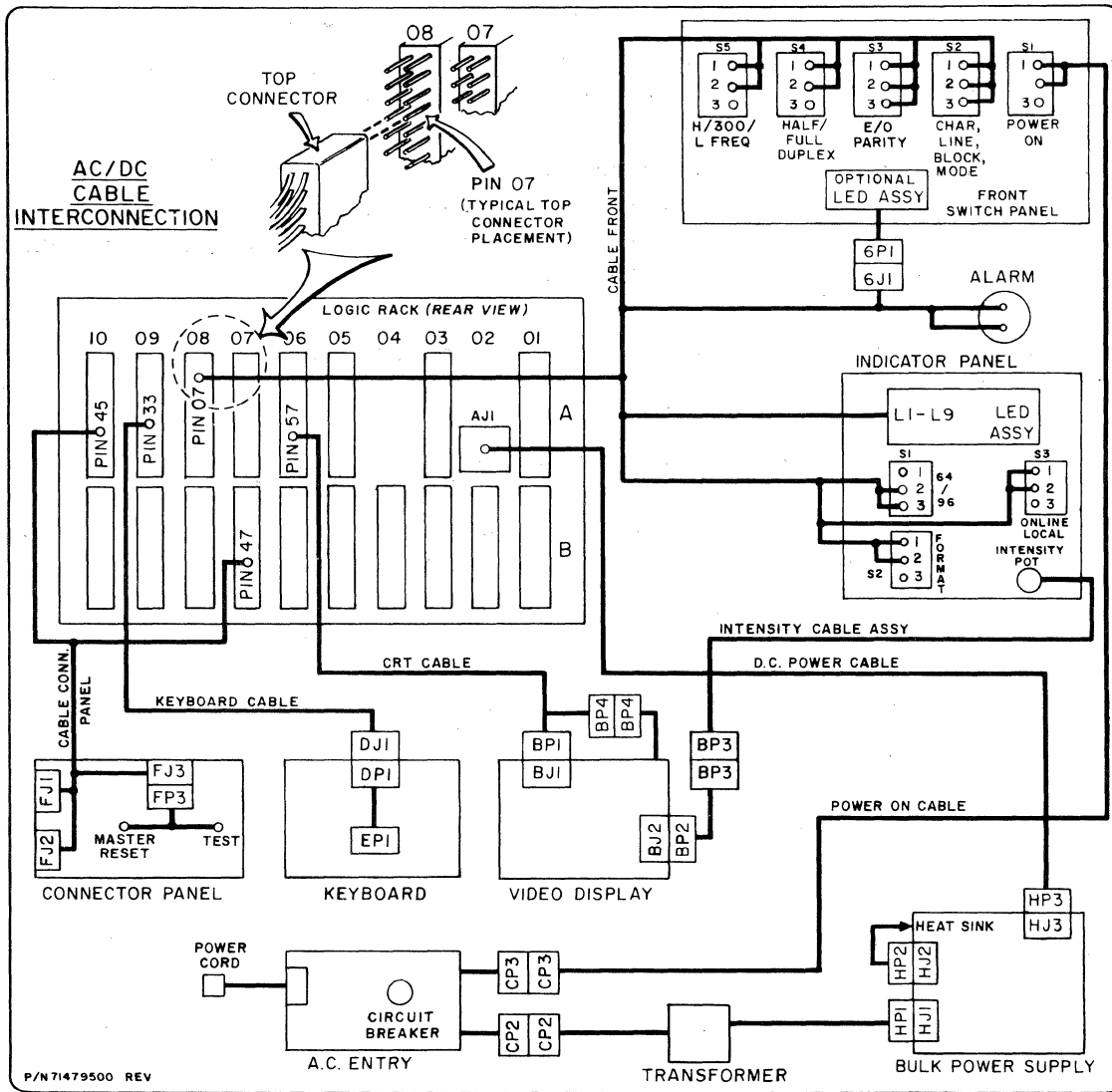


Figure 5-1. Display Terminal Cabling Decal

CARD PLACEMENT CHART									
01	02	03	04	05	06	07	08	09	10
+5-V EXPANSION REGULATOR	REGULATOR	+5-V REGULATOR	REGULATOR	OPTION HIGHLIGHT	REFRESH CONTROL	OPTION CASSETTE PAGING CONTROL	MEMORY	PROCESSOR	OPTION CURRENT LOOP MODEM
OPTION EDIT ROM	OPTION EDIT SEARCH	OPTION ANSWER BACK OR MULTI-DROP	OPTION PRINTER CONTROL	OPTION EXTENDED MEMORY					

DOCUMENT NUMBER 71479302

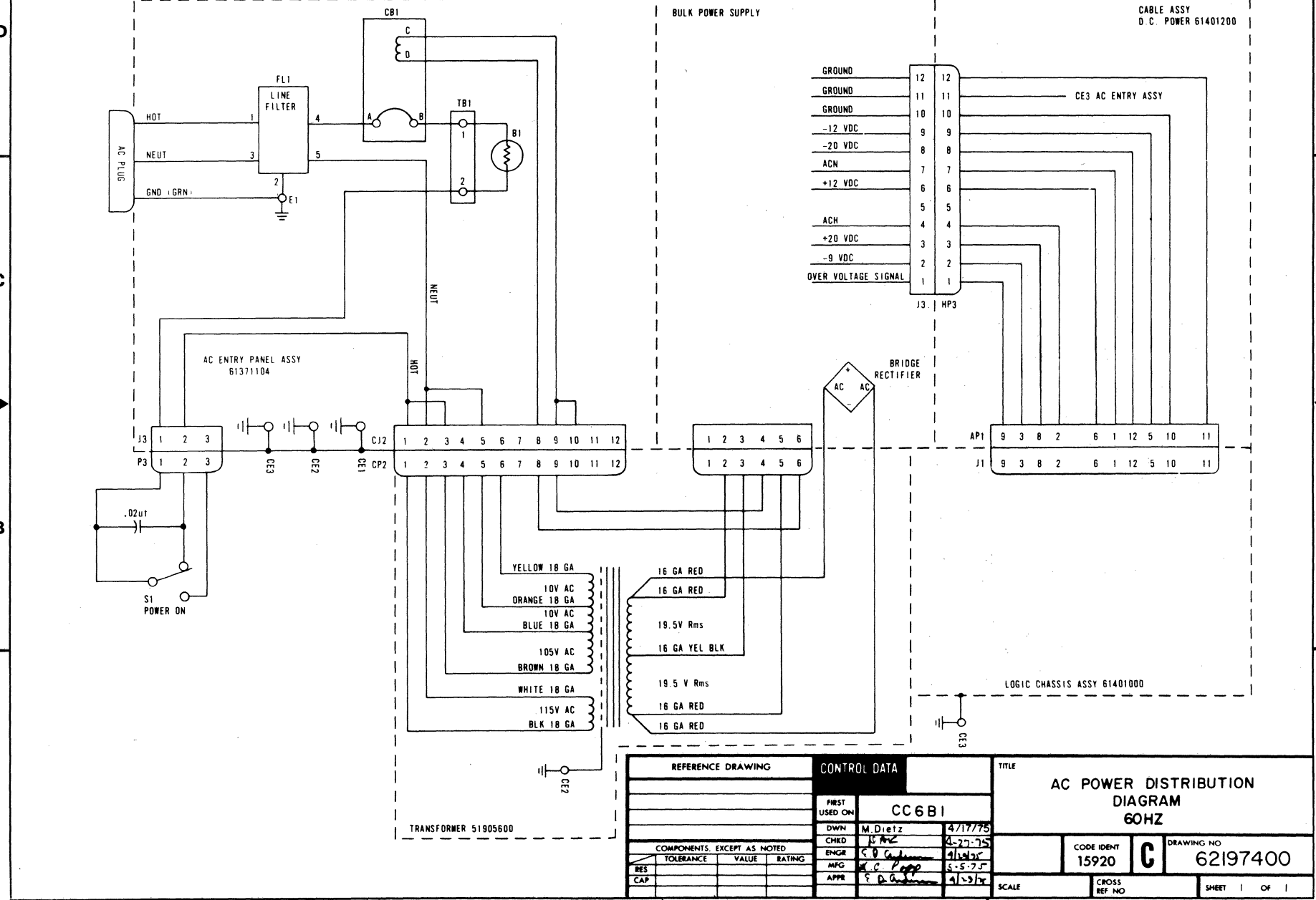
01884

Figure 5-2. Card Placement Chart Decal

5-4

62962300 A

SHEET REVISION STATUS					REVISION RECORD					
REV	CO	DESCRIPTION	DRAFT	DATE	CHKD	APP				
A	10653-4	RELEASED CLASS A	-	5/5/75	-	ECT				
B	10980	REVISED PER ECO	-	11/18/75	-	DW				
C	CD 11036	REVISED PER ECO	-	11/12/75	E.E.	GW				



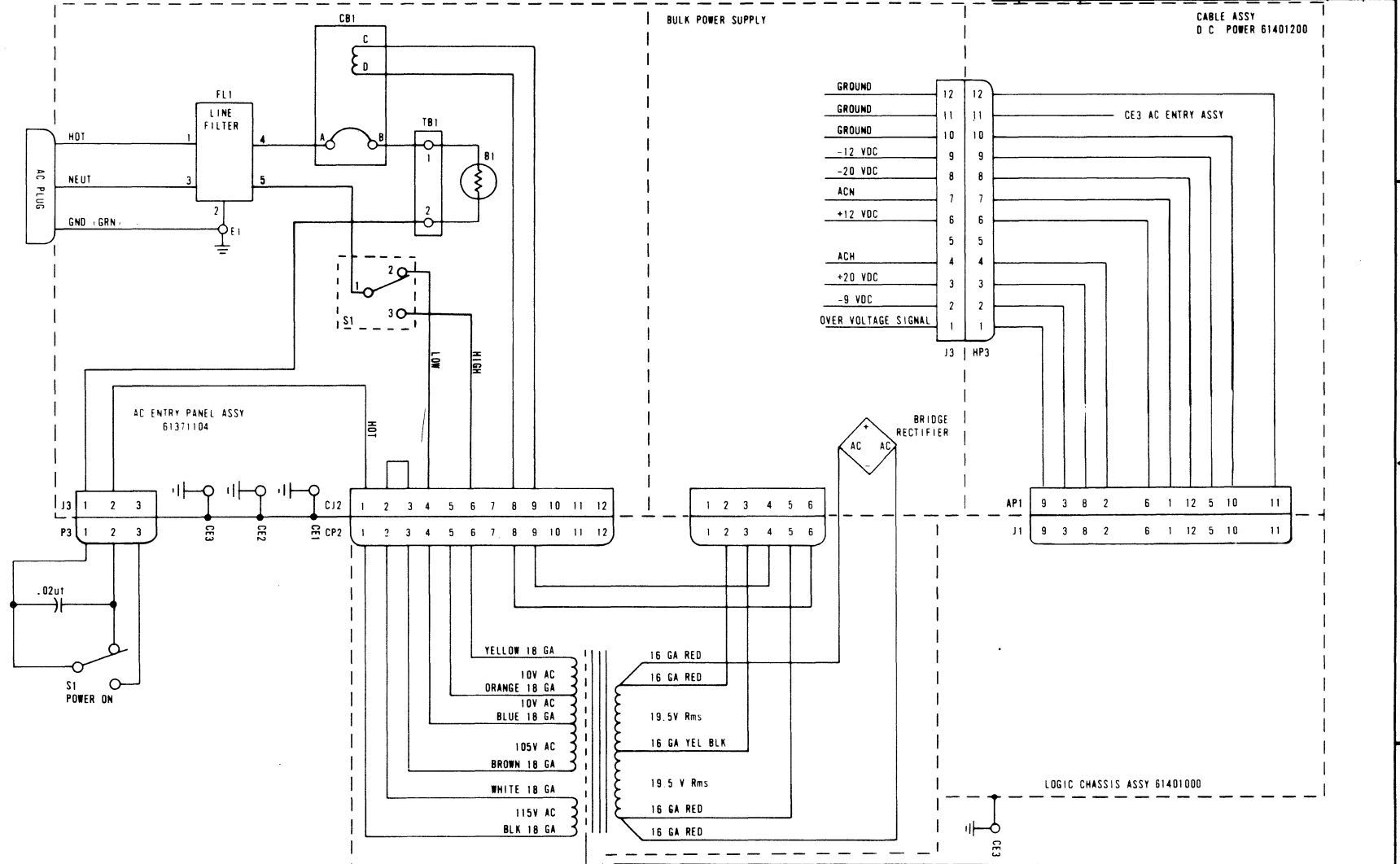
REFERENCE DRAWING			CONTROL DATA			TITLE		
			FIRST USED ON			AC POWER DISTRIBUTION DIAGRAM 60HZ		
			CC 6 B 1			CODE IDENT		
			DWN M. Dietz 4/17/75			15920		
			CHKD J. M. C. 4-27-75			DRAWING NO		
			ENGR S. B. G. 4/18/75			C 62197400		
			MFG S. C. G. 5-5-75			SCALE		
			APPR S. P. G. 4/19/75			CROSS REF NO		
COMPONENTS, EXCEPT AS NOTED						SHEET   OF		
TOLERANCE	VALUE	RATING						
RES								
CAP								



62962300 A

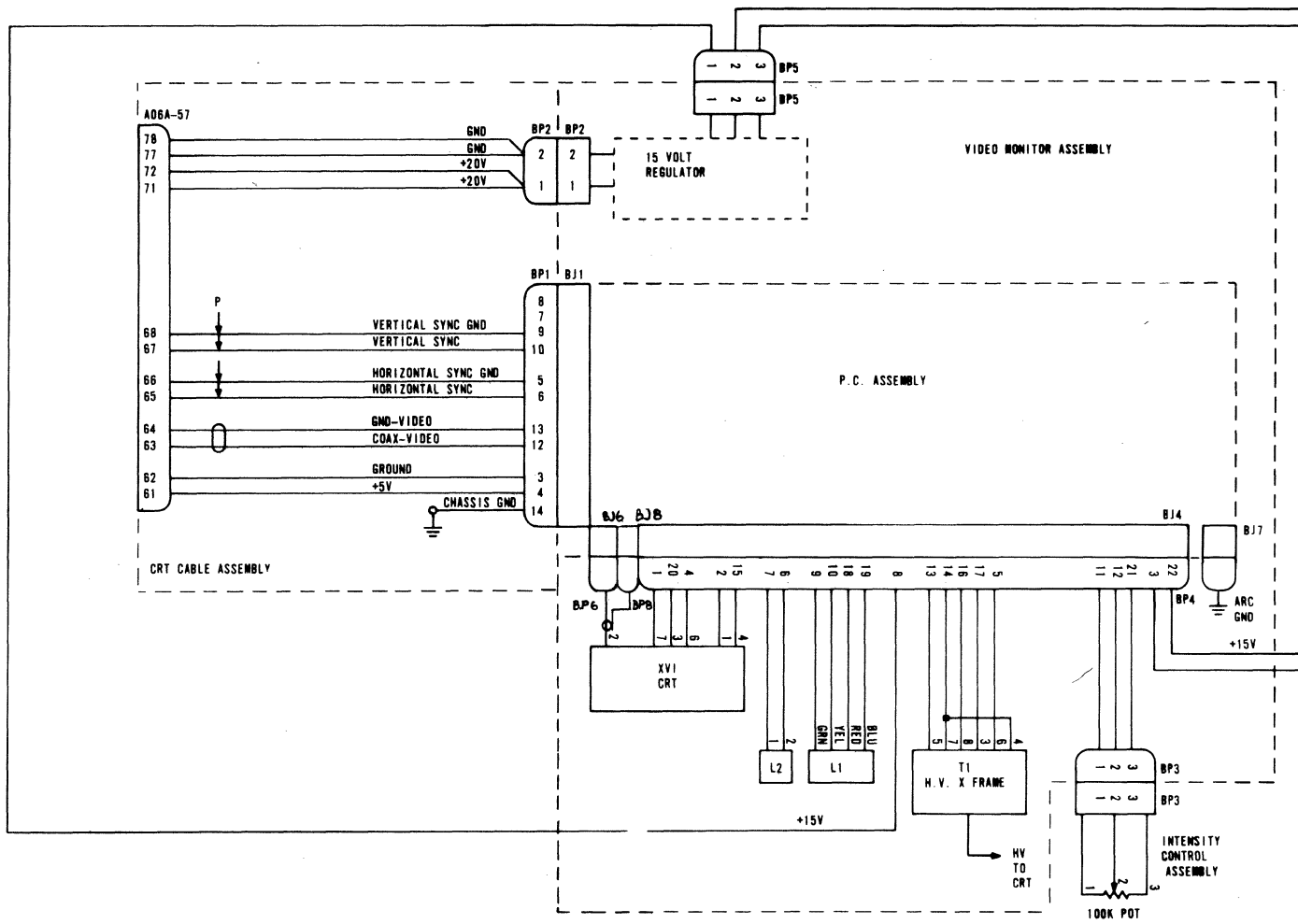
5-5

SHEET REVISION STATUS				REVISION RECORD			
REV	CO	DESCRIPTION	DRFT	DATE	CHKD	APP	
A	10653-4	RELEASED CLASS A	-	5/15/75	-	CT	
B	10980	REVISED PER ECO	APP	11/18/75	SLG	SLG	
C	CD1056	REVISED PER ECO	APP	12-1-75	E.L.	QW	



REFERENCE DRAWING			PART NO			TITLE	
			CC6B1			AC POWER DISTRIBUTION DIAGRAM 50HZ	
COMPONENTS, EXCEPT AS NOTED			FIRST USED ON	DWNN	CHKD	ENGR	APPR
RES	TOLEBRANCE	VALUE	DATE	NAME	DATE	DATE	DATE
CAP							
CODE IDENT 15920						DRAWING NO 62197600	
SCALE						CROSS REF NO	
SHEET 1 OF 1							

SHEET REVISION STATUS				REVISION RECORD			
REV	NO	DESCRIPTION	DRAFT	DATE	CHKD	APP	
2	1						
A	A	RELEASE CLASS A		4/17/75			
B	B	CD10925 REVISED DWG ONLY		4/10/75			
C	C	CD10925 REVISED PER ECO		4/10/75			
D	D	CD10925 REVISED PER ECO		4/10/75			



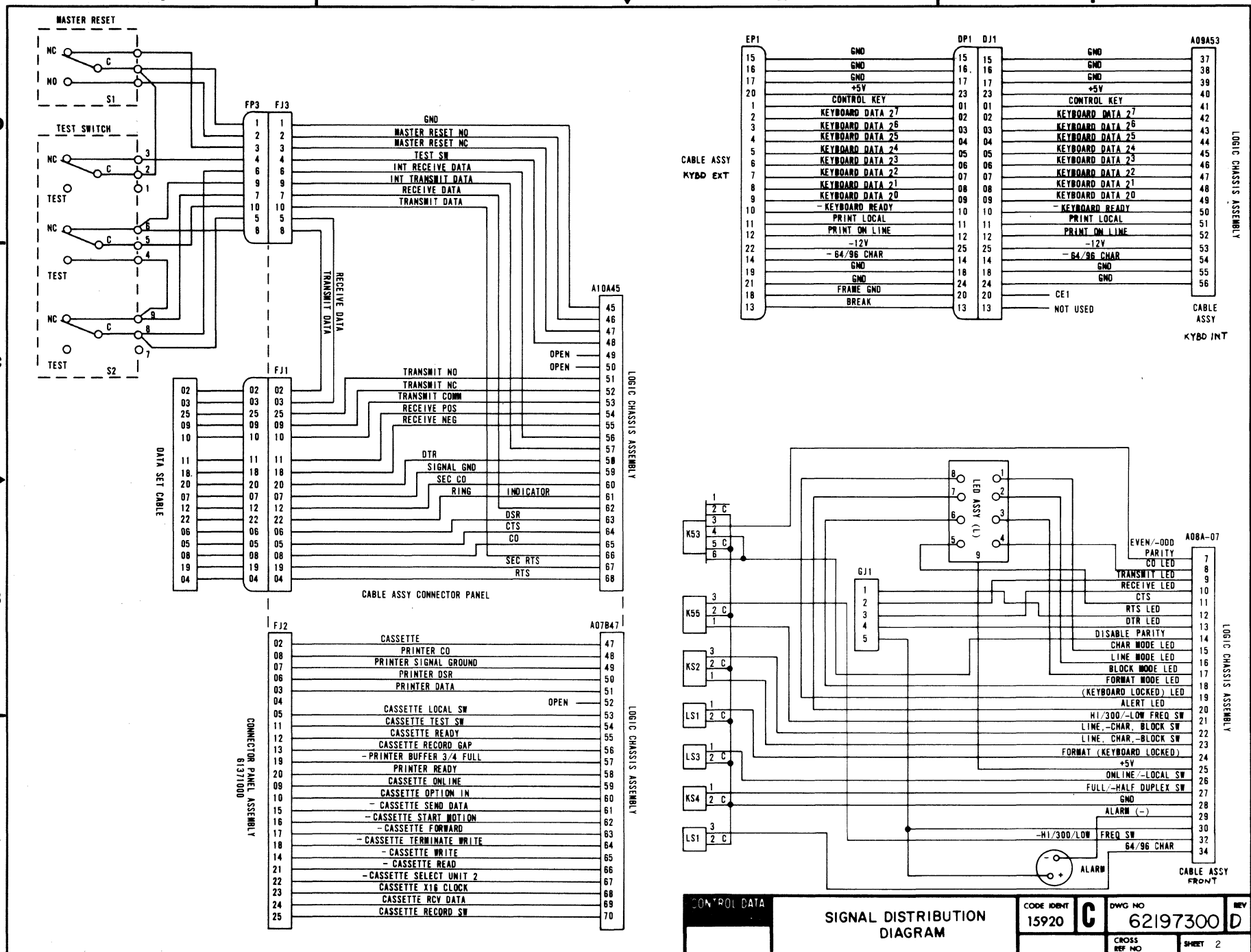
REFERENCE DRAWING			TITLE	
			SIGNAL DISTRIBUTION DIAGRAM	
FIRST USED ON			CC6B1	
DWN			M. Dietz 4/17/75	
CHKD			10/2/75	
ENGR			S.A.G. 4-22-75	
APPR			S.C. Price 5-8-75	
APPR			S.C. Price 5-8-75	
COMPONENTS, EXCEPT AS NOTED			CODE IDENT	
TOLERANCE			15920	
VALUE			C	
RATING			DRAWING NO	
			62197300	
SCALE			CROSS REF NO	
			SHEET 1 OF 2	

5-6

62962300 B

62962300 B

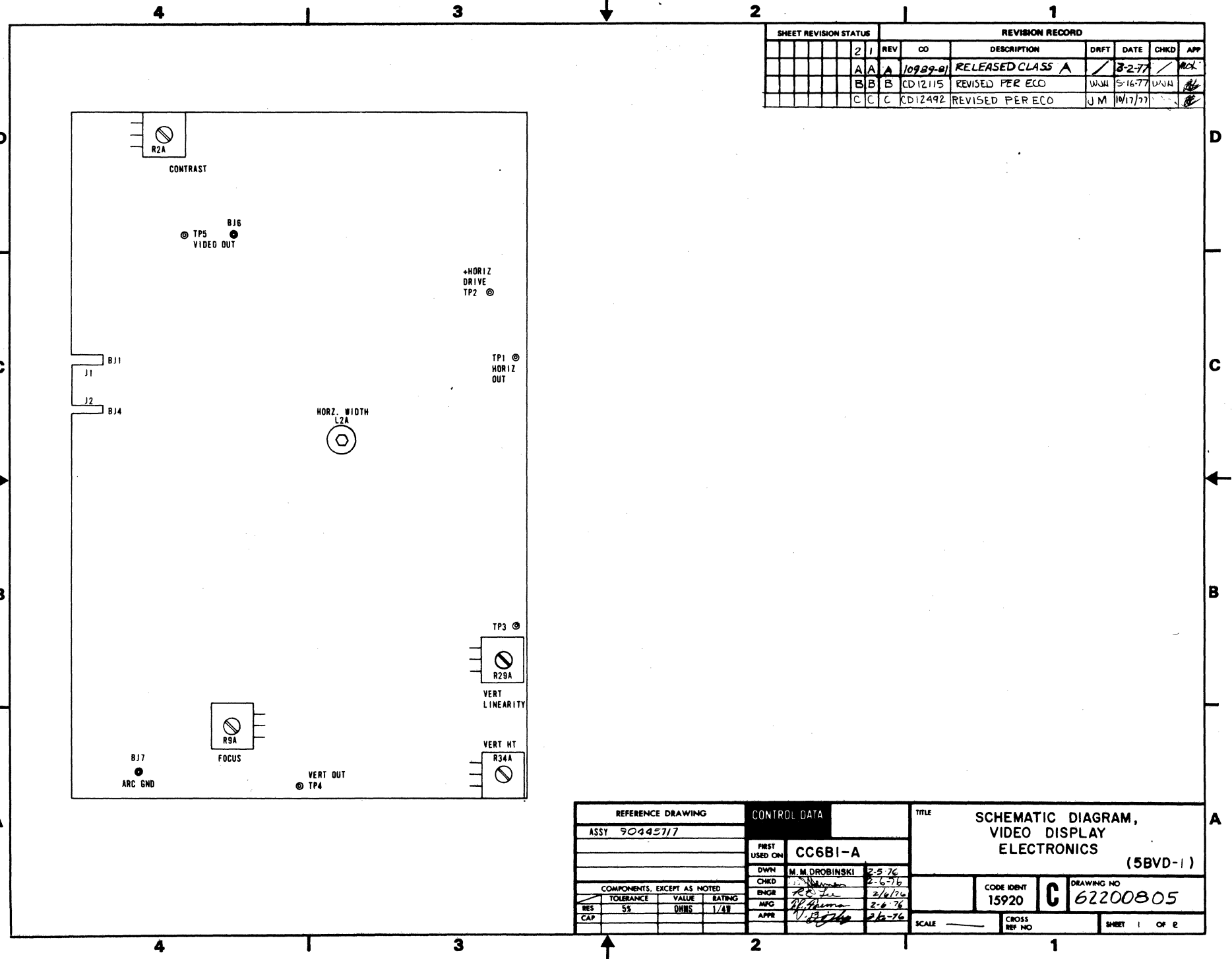
5-7



CONTROL DATA	SIGNAL DISTRIBUTION DIAGRAM		CODE IDENT 15920	DWG NO 62197300	REV D
	CROSS REF NO	SHEET 2			

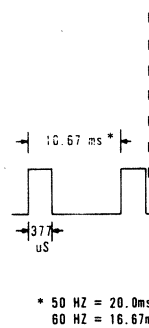
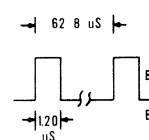
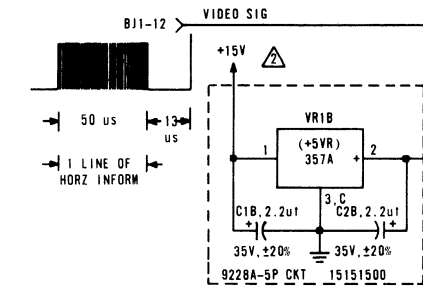
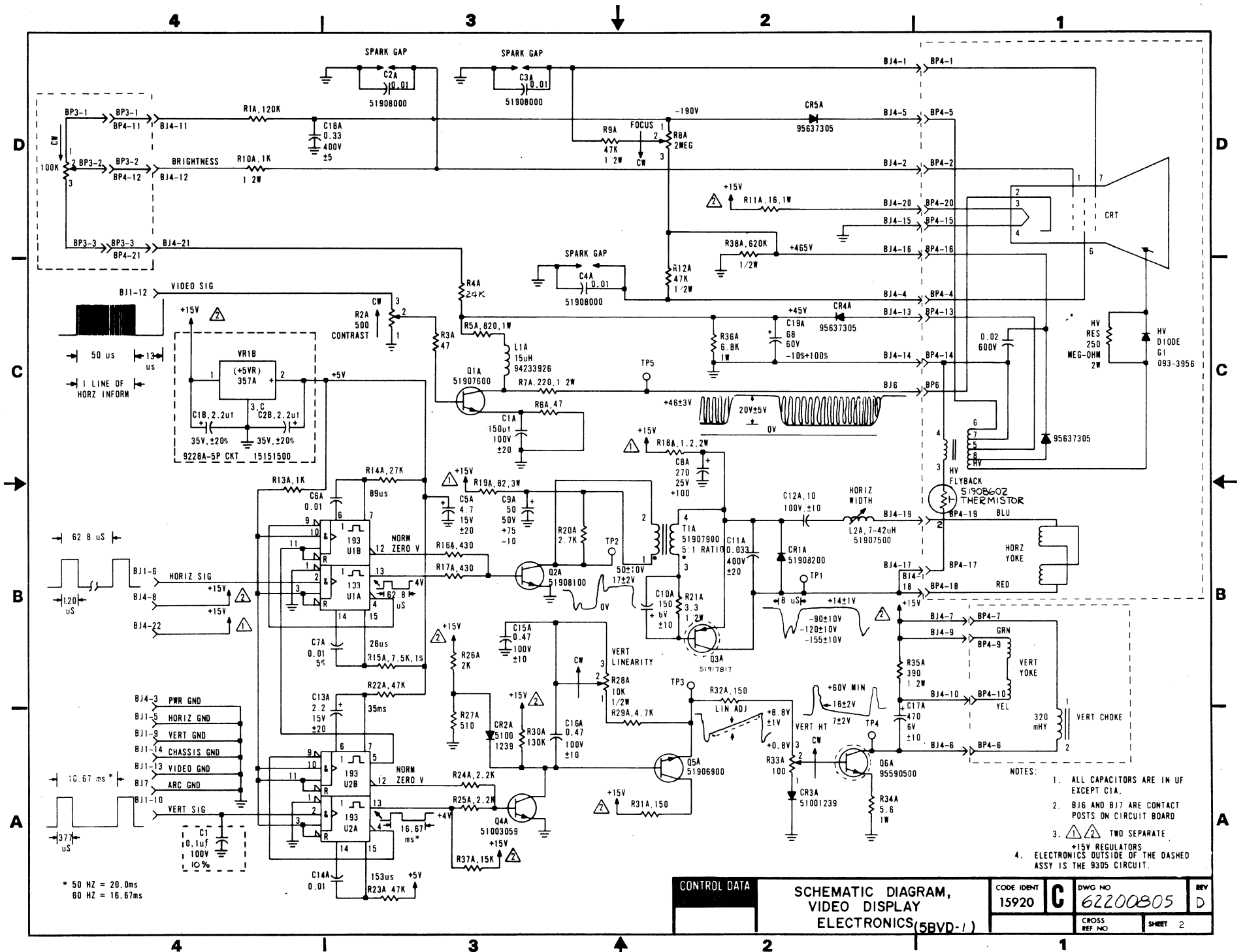
5-8

62962300 C



SHEET REVISION STATUS				REVISION RECORD					
REV	CO	DESCRIPTION	DRFT	DATE	CHKD	APP			
2	1								
A	A	10989-81	RELEASED CLASS A		3-2-77				
B	B	CD12115	REVISED PER ECO	WJH	5-16-77	WJH			
C	C	CD12492	REVISED PER ECO	JM	10/17/77				

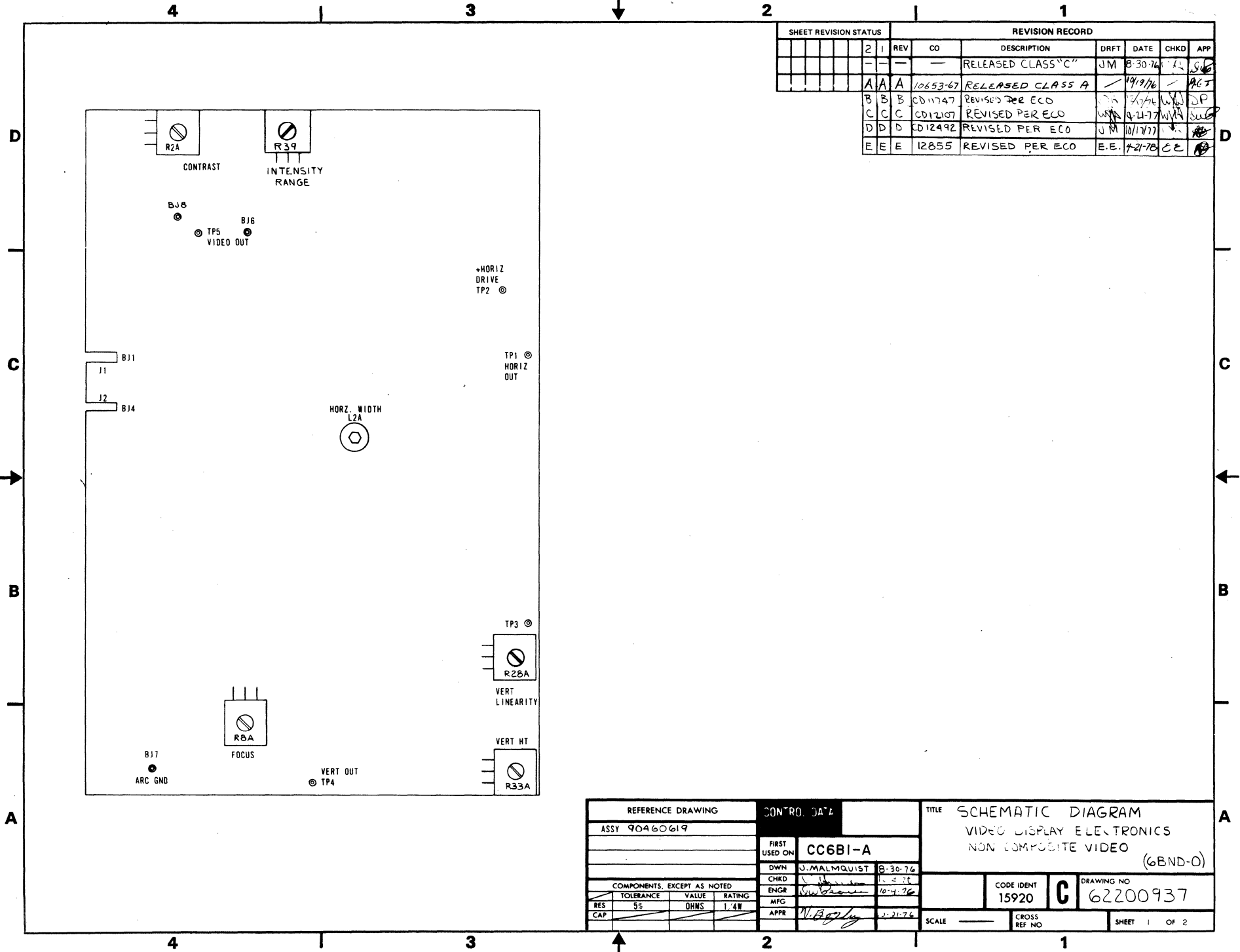
REFERENCE DRAWING			CONTROL DATA		TITLE			
ASSY 90445717			FIRST USED ON		SCHEMATIC DIAGRAM, VIDEO DISPLAY ELECTRONICS (5BVD-1)			
			CC6BI-A				DRAWING NO	
			DWN M. M. DROBINSKI		2-5-76		15920	
			CHKD		2-6-76		C 62200805	
COMPONENTS, EXCEPT AS NOTED			ENGR		2-6-76		SCALE	
RES TOLERANCE			MFG		2-6-76		CROSS REF NO	
CAP 5% OHMS			APPR		2-6-76		SHEET 1 OF 2	



- NOTES:
1. ALL CAPACITORS ARE IN UF EXCEPT CIA.
  2. B16 AND B17 ARE CONTACT POSTS ON CIRCUIT BOARD
  3. TWO SEPARATE +15V REGULATORS
  4. ELECTRONICS OUTSIDE OF THE DASHED ASSY IS THE 9305 CIRCUIT.

5-10

62962300 F

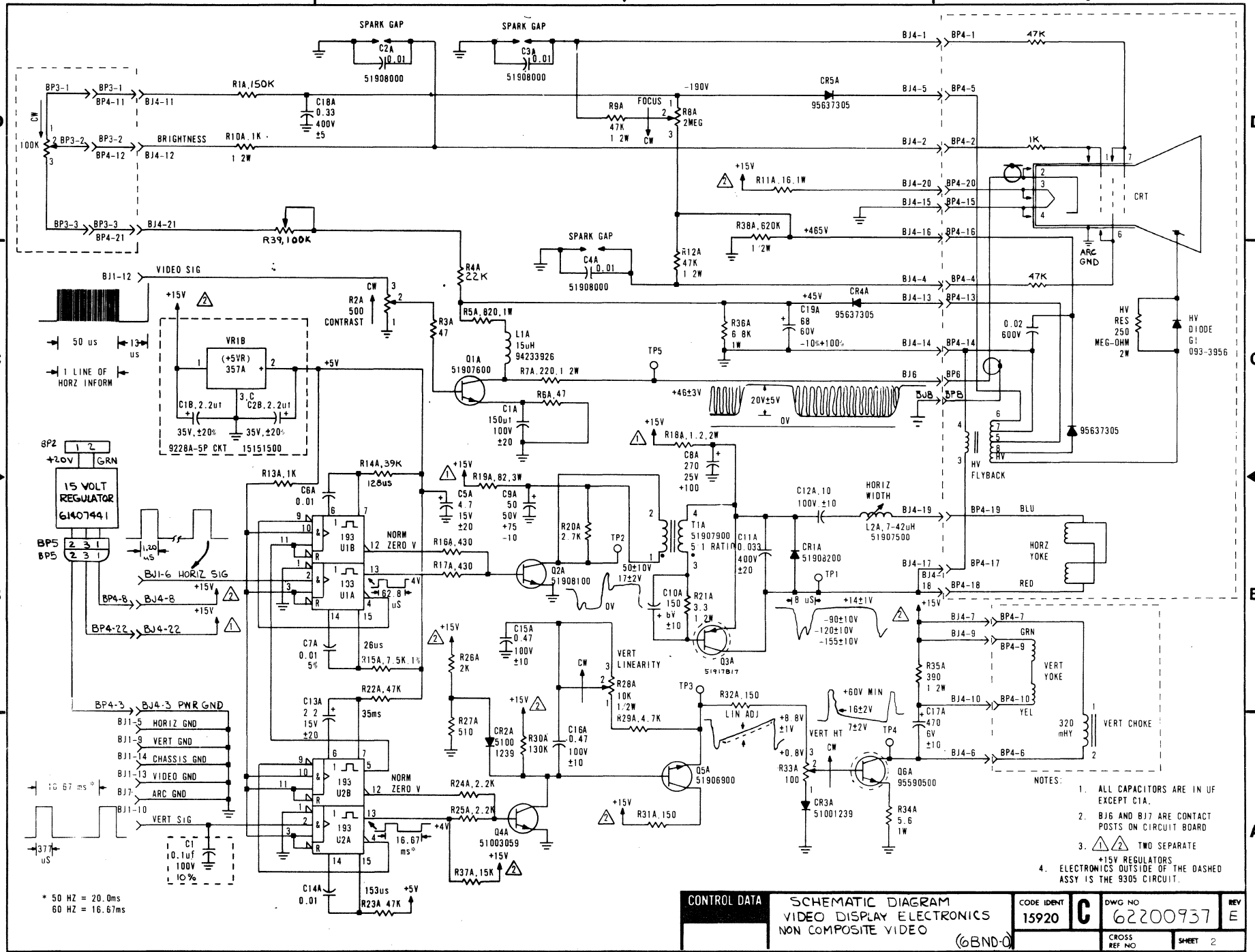


SHEET REVISION STATUS				REVISION RECORD			
REV	CO	DESCRIPTION	DFT	DATE	CHKD	APP	
2	1	---	---	---	---	---	
		RELEASED CLASS "C"	JM	8-30-76	---	---	
A	A	10653-67 RELEASED CLASS A	---	10/17/76	---	---	
B	B	CD11747 REVISED PER ECO	---	7/3/76	---	---	
C	C	CD12107 REVISED PER ECO	---	9-21-77	---	---	
D	D	CD12492 REVISED PER ECO	JM	10/17/77	---	---	
E	E	12855 REVISED PER ECO	E.E.	7-21-78	---	---	

REFERENCE DRAWING		CONTR. DATA		TITLE	
ASSY 90460619				SCHEMATIC DIAGRAM	
		FIRST USED ON		VIDEO DISPLAY ELECTRONICS	
		CC6BI-A		NON-COMPOSITE VIDEO	
		DWN		(6BND-0)	
		CHKD		CODE IDENT	
		ENGR		15920	
		MFG		DRAWING NO.	
		APPR		62200937	
COMPONENTS, EXCEPT AS NOTED					
RES	TOLERANCE	VALUE	RATING		
CAP	5%	OHMS	1/4W		
				SCALE	CROSS REF NO.
					SHEET 1 OF 2

62962300 F

5-11



- NOTES:
1. ALL CAPACITORS ARE IN UF EXCEPT CIA.
  2. BJ6 AND BJ7 ARE CONTACT POSTS ON CIRCUIT BOARD
  3. TWO SEPARATE +15V REGULATORS
  4. ELECTRONICS OUTSIDE OF THE DASHED ASSY IS THE 9305 CIRCUIT.

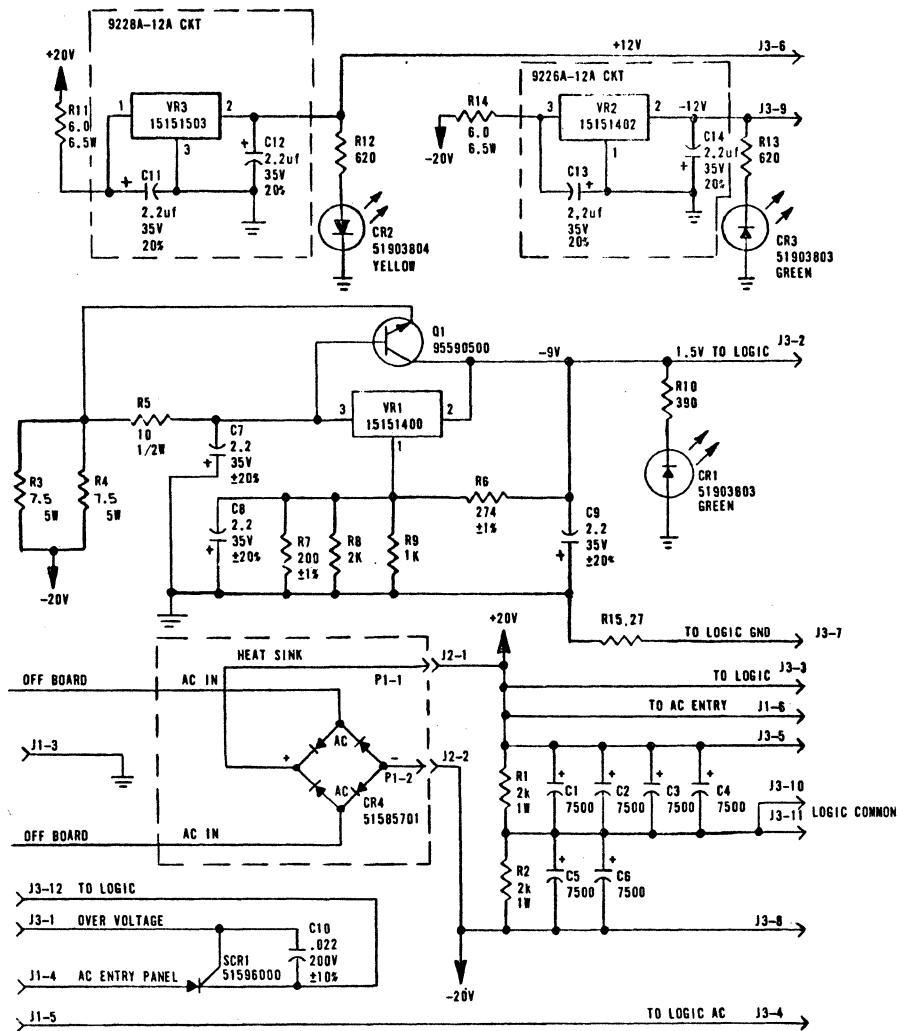
\* 50 HZ = 20.0ms  
60 HZ = 16.67ms

CONTROL DATA	SCHEMATIC DIAGRAM		CODE IDENT	DWG NO	REV
	VIDEO DISPLAY ELECTRONICS		15920	62200937	E
	(6BND-0)		CROSS REF NO	SHEET	2

REV	ECO	DESCRIPTION	DATE	BY	CHKD	APP
01	01	RELEASE	11/1	DA		
A	0253	REVISED PER ECO				
B	0253-6	REVISED PER ECO				
C	0253-6	REVISED PER ECO				
D	0253-6	REVISED PER ECO				

**NOTE:**

INSTRUCTIONS FOR ADJUSTING THE -9V OUTPUT:  
 R6 AND R8 ARE TRIMMING RESISTORS TO COMPENSATE FOR OUTPUT VOLTAGE VARIATION DUE TO COMPONENT TOLERANCE.  
 REMOVING R8 WILL CAUSE APPROX. .5V DECREASE IN OUTPUT, (FROM -8.5V TO -9V TYPICAL).  
 REMOVING R6 WILL CAUSE AN ADDITIONAL DECREASE OF APPROX. .5V.



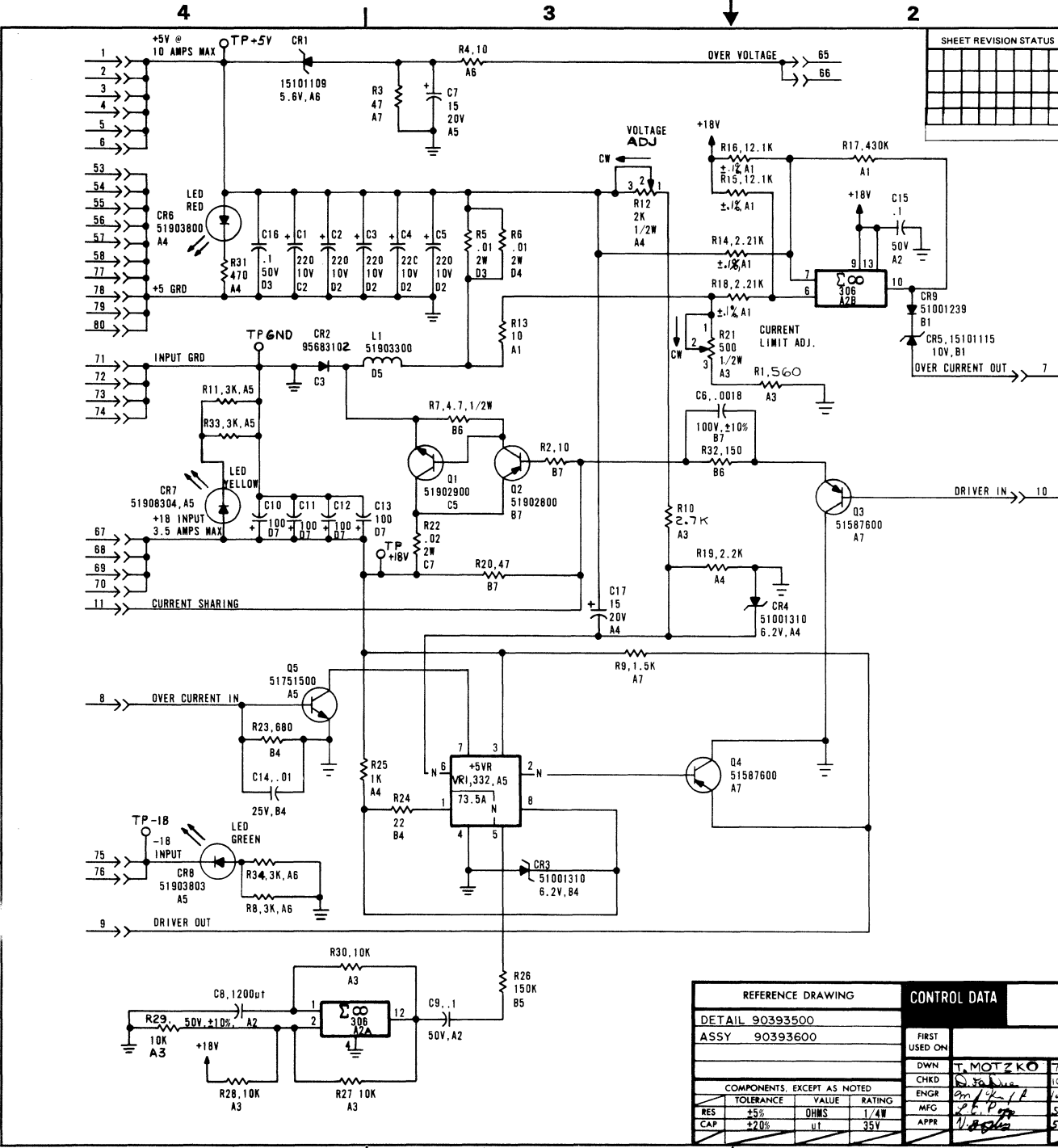
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90421600	90421700	UNIT	DATE	REV	BY
ASBY	ASBY	DWN	2-18-75	01	DA
		CHK	2-17-75		
		ENGR			
		WFC			
		APP			
		INLCA			
COMPONENTS, EXCEPT AS NOTED		DRAWING NUMBER			
TOLERANCE	VALUE	TYPING	C 90421500		
RES ± 5%	OHMS	1/4W	CODE IDENT		
CAP ± 10%	UF	35V	SHEET 1 OF 1		

TITLE	
SCHEMATIC DIAGRAM 110W/D (PS FILTER AND -9V REG)	



62962300 B

5-13



SHEET REVISION STATUS			REVISION RECORD				
REV	CO	DESCRIPTION	DRFT	DATE	CHKD	APP	
01	C008	REVISED & REDRAWN	MMO	10-21-74	DR	20/1	
02	C114	REVISED PER ECO	T.M.	2-7-75	DR	24/1	
03	C207	REVISED PER ECO	T.M.	3-17-75	DR	24/1	
04	C251	REVISED PER ECO	T.M.	4-29-75	DR	24/1	
A 10238-4 RELEASED CLASS A				5/8/75	DR	24/1	
B	CD11077	REVISED PER ECO	J.W.	11/4/75	DR	24/1	
C	CD11161	REVISED PER ECO	J.M.	12-11-75	DR	24/1	

REFERENCE DRAWING		CONTROL DATA		TITLE	
DETAIL 90393500		FIRST USED ON		SCHEMATIC DIAGRAM 4BBD	
ASSY 90393600				( +5 VOLTS @ 10 A )	
COMPONENTS, EXCEPT AS NOTED					
RES	+5%	OHMS	1/4W	CODE IDENT	15920
CAP	+20%	UF	35V	DRAWING NO	90393400
DRAWN			DATE		
CHKD			DATE		
ENGR			DATE		
MFG			DATE		
APPR			DATE		
SCALE	CROSS REF NO	SHEET		OF	

D C B A

REV B  
 DWG NO 62197700  
 SHEET 17  
 CROSS REF NO  
 CODE IDENT 15920  
 SIGNAL DISTRIBUTION  
 CON'GOL DATA

BACK PANEL PIN NO.	SBJD INPUT/OUTPUT CARD 01	SBLD READ WRITE CARD 02	SBKD UNIT CONTROL CARD 03
1	+5	+5	+5
2	+5	+5	+5
3	+5	+5	+5
4	+5	+5	+5
5	+12		
6	+12		
7	-12		
8	-12		
9	START MOTION	-BOT/EOT UNIT 1	-BOT/EOT UNIT 1
10	SELECT UNIT 2	READ DATA 1 UNIT 1	READ DATA 1 UNIT 1
11	FORWARD	READ DATA 0 UNIT 1	READ DATA 0 UNIT 1
12	TERMINATE WRITE	-WRITE ENABLE UNIT 1	-WRITE ENABLE UNIT 1
13	BOT/EOT	DRIVE 1 WRITE PROTECT 1	DRIVE 1 WRITE PROTECT 1
14	PLAY	READY UNIT 1	READY UNIT 1
15	LINE/LOCAL	-GO UNIT 1	-GO UNIT 1
16	RECORD	PED TO DECK	PED TO DECK
17	READY		
18	RECORD GAP	-BOT/EOT UNIT 2	-BOT/EOT UNIT 2
19	RECEIVE CLK	READ DATA 1 UNIT 2	READ DATA 1 UNIT 2
20	READ DATA	READ DATA 0 UNIT 2	READ DATA 0 UNIT 2
21	READ	-WRITE ENABLE UNIT 2	-WRITE ENABLE UNIT 2
22	WRITE	DRIVE 2 WRITE PROTECT 2	DRIVE 2 WRITE PROTECT 2
23	WRITE DATA	READY UNIT 2	READY UNIT 2
24	TIMES 16 CLK	-GO UNIT 2	-GO UNIT 2
25	DELAY CNT ENABLE	DELAY CNT ENABLE	
26	SELECTED UNIT READY	SELECTED UNIT READY	STOP/GO
27	-SELECTED BOT/EOT	-SELECTED BOT/EOT	FORWARD/REV
28	-STOP READ		SLOW/FAST
29	RECEIVE CLK	RECEIVE CLK	WRITE SELECT
30	READ NRZ DATA	READ NRZ DATA	READ ENABLE
31	GO F/F	GO F/F	WRITE DATA
32	-GO F/F	-GO F/F	READ DATA
33	WRITE ENABLE	WRITE ENABLE	-READ DATA
34	END WRITE	END WRITE	BOT/EOT
35	READ ENABLE	READ ENABLE	READY
36	DATA FROM DISPLAY	DATA FROM DISPLAY	WRITE ENABLE
37	TIMES 16 CLK	TIMES 16 CLK	SIDE A/B
38	SELECT DELAY CLK	SELECT DELAY CLK	
39	-CLR RECORD GAP	-CLR RECORD GAP	
40	-CLR RAMP DOWN	-CLR RAMP DOWN	
41	-READY + BUSY UNIT 1	-READY + BUSY UNIT 1	
42	SELECT UNIT 1	SELECT UNIT 1	
43	-READY + BUSY UNIT 2	-READY + BUSY UNIT 2	
44	SELECT UNIT 2	SELECT UNIT 2	
45	-PU CLR	-PU CLR	
46	RECORD GAP	RECORD GAP	
47	-OUT OF TAPE UNIT 1		
48	-OUT OF TAPE UNIT 2		
49	-REWIND		
50	FORWARD		
51	WRITE		
52	UNLOAD UNIT 1		
53	UNLOAD UNIT 2		
54			
55			
56			
57	OUT OF TAPE IND 1		STOP/GO
58	UNLOAD UNIT 1		FORWARD/REV
59	READY + -BUSY IND 1		SLOW/FAST
60	LINE/LOCAL UNIT 2		WRITE SELECT
61	READ ACTIVE IND		READ ENABLE
62	PLAY UNIT 1		WRITE DATA
63	WRITE ACTIVE IND		READ DATA
64	RECORD UNIT 1		-READ DATA
65	UNLOAD UNIT 2		BOT/EOT
66	RECORD UNIT 2		READY
67	OUT OF TAPE IND 2		WRITE ENABLE
68	PLAY UNIT 2		SIDE A/B
69	READY + -BUSY IND 2		
70	LINE/LOCAL UNIT 2		
71			
72			
73			
74			
75			
76			
77	GND	GND	GND
78	GND	GND	GND
79	GND	GND	GND
80	GND	GND	GND

- △ I/O CABLE
- △ INDICATOR AND SWITCH CABLE
- △ TAPE DRIVE #1 CABLE
- △ TAPE DRIVE #2 CABLE

1  
2  
3  
4

1  
2  
3  
4

REV	DWG NO	CROSS REF NO	SHEET
A	62197700		18
CODE IDENT	15920	SIGNAL DISTRIBUTION	
CONTROL DATA			

I/O CABLE P10 CABLE W1	SIGNAL IDENTIFICATION	BACK PLANE A1A5J1
1	FRAME GROUND	
2	PLAY	01-14
3		
4		
5	BOT EOT	01-13
6		
7	DC GROUND	
8		
9	LINE/LOCAL	01-15
10		
11	RECEIVE CLK	01-19
12	READY	01-17
13	RECORD GAP	01-18
14	WRITE	01-22
15	WRITE DATA	01-23
16	START MOTION	01-9
17	FORWARD	01-11
18	TERMINATE WRITE	01-12
19		
20		
21	READ	01-21
22	SELECT UNIT 2	01-10
23	TIMES 16 CLK	01-24
24	READ DATA	01-20
25	RECORD	01-16

TAPE DRIVE #1 A804 CABLE W6 OR W3	SIGNAL IDENTIFICATION	BACK PLANE A1A7J1
1	CONNECTED TO A8P4-14	
2	WRITE DATA	03-32
3		
4	BOT EOT	03-35
5	READY	03-36
6	SLOW/FAST	03-29
7	READ ENABLE	03-31
8		
9	-READ DATA	03-34
10		
11	GROUND	
12	GROUND	
13	-12	
14	CONNECTED TO A8P4-1	
15	WRITE ENABLE	03-37
16	SIDE A/B	03-38
17	WRITE SELECT	03-30
18	STOP/GO	03-27
19	FORWARD/REV	03-28
20	+5	
21	READ DATA	03-33
22	+5	
23	+12	

TAPE DRIVE #2 A8P4 CABLE W3	SIGNAL IDENTIFICATION	BACK PLANE A1A7P2
1	CONNECTED TO A8P4-14	
2	WRITE DATA	03-63
3		
4	BOT EOT	03-66
5	READY	03-67
6	SLOW/FAST	03-60
7	READ ENABLE	03-62
8		
9	-READ DATA	03-65
10		
11	GROUND	
12	GROUND	
13	-12	
14	CONNECTED TO A8P4-1	
15	WRITE ENABLE	03-68
16	SIDE A/B	03-69
17	WRITE SELECT	03-61
18	STOP/GO	03-58
19	FORWARD/REV	03-59
20	+5	
21	READ DATA	03-64
22	+5	
23	+12	

D

C

B

A

POWER SUPPLY A3P03 CABLE W3 OR W6*	SIGNAL IDENTIFICATION	TAPE DRIVE	OPERATOR PANEL
1	DRIVE #1 +5 VOLTS	A9P4-20	
1	DRIVE #1 +5 VOLTS	A9P4-22	
2	DRIVE #2 +5 VOLTS	A9P4-20	
2	DRIVE #2 +5 VOLTS	A9P4-22	
6	DRIVE #1 +12 VOLTS	A9P4-23	
6	DRIVE #1 +12 VOLTS	A9P4-24	
7	DRIVE #2 +12 VOLTS	A9P4-23	
7	DRIVE #2 +12 VOLTS	A9P4-24	
8	DRIVE #1 -12 VOLTS	A9P4-13	
9	DRIVE #2 -12 VOLTS	A9P4-13	
10	DRIVE #1 GROUND	A9P4-11	
10	DRIVE #1 GROUND	A9P4-12	
11	DRIVE #2 GROUND	A9P4-11	
11	DRIVE #2 GROUND	A9P4-12	
12	UNIT #2 SWITCH GROUND		S5-1, S4-1, S6-1
12	UNIT #2 POWER ON INDICATOR		A4L6

\*NOTE: IF CABLE W6, SINGLE DRIVE IS USED ALL A9P4 AND S5-1, S4-1, S6-1 CONNECTORS ARE OMITTED.

POWER SUPPLY A3P02 CABLE W4	SIGNAL IDENTIFICATION	LOGIC CHASSIS	OPERATOR PANEL
1	+5 VOLTS	A1E1	
2	LED +5V		A4L9
6	+12 VOLTS	A1A5-B	
8	-12 VOLTS	A1A5-B	
10	GROUND	A1E2	
11	UNIT 1 POWER ON INDICATOR		A4L7
11	UNIT 1 SWITCH GROUND		S2-1, S1-1, S3-1
12	LOGIC TO FRAME GROUND	A2E4	

REV	A
DWG NO	62197700
CROSS REF NO	
SHEET	19
CODE IDENT	C
	15920
DC POWER DISTRIBUTION	
CONTROL DATA	

1

2

3

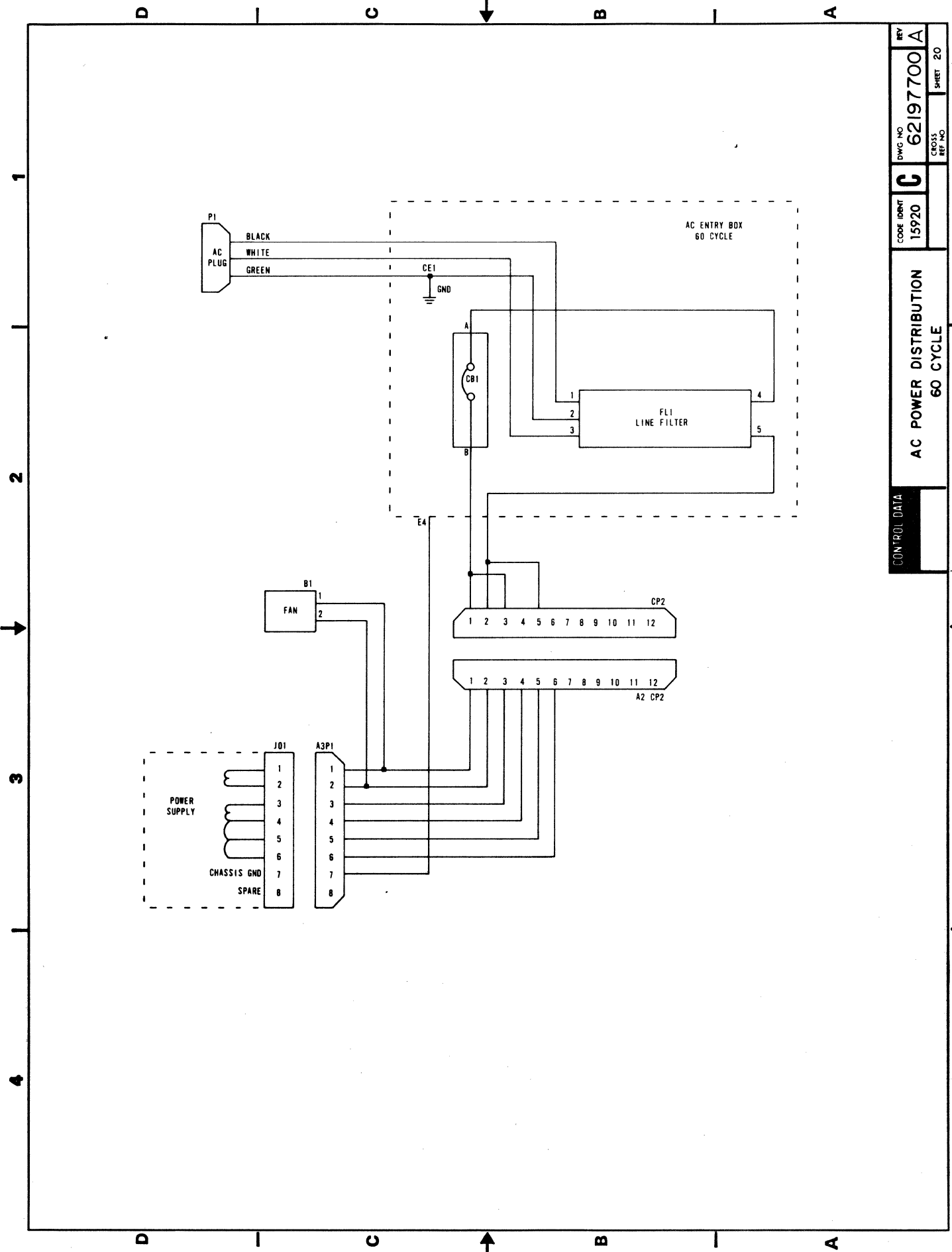
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D

C

B

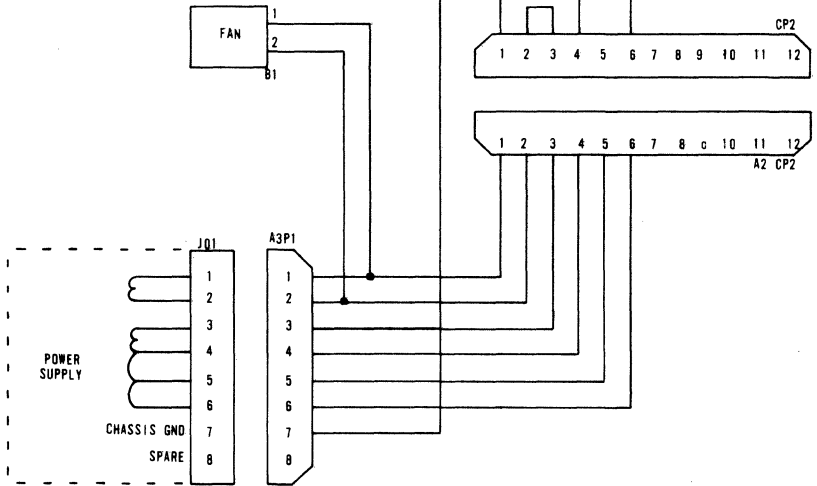
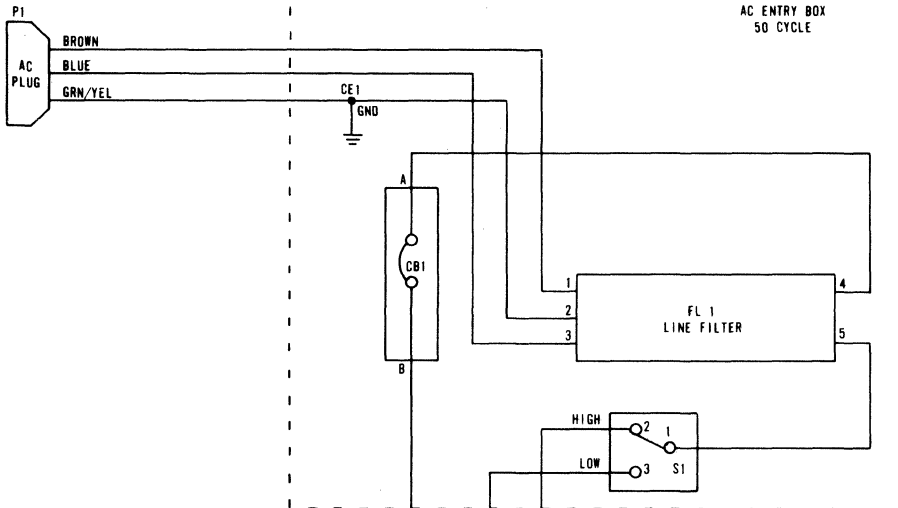
A



REV	A
DWG NO	62197700
CROSS REF NO	
SHEET	20
CODE IDENT	C
15920	
AC POWER DISTRIBUTION 60 CYCLE	
CONTROL DATA	

D C B A

REV	A
DWG NO	62197700
CODE IDENT	C
CROSS REF NO	15920
SHEET	21
AC POWER DISTRIBUTION 50 CYCLE	
CONTROL DATA	



1  
2  
3  
4

1  
2  
3  
4

This section contains genealogy charts, assembly drawings, and parts lists for portions of the terminal subsystem. Covered are the keyboard display, keyboard display supplemental functions (e.g., edit, answerback, current loop, etc.), and the peripheral tape cassette unit. For the keyboard display and tape unit, illustrations with related lists of materials are provided at least to the field-replaceable part/assembly/module level. Table 7-1 defines terms appearing on the parts lists in this section. For parts data within any module, refer to the hardware maintenance manual for that module (see preface for particular module manuals).

Parts data for the nonimpact printer is provided in its hardware maintenance manual. Parts data for the impact printer is provided in its parts manual. See preface for publication numbers of these printer manuals.

TABLE 7-1. DEFINITION OF TERMS USED IN PARTS LISTS

COLUMN HEADING	EXPLANATION
FIND NO.	Identifies an electrical or mechanical part on an assembly drawing. If more than one listing appears for a find number, refer to LI, WK IN, and WK OUT.
LI (Line Item)	Gives a chronological or historical record of the addition of a new part to a find number. For example, 01 indicates that the part was the first one used, and 02 indicates the second, etc. See also WK IN and WK OUT.
PART NUMBER	Gives the Control Data Corporation part identification. Use this number when ordering replacements.
CD (Check Digit)	Gives the information-control system a means of cross-checking the correctness of a part number.
QUANTITY	Lists the total number of a part required to complete an assembly. The vertical line near the center of the column acts as a decimal point. Numbers to the left of the line are whole numbers. Those to the right of the line are tenths, hundredths, and thousandths.
U/M (Unit of Measure)	Indicates how the information-control system counts or supplies a part.
PART DESCRIPTION	Describes the physical appearance, type, or name of a part.
MC (Material Control Code)	Supplies additional descriptive data to the information-control system.
YLD (Yield)	A 2-digit numeric number that indicates the usable portion of any quantity of parts expressed as a percentage.
ECO NO. IN	Engineering Change Order that adds a new part to an assembly. See also WK IN.
ECO NO. OUT	Engineering Change Order that deletes a part from an assembly. See also WK OUT.
S/N (Serial Number)	Used to specify an ECO's effectivity by serial number.
WK IN (Week In)	Lists the date when manufacturing begins using a new part and when it is available for parts replacement. For example, 7222 means a part is available as of the 22nd week of 1972.
WK OUT (Week Out)	Lists the date when manufacturing no longer uses a part in building an assembly. See also WK IN. Do not order a part after its week-out date.





SHEET REVISION STATUS		REVISION RECORD				
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP
		RELEASED CLASS C		11-12		DCW
01	C123	ADDED FIRMWARE CARDS DELETED 482D PC CARD		11/75		LKH
02	C126	REVISED PER ECO		12/22		LKH
03	C127	REVISED PER ECO		12/22		LKH
04	C128	ADDED 482D PC CARD		12/22		LKH
05	C304	ADDED REF DOCUMENTS		12/22		LKH
A	10637	REVISED PER ECO		11/75		LKH
B	21027	REVISED PER ECO		11/75		LKH
C	21027	REVISED PER ECO		11/75		LKH
D	21027	REVISED PER ECO		11/75		LKH
E	21027	REVISED PER ECO		11/75		LKH
F	21027	REVISED PER ECO		11/75		LKH
G	21027	REVISED PER ECO		11/75		LKH
H	21027	REVISED PER ECO		11/75		LKH
I	21027	REVISED PER ECO		11/75		LKH
J	21027	REVISED PER ECO		11/75		LKH
K	21027	REVISED PER ECO		11/75		LKH
L	21027	REVISED PER ECO		11/75		LKH
M	21027	REVISED PER ECO		11/75		LKH
N	21027	REVISED PER ECO		11/75		LKH
O	21027	REVISED PER ECO		11/75		LKH
P	21027	REVISED PER ECO		11/75		LKH
Q	21027	REVISED PER ECO		11/75		LKH
R	21027	REVISED PER ECO		11/75		LKH
S	21027	REVISED PER ECO		11/75		LKH
T	21027	REVISED PER ECO		11/75		LKH
U	21027	REVISED PER ECO		11/75		LKH

OPTIONS FOR REFERENCE ONLY SEE HPC

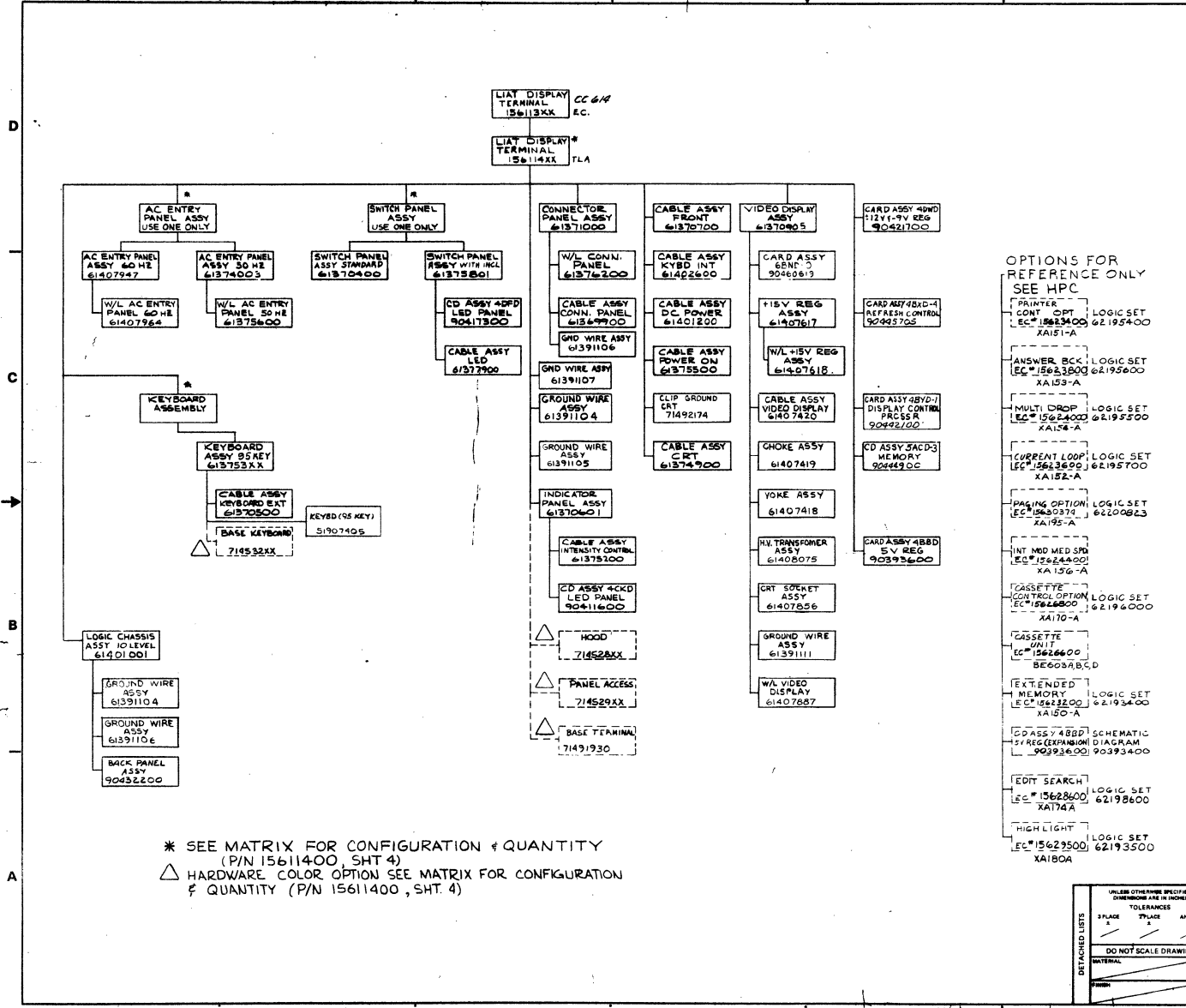
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PRINTER CONT OPT LOGIC SET EC# 15623400	62195600	XA152-A
MULTI DROP LOGIC SET EC# 15624000	62195500	XA154-A
CURRENT LOOP LOGIC SET EC# 15623600	62195700	XA152-A
PAGING OPTION EC# 15620374	62200823	XA192-A
INT MID MED SPD EC# 15624400		XA156-A
TAPE DRIVE CONTROL OPTION EC# 15626800	62196000	XA170-A
EXTENDED MEMORY LOGIC SET EC# 15623300	62193400	XA180-A
DPASSY 482D SCHEMATIC DIAGRAM EC# 90393600	90393400	
EDIT SEARCH LOGIC SET EC# 15628600	62198600	XA174-A
HIGHLIGHT LOGIC SET EC# 15623500	62193500	XA180A

REFERENCE DOCUMENTS

SIGNAL DISTRIB DIAGRAM	62197300
AC POWER 60HZ VIS M DIAG	62197400
SCHEMATIC DIAG VIDEO DISPLAY	15623300
BULK PWR SPLY SCHEMATIC DIAG	90421300
3V REGULATOR SCHEMATIC DIAG	90393400
AC PWR DISTR DIAGRAM 50HZ	62197600

REFERENCE DOCUMENTS

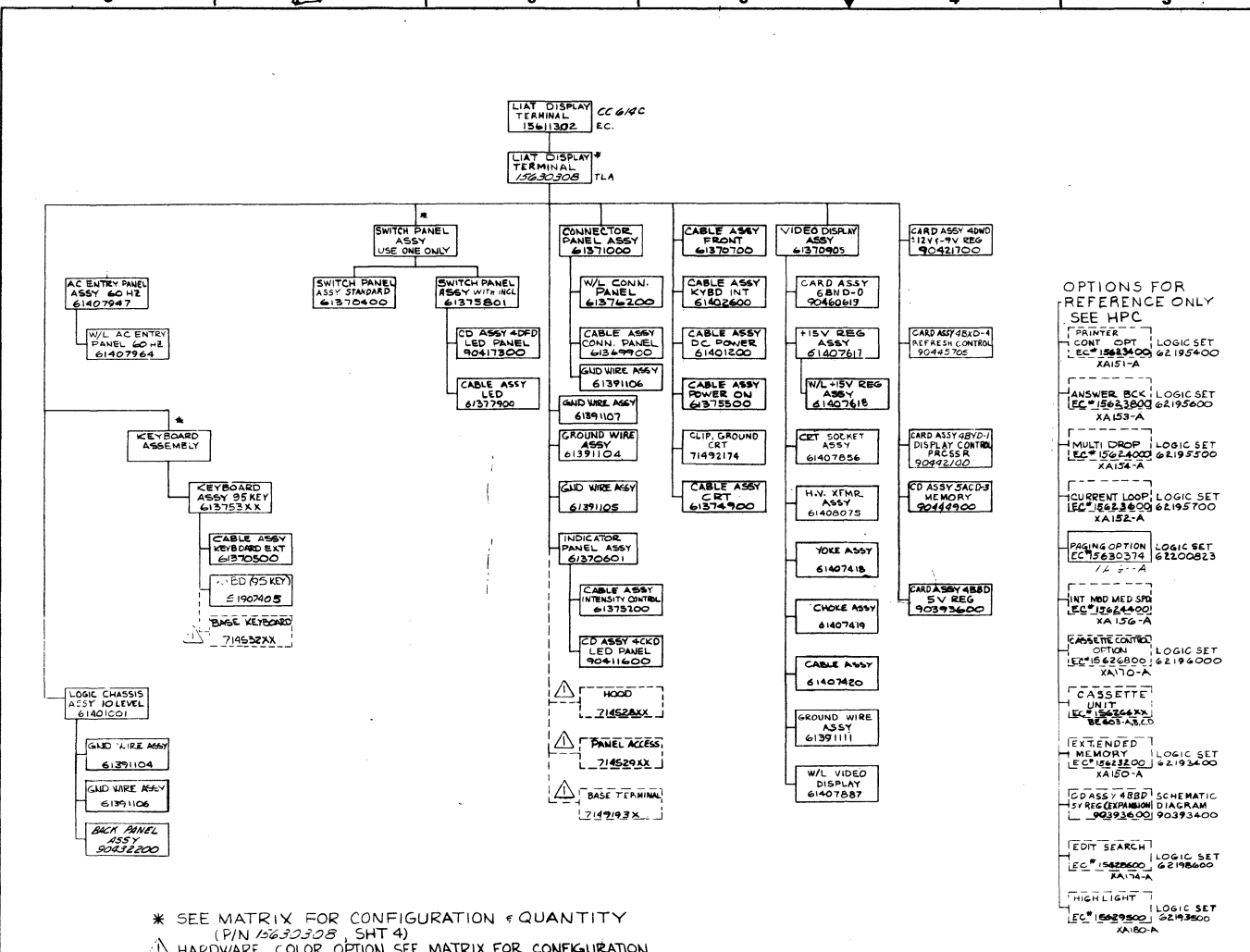
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 XA155A - 66258800  
 XA156A - 66258900  
 XA174A - 66289100  
 XA180A - 66289000  
 XA185A - 66299116  
 KYBD SPARE PARTS LIST 66300938



\* SEE MATRIX FOR CONFIGURATION & QUANTITY (P/N 15611400, SHT 4)  
 △ HARDWARE COLOR OPTION SEE MATRIX FOR CONFIGURATION & QUANTITY (P/N 15611400, SHT. 4)

DETACHED LISTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	TOLERANCES		CONTROL DATA		TITLE	
	3 PLACE	2 PLACE	ANGLES	UNIT USED ON	CC614 A	GENEALOGY CHART LIAT DISPLAY	
DO NOT SCALE DRAWING	DRAWN BY R. T. ...		CHECKED BY R. T. ...	DATE 11-14-74	CODE IDENT 15920	D	DRAWING NO 66244600
APPROVED	ENGINEER		DATE 11/23/74	SCALE	SHEET 1 OF 1		

SHORT REVISION STATUS		REVISION RECORD					
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP	
A	10653-36	RELEASED CLASS A		3/4/76			
B	CD11541	REVISED PER ECO		MM/8/76			
C	11623	REVISED PER ECO		7/28/76			
D	CD1437	REVISED PER ECO		8/17/76			
E	CD1639	90445205 WAS 90445221		1/14/77			
F	CD11747	0103 VIDEO DISPLAY ASSY		4/7/77			
G	12107	REVISED PER ECO		8/27/77			
H	12357	REVISED PER ECO		8/1/77			
J	12495	REVISED PER ECO		11/4/77			
K	CD12714	REVISED PER ECO		1/24/78			
L	12745	REVISED PER ECO		2/27/78			
M	12487	REVISED PER ECO		7/27/78			
N	12855	REVISED PER ECO		4/21/78			



OPTIONS FOR REFERENCE ONLY SEE HPC

- PRINTER CONT OPT LOGIC SET EC# 15633000 62195400 XA151-A
- ANSWER BCK LOGIC SET EC# 15633000 62195600 XA153-A
- MULTI DROP LOGIC SET EC# 15633000 62195500 XA154-A
- CURRENT LOOP LOGIC SET EC# 15633000 62195700 XA152-A
- PAGING OPTION LOGIC SET EC# 15633000 62200823 XA155-A
- INT MOD MED SPD LOGIC SET EC# 15633000 62193400 XA156-A
- CASSETTE CONTROL OPTION LOGIC SET EC# 15633000 62194000 XA170-A
- CASSETTE UNIT EC# 15633000 626004300
- EXTENDED MEMORY LOGIC SET EC# 15633000 62193400 XA150-A
- CD ASSY 48BD SCHEMATIC SV REG EXPANSION DIAGRAM 90393600 90393400
- EDIT SEARCH LOGIC SET EC# 15633000 62195600 XA174-A
- HIGH LIGHT LOGIC SET EC# 15633000 62193600 XA180-A

REFERENCE DOCUMENTS

- DISPLAY TERM LOGIC SET (62193300)
- SIGNAL DISTRIB DIAGRAM (62197300)
- AC PWR CONZ DISTR. DIAG. (62197400)
- SCHEMATIC DIAG VIDEO DISPLAY (62200337)
- BULK PWR SPLY SCHEMATIC DIAG (90461500)
- SV REGULATOR SCHEMATIC DIAG (90393400)
- PC PWR SO HD DISTR. DIAG. (62197600)

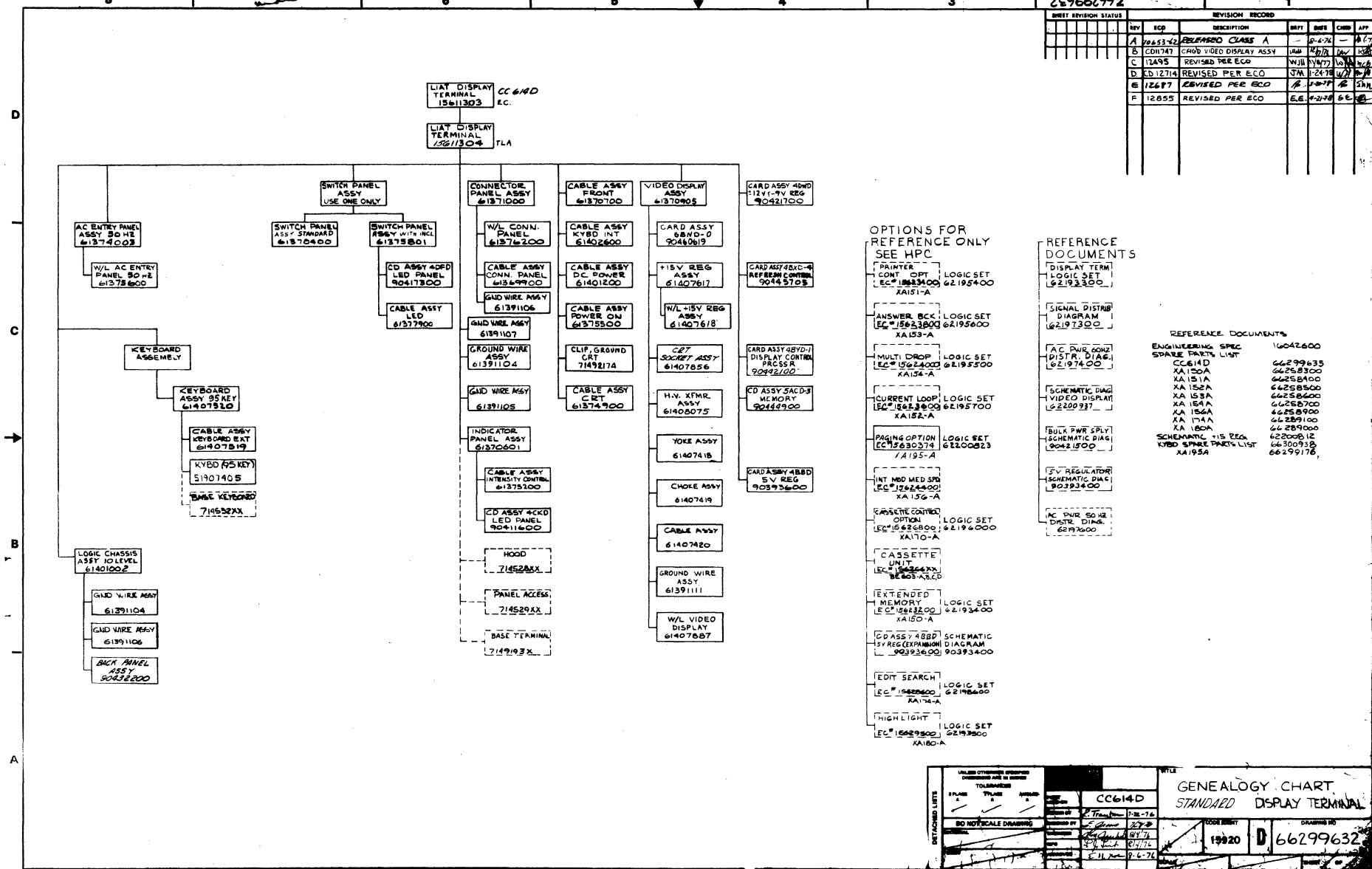
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- ENGINEERING SPEC 16042600
  - SPARE PARTS LIST 66248200
  - CC614 66268300
  - XA151A 66258400
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  - XA153A 66258600
  - XA154A 66258700
  - XA156A 66258800
  - XA174A 66259100
  - XA180A 66259000
  - SCHEMATIC HS REG 62200812
  - KYBD SPARE PARTS 66300938
  - XA159A 66259176

\* SEE MATRIX FOR CONFIGURATION & QUANTITY (P/N 15630308, SHT 4)  
 ▲ HARDWARE COLOR OPTION SEE MATRIX FOR CONFIGURATION & QUANTITY (P/N 15630308, SHT. 4)

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		TOLERANCES		TITLE	
PLACE	PLANE	FINISH	AMOUNT	CC614 C	
DO NOT SCALE DRAWING				GENEALOGY CHART	
DATE				STAND ALONE DISPLAY TERMINAL	
DRAWN BY				CODE IDENT	DRAWING NO
CHECKED BY				15920	66299091
APPROVED BY				D	
DATE				SHEET OF	

289662992

REV		ECO	DESCRIPTION	DATE	BY	CHK	APP
A	20653	22	RELEASED TO A	8-4-74			
B	20647		CHAS VIDEO DISPLAY ASSY	12/13			
C	12855		REVISED PER ECO	10/17/74			
D	12714		REVISED PER ECO	7/11/74			
E	12677		REVISED PER ECO	4-17-74			
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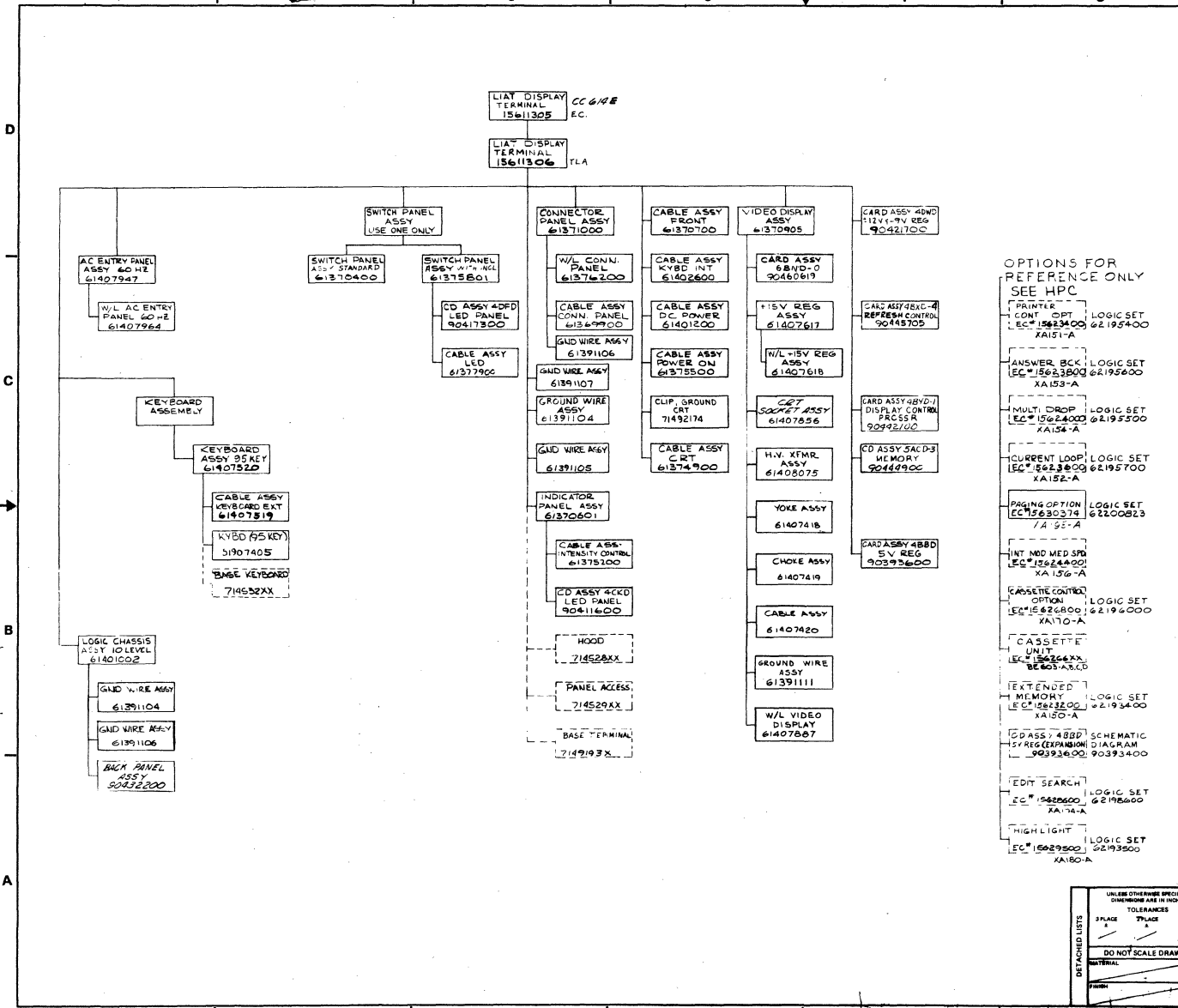
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STANDARD DISPLAY TERMINAL

CC614D

19920 D 66299632

DATE: 7-28-74  
BY: [Signature]  
CHECKED BY: [Signature]  
DRAWN BY: [Signature]

SHEET REVISION STATUS		REVISION RECORD					
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A	106534	RELEASED CLASS A		7-2-76		RT	
B	CD1174	CHGD VIDEO DISPLAY ASSY		9/21/76	GN	RT	
C	12495	REVISED PER ECO		11/6/77	GN	RT	
D	CD12714	REVISED PER ECO		12-18-77	GN	RT	
E	12795	REVISED PER ECO		2/27/78	EE	RT	
F	12687	REVISED PER ECO		3-27-78	EE	RT	
G	12855	REVISED PER ECO		4-21-78	EE	RT	



OPTIONS FOR REFERENCE ONLY SEE HPC

- PRINTER LOGIC SET EC# 15823400 XA151-A
- CONT. OPT. LOGIC SET EC# 15823400 XA151-A
- ANSWER BCK. LOGIC SET EC# 15823400 XA153-A
- MULTI DRSP LOGIC SET EC# 15823400 XA154-A
- CURRENT LOOP LOGIC SET EC# 15823400 XA152-A
- PAGING OPTION LOGIC SET EC# 15823400 XA155-A
- INT MOD MED SPD LOGIC SET EC# 15823400 XA156-A
- CASSETTE CONTROL LOGIC SET EC# 15823400 XA170-A
- CASSETTE UNIT LOGIC SET EC# 15823400 XA170-A
- EXTENDED MEMORY LOGIC SET EC# 15823400 XA150-A
- EXPASS 48BD SCHEMATIC SV REG EXPANSION DIAGRAM 90393400 90393400
- EDIT SEARCH LOGIC SET EC# 15823400 XA174-A
- HIGHLIGHT LOGIC SET EC# 15823400 XA180-A

REFERENCE DOCUMENTS

- DISPLAY TERM LOGIC SET (62193300)
- SIGNAL DISTR DIAG (62193300)
- AC PWR 60HZ DISTR. DIAG (62193300)
- SCHEMATIC DIAG (62200337)
- BULK PWR SUPPLY SCHEMATIC DIAG (90421500)
- TV REGULATOR SCHEMATIC DIAG (90393400)
- AC PWR 50HZ DISTR. DIAG (62193300)

REFERENCE DOCUMENTS

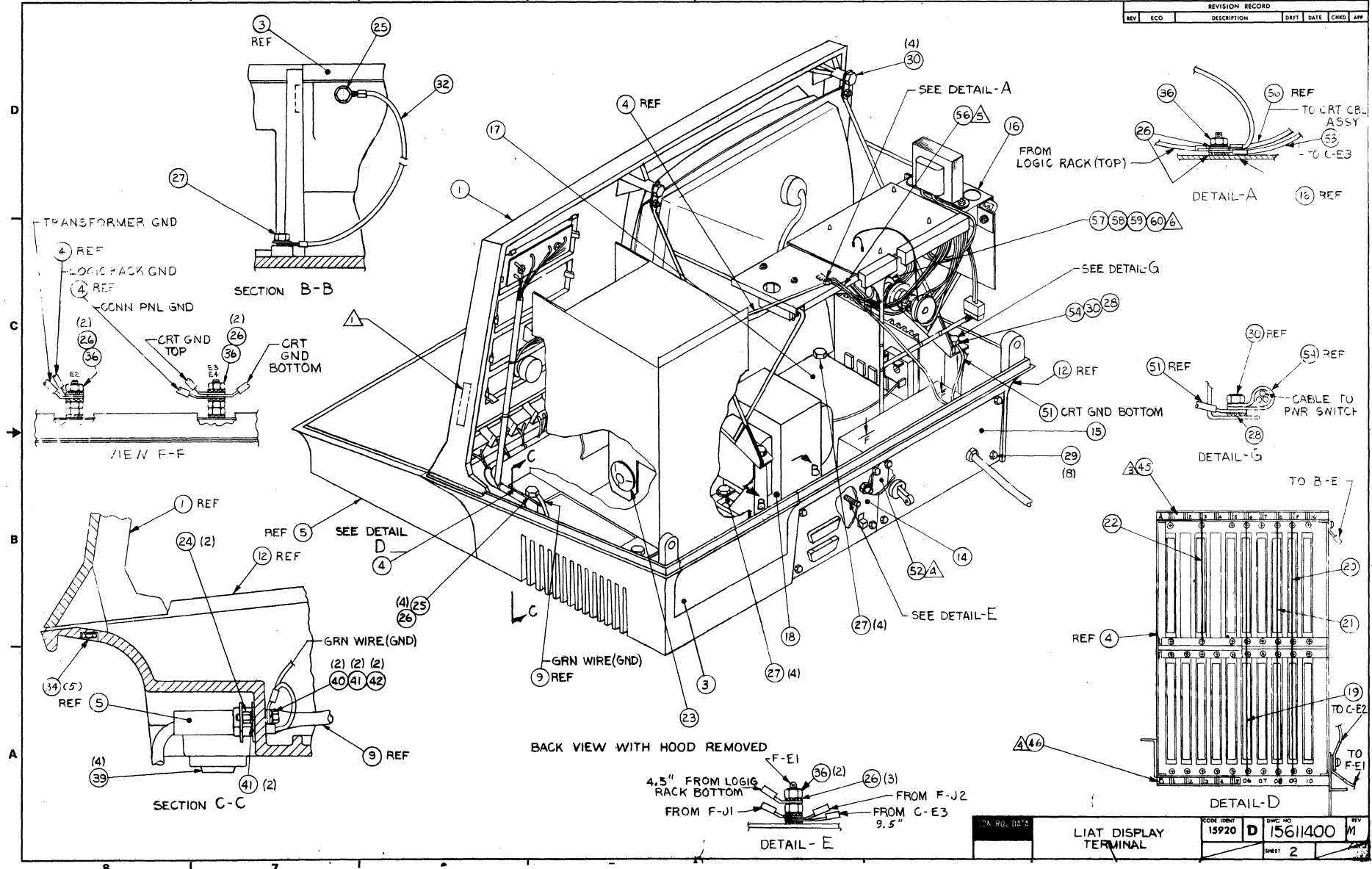
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KYBD SHARE PARTS LIST	66300938
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MATERIAL		ENGINEER	...	D	6629633
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REVISION RECORD						
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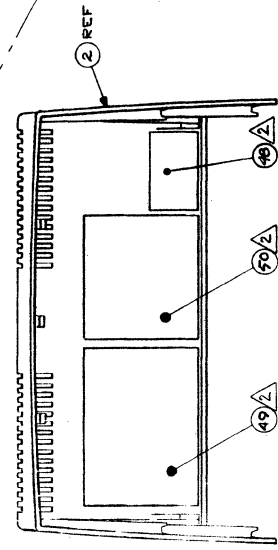
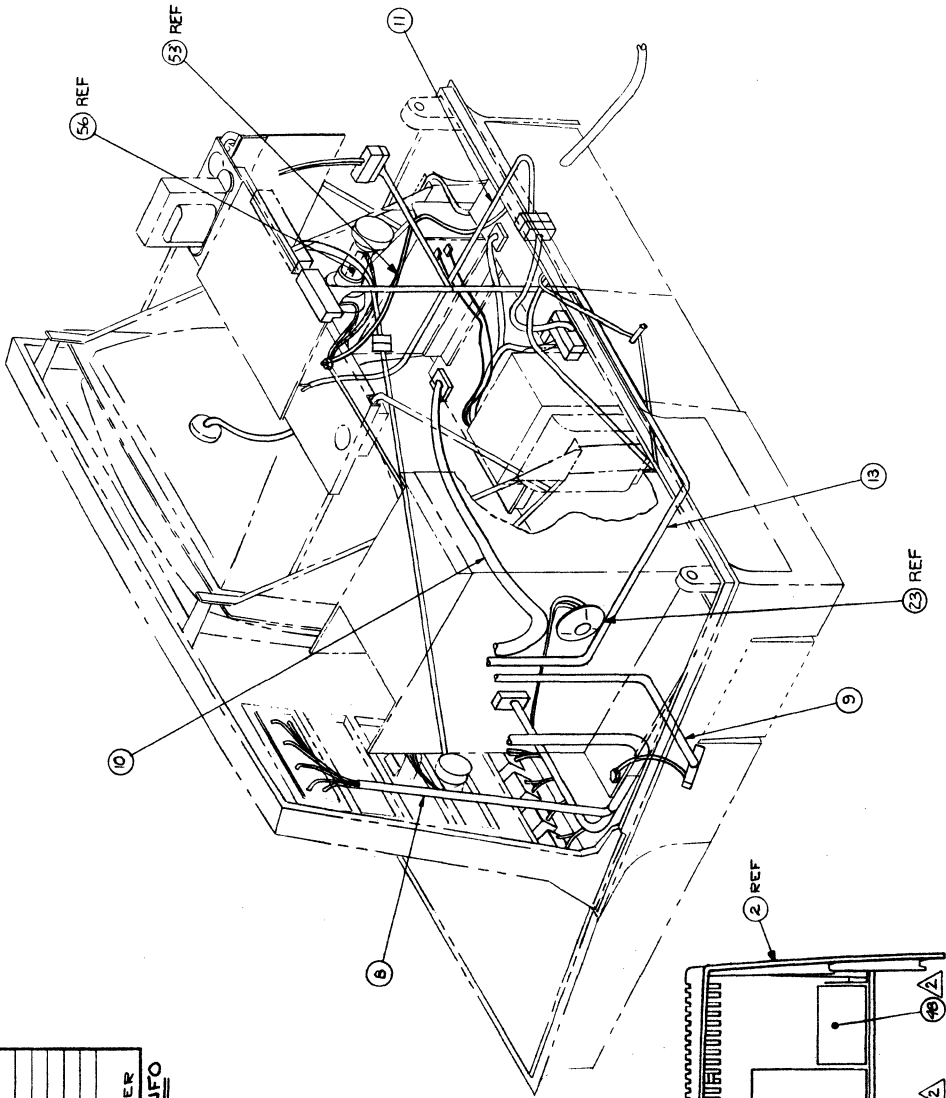
2/56/1400

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REV	ECO	REVISION RECORD	DATE	BY	CHKD	APP

NO.	DESCRIPTION
6	L - INDICATOR PANEL
7	K - SWITCH PANEL
7A	H - POWER SUPPLY
8	G - OPTIONAL LED ASSY
9	F - CONNECTOR PANEL
10	E - KEYBOARD
11	D - BASE
12	C - A/C ENTRY PANEL
13	B - VIDEO DISPLAY
14	A - LOGIC CHASSIS
15	DESCRIPTION
16	NO. SUB ASSY CODE LETTER

**SUB ASSY CODE LETTER INFO**



CABLE ROUTING DIAGRAM

INSIDE VIEW OF HOOD

CON. NO.	15920	REV	D
REV NO.	156/1400	DATE	3
REV		DATE	
REV		DATE	

LIAT DISPLAY TERMINAL





BUILD ARC 440

**ASSEMBLY PARTS LIST**

DIV.		ASSEMBLY NUMBER		REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
0860		15611490		1	0	TERM, DSPL CSA 50/60HZ (TA)	N	REL	05-14-75	CC614A	08-11-77		
ITEM NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	71452600	1	1		PC FZEL 12IN CRT	P						
002	01	71452800	7	1		PC HOOD, TERMINAL (GOLD FINISH)	P						
003	01	71452900	5	1		PC PANEL, ACCESS (FINISH-GOLD)	P						
004	02	61401001	5	1		PC LOGIC CHASSIS ASSY	A		11241			7612	
005	01	61375300	3	1		PC KEYBOARD ASSY 94 KEY	N						
006	02	61376501	4	1		PC PANEL ASSY INDICATOR	A		11040			7552	
007	02	61375601	1	1		PC SWITCH PNL ASSY	A		11040			7552	
008	01	61370700	4	1		PC CABLE ASSY (FRONT)	A						
009	02	61402600	3	1		PC CABLE ASSY KEYBOARD INTERNAL	A		10935			7546	
010	02	61401200	3	1		PC CABLE ASSY D.C. POWER	A		11241			7612	
011	01	61375500	4	1		PC CABLE ASSY (POWER ON)	A						
012	02	71491930	4	1		PC CASE, TERMINAL (GOLD-FINISH)	P		11231			7612	
013	01	61374900	1	1		PC CABLE ASSY (CPT)	A						
014	01	61371000	3	1		PC PANEL ASSY (CONNECTOR)	A			12745			
015	01	61371104	3	1		PC PANEL ASSY (AC ENTRY) 60 HZ	A		12745				
016	02	61370902	1	1		PC VIDEO DISPLAY ASSY	G		11637	11747		7636	7705
016	03	61370905	4	1		PC VIDEO DISPLAY ASSY	G		11747			7705	
017	01	90421700	7	1		PC CD ASSY 40WD PW SPLY FLTR 9V	A						
018	01	51905600	6	1		PC XFOMER POWER	P						
019	05	90445705	6	1		PC CD ASSY 4RXD-4 REFRESH CONT	A		11679			7639	
020	02	90442100	5	1		PC CD ASSY 4RYD-1 PROCESSOR BD	A		10879			7520	

BUILD ARC 440

**ASSEMBLY PARTS LIST**

DIV.		ASSEMBLY NUMBER		REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
0860		15611490		1	0	TERM, DSPL CSA 50/60HZ (TA)	N	REL	05-14-75	CC614A	08-11-77		
ITEM NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
021	04	90444900	6	1		PC CD ASSY 5ACD-3 MEMORY	A		11142			7612	
022	01	90393600	3	1		PC CD ASSY 4BBD +5V 10AMP	A						
023	02	51909902	3	1		PC ALARM AUDIBLE LUG F10 2	P		11281			7612	
024	02	71455801	2	2		PC STANDOFF MALE/FEMALE 4-40 STL	P		11241			7612	
025	02	51858501	3	1		PC SCREW 10X1/2 TYPE A HEX HD	B		11281	12745		7612	
026	02	10126403	4	10		PC WSHR NO.10 EXT TOOTH LK TYP A	B		11281			7612	
027	04	51917790		10		PC SCREW HEX WSHR HD TYPE B	B		12629	12745	12745		
028	02	10126402	6	1		PC WSHR NO.6 EXT TOOTH LK TYP A	B		11281			7612	
029	01	00860303	7	8		PC HSCR SLF-LK0 HEX 6-32X3/8	B						
030	02	00860311	0	6		PC HSCR SLF-LK0 HEX 8-32X3/8	B		11281			7612	
031	02	10125600	3	3		PC WASHER FLT NO.8 STL CP	B		11281	12745		7612	
032	02	61391105	6	1		PC GND WIRE ASSY 7.5 160A	A		11281			7612	
033	01	10127153	4	2		PC HSCR PAN PHL 1/4-20X 1/2	B						
034	02	51858503	9	5		PC SCREW 3/4L S2 10 HEX	B		11281			7612	
035	01	95125301	2	AR		OZ LOC TITE SEALANT RED	B			11774	11774	7732	7732
035	02	95125301	2	010		OZ LOC TITE SEALANT RED	B		11774	12745			
036	02	10125100	0	5		PC NUT HEX MCH 10-32 STL CP OR Z	B		11281			7612	
037	01	66244600	4	REF		PC GENEALOGY CHART (LIAT DSPL)	D						
039	01	51805801	1	4		PC BUMPER, RUBBER .300H SLF-STKG	B						
040	01	10125603	0	2		PC WASHER FLT NO.4 STL CP	B						
041	02	10126400	0	4		PC WSHR NO.4 EXT TOOTH LK TYP A	B		11281			7612	

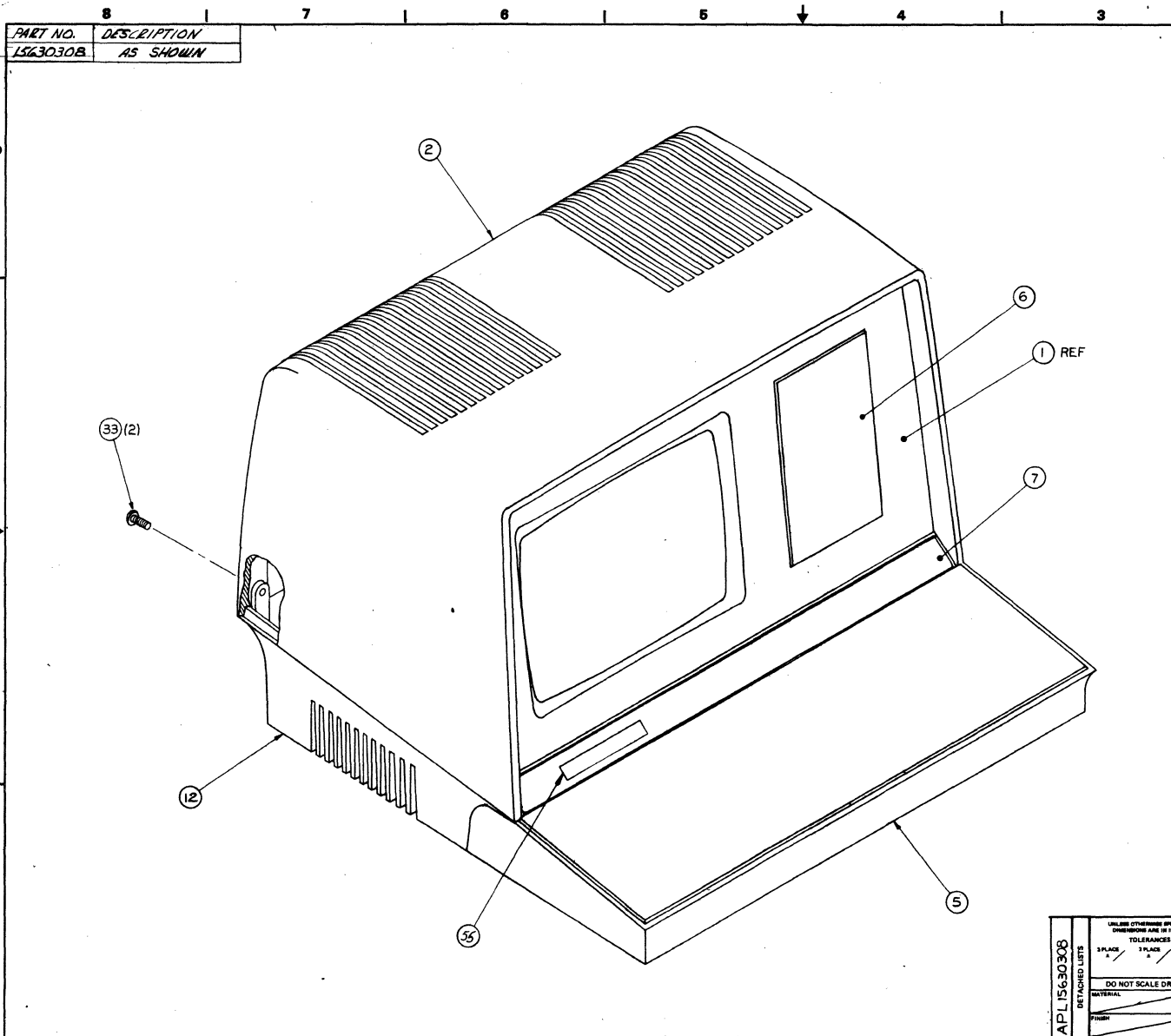


RHILD ARC 449

### ASSEMBLY PARTS LIST

PRINT DATE	PAGE	FILE CHANGE NO.
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DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	156114001	1	1	0	TEMP. DSPL CSA 50/60HZ (T4)	N	REL	05-14-75	CC614A	08-11-77			
FIND NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
042	01	10125103	1	2		PC NUT HEX MCH 4-40 STL CP OR ZP	B						
045	01	71474100	6	1		PC LABEL A, CC CHAS 6.4IN VINYL	P						
046	02	71474106	3	1		PC LABEL B, CC CHAS 6.4IN VINYL	P		11281			7612	
048	03	71479302	3	1		PC LABEL, CARD PLACEMENT TAR-02	P		11673			7638	
049	01	71479400	5	1		PC LABEL LOG CD SW AND ADJUST	P						
050	01	71479500	2	1		PC LABEL A/C D/C CABLE INTER	P						
051	02	61391104	9	1		PC GND WIRE ASSY 4.5 16GA	A		11281			7612	
052	02	95554018	4	201		PC TAPE, COPPER FOIL W 1.00	R		11281			7612	
053	01	61391107	2	1		PC GND WIRE ASSY 12.5 16GA	A		11281			7612	
054	01	51776601	0	1		PC CLAMP, CRL (4) 3/32DIA NOM	B		11281			7612	
055	01	15010307	5	1		PC ID EMBLEM, PRODUCT MEDIUM AL	P		11281			7612	
056	01	71492174	9	1		PC GROUND CLIP CRT	A		11747			7705	
057	01	51917050	0	500		PC MAGNET BAR	P		11747			7705	
058	01	51917051	0	500		PC MAGNET BAR	P		11747			7705	
059	01	51917052	0	500		PC MAGNET BAR	P		11747			7705	
060	01	51004063	7	100		PC ADHESIVE, AMBER SYN ELASTOMER	B		11747			7705	
061	01	16042739	9	REF		PC GEOM DIST CORRECTION	D		11747			7705	
0059 TOTAL LINES													



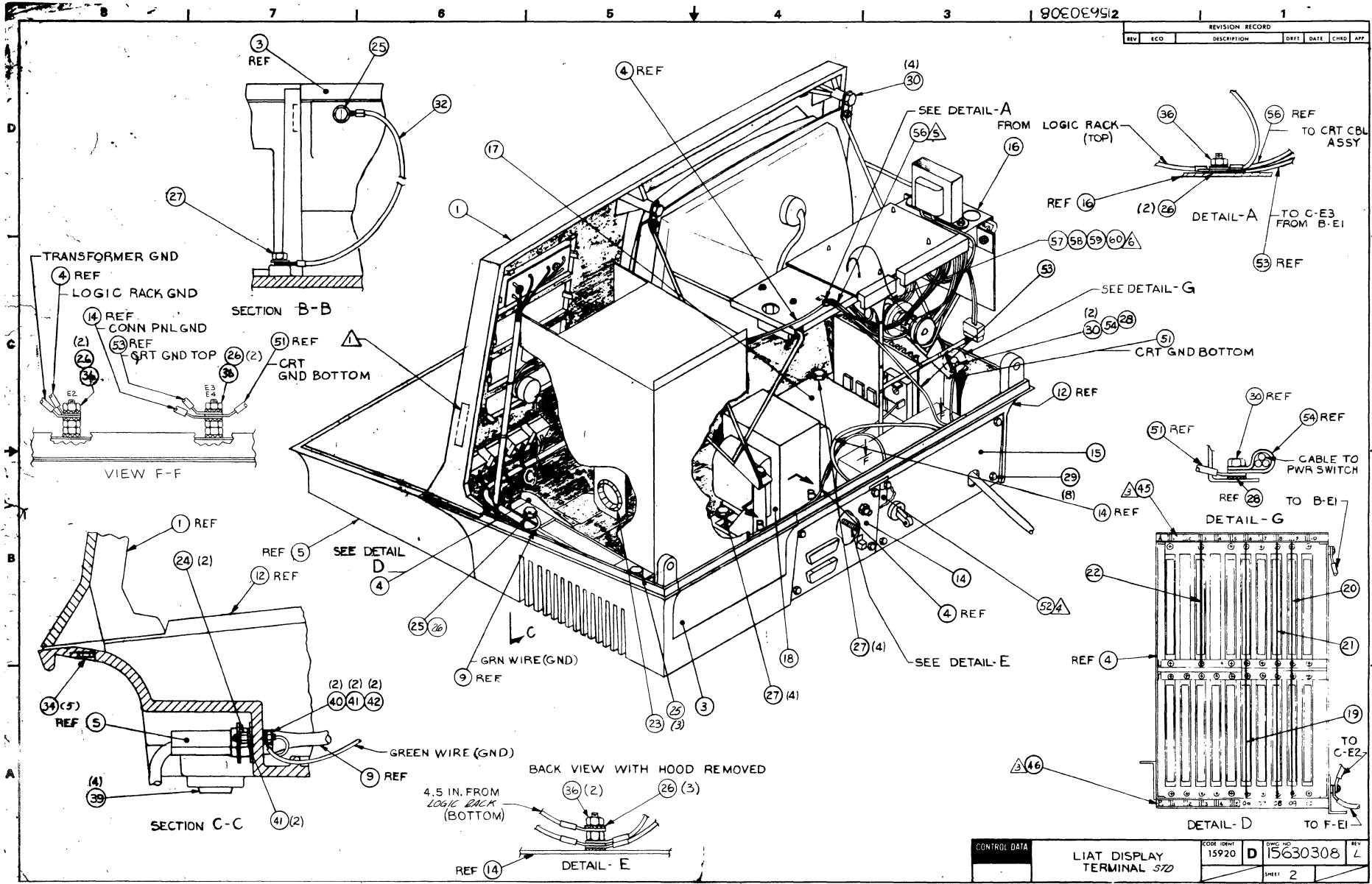
PART NO.	DESCRIPTION
1563030B	AS SHOWN

SHEET REVISION STATUS		REVISION RECORD				
REV	ECO	DESCRIPTION	DRY	DATE	CHKD	APP
1	A	RELEASED CLASS A		2-27-76		K.T.
2	B	PL CHG ONLY		4-19-76		
3	C	CD1450 REVISED PER ECO		7/28/76		
4	D	11629 REVISED PER ECO		7/28/76		
5	E	CD1457 F/N 14 WAS 61370900		8-25-76		
6	F	CD1459 F/N 14 WAS 90446727		9/4/76		
7	G	CD1475 F/N 48 WAS 7147930Z		10/7/76		
8	H	CD1747 1050 F/N'S 34, 57, 59, 60		10/14/76		
9	J	CD1946 REMOVED ITEM 10 FROM DETAIL		11/17/76		
10	K	12629 D/L GMS ONLY		12/11/76		
11	L	12745 REVISED PER ECO		2/11/77		

- NOTES:
- 1. MARK "TOP ASSY 156303..." IN AREA SHOWN PER CDC SPEC 1012150B.
  - 2. BRUSH OFF EXCESS PAINT OVER SPRAY AND SOLVENT CLEAN BEFORE APPLYING.
  - 3. SEE ENGRG SPEC 16036800. COLOR CODE KEYING SPECIFICATION.
  - 4. ATTACH F/N 52 (COPPER FOIL) TO F/N 12 APPROXIMATELY AS SHOWN, DRIVE SCREWS THRU FOIL, THEN TIGHTEN.
  - 5. INSTALL CRT GROUND CLIP, F/N 56 AS FOLLOWS:
    1. INSERT FLAG PIN IN CONNECTOR BPI-14.
    2. ATTACH RING LUG TO STUD 'E1' ON VIDEO DISPLAY ASSY.
    3. INSTALL METAL CLIP UNDER LINEARITY SHIELD WHICH IS UNDER YOKE & RING MAGNET ASSY.
  - 6. IF REQ'D, INSTALL F/N 57, 58, 59 WITH ADHESIVE (F/N 60) PER CDC SPEC. P/N 16042739, GEOMETRIC DISTORTION CORRECTION.

ATTACHED LISTS APL1563030B	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTROL DATA		TITLE	
	TOLERANCES SPACES & / THIRDS & / ANGLES & /		PART NUMBER CC614C		LIAT DISPLAY TERMINAL STD	
	DO NOT SCALE DRAWING		DRAWN BY D. WELLS 2-24-76		CODE IDENT 15920	
	MATERIAL		CHECKED BY [Signature] 5/2/76		DRAWING NO D 1563030B THRU 15630333	
FINISH		ENGINEER [Signature] 7/15/76		SCALE EC 15611302		SHEET 1 OF 3

REVISION RECORD					
REV	ECO	DESCRIPTION	DRFT	DATE	CHGD APP



CONTROL DATA	LIAT DISPLAY TERMINAL 37D	CODE 15920	D	15630308	REV L
				SHEET 2	

15630308

1

REV	ECO	DESCRIPTION	DATE	CHKD	APP

3

4

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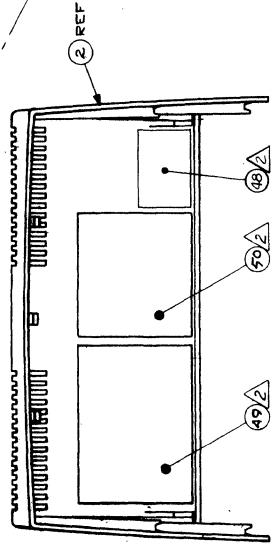
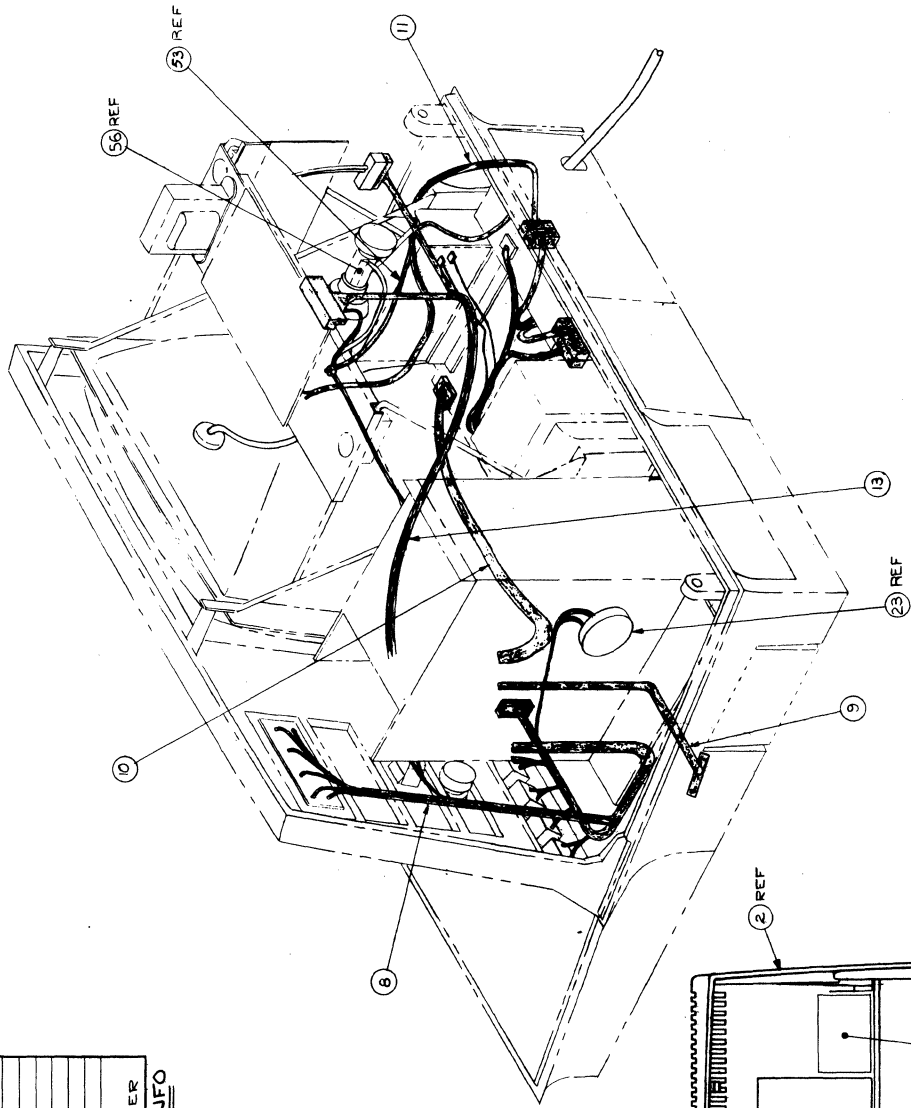
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7

8

NO.	DESCRIPTION
6	L - INDICATOR PANEL
7	K - SWITCH PANEL
17/18	H - POWER SUPPLY
NONE	G - OPTIONAL LED ASSY
14	F - CONNECTOR PANEL
5	E - KEYBOARD
12	D - BASE
15	C - AC ENTRY PANEL
16	B - VIDEO DISPLAY
4	A - LOGIC CHASSIS
FIND NO.	L DESCRIPTION
	- SUB ASSY CODE LETTER

SUB ASSY CODE LETTER INFO



CABLE ROUTING DIAGRAM

INSIDE VIEW OF HOOD

CONTROL DATA	DATE	REV
	1970	D
LIAT DISPLAY TERMINAL 372		15630308
		L
		3

BUILD ARC 440										ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.
										01-30-78		1		00012745		
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE						
0860	15630308	3	L	D	TERM, DSPL UL 50/60HZ (TA)	N	REL	03-04-76	CC614C	01-30-78						
FIND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT			
001	01	71452600	1	1		PC REZEL 12IN CRT	P									
002	01	71452800	7	1		PC HOOD, TERMINAL (GOLD FINISH)	P									
003	01	71452900	5	1		PC PANEL, ACCESS (FINISH-GOLD)	P									
004	01	61401001	5	1		PC LOGIC CHASSIS ASSY	A									
005	01	61375300	3	1		PC KEYBOARD ASSY 95 KEY	N									
006	01	61370601	9	1		PC PANEL ASSY INDICATOR	A									
007	01	61375801	0	1		PC SWITCH PNL ASSY	A									
008	01	61370700	9	1		PC CABLE ASSY (FRONT)	A									
009	01	61402600	3	1		PC CABLE ASSY KFYBOARD INTERNAL	A									
010	01	61401200	3	1		PC CABLE ASSY D.C. POWER	A									
011	01	61375500	8	1		PC CABLE ASSY (POWER ON)	A									
012	01	71491930	5	1		PC BASE, TERMINAL (GOLD-FINISH)	P									
013	01	61374900	1	1		PC CABLE ASSY (CRT)	A									
014	01	61371000	3	1		PC PANEL ASSY (CONNECTOR)	A									
015	01	61371104	3	1		PC PANEL ASSY (AC ENTRY) 60 HZ	A			12745	12745		7820	7820		
015	02	61407947	3	1		PC PANEL ASSY (AC ENTRY) 60HZ	A									
016	03	61370905	4	1		PC VIDEO DISPLAY ASSY	A		11747			7705				
017	01	90421700	7	1		PC CD ASSY 40WD PW SPLY FLTR 9V	A									
018	01	51905600	6	1		PC XFORMER POWER	P									
019	03	90445705	8	1		PC CD ASSY 4BXD-4 REFRESH CONT	S		11639			7639				
020	01	90442100	5	1		PC CD ASSY 4BYD-1 PROCESSOR BD	S									

BUILD ARC 440										ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.
										01-30-78		2		00012745		
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE						
0860	15630308	3	L	D	TERM, DSPL UL 50/60HZ (TA)	N	REL	03-04-76	CC614C	01-30-78						
FIND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT			
021	01	90444900	6	1		PC CD ASSY 5ACD-3 MEMORY	A									
022	01	90393600	3	1		PC CD ASSY 4BBD +5V 10AMP	S									
023	01	51908902	3	1		PC ALARM AUDIBLE LUG FIG 2	P									
024	01	71455801	2	2		PC STANDOFF MALE/FEMALE 4-40 STL	P									
025	01	51858501	3	4		PC SCR TP6 HEX-WSHR SLT 10X1/2	B			12745	12745		7820	7820		
025	02	51858501	3	5		PC SCR TP6 HEX-WSHR SLT 10X1/2	B									
026	01	10126403	4	9		PC WSHR NO.10 EXT TOOTH LK TYP A	B			12745	12745		7820	7820		
026	02	10126403	4	10		PC WSHR NO.10 EXT TOOTH LK TYP A	B									
027	02	51858529	4	10		PC SCR TP6 HEX-WSHR SLT 8X3/8	B		11419	12629	12629	7821	7812	7812		
027	03	51917790	1	10		PC SCREW HEX WSHR HD 8-18X1/2	B		12629	12745		7812	7820			
027	04	51917790	1	9		PC SCREW HEX WSHR HD 8-18X1/2	B		12745			7820				
028	01	10126402	6	1		PC WSHR NO.8 EXT TOOTH LK TYP A	B									
029	01	00860303	7	8		PC MSCR SLF=LK0 HEX 6-32X3/8	B									
030	01	00860311	0	6		PC MSCR SLF=LK0 HEX 8-32X3/8	B									
031	01	10125606	3	2		PC WASHER FLT NO.8 STL CP	B			12745			7820			
032	01	61391105	6	1		PC GND WIRE ASSY 7.5 160A	A									
033	01	10127153	4	2		PC MSCR PAN PHL 1/4-20X 1/2	B									
034	01	51858503	9	5		PC SCR TP6 HEX-WSHR SLT 10X3/4	B									
035	02	95125301	2	010	OZ	LOC TITE SEALANT RED	B		11774	12745		7723	7820			
036	01	10125108	0	6		PC NUT HEX MCH 10-32 STL CP OR Z	B			12745	12745		7820	7820		
036	02	10125108	0	5		PC NUT HEX MCH 10-32 STL CP OR Z	B									
037	01	66299091	0		REF	PC GENEALOGY CHART STAND ALONE	T									
039	01	51805801	1	4		PC BUMPER, RUBBER .300H SLF-STKG	B									





BUILD ARC 440

**ASSEMBLY PARTS LIST**

PRINT DATE: 01-30-78  
 PAGE: 3  
 FILE CHANGE NO.: 00012745

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		15630308		3	L	D	TERM, DSPL UL 50/60HZ (TA)		N	REL	03-04-76		CC614C	01-30-78	
ITEM NO.	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT	
040	01	10125603	0	2		PC WASHER FLT NO.4 STL CP		B							
041	01	10126400	0	4		PC WSHR NO.4 EXT TOOTH LK TYP A		B							
042	01	10125103	1	2		PC NUT HEX MCH 4-40 STL CP OR ZP		B							
045	01	71474100	5	1		PC LABEL A, CC CHAS 6.4IN VINYL		P							
046	01	71474106	3	1		PC LABEL B, CC CHAS 3.4IN VINYL		P							
048	02	71479302	3	1		PC LABEL, CARD PLACEMENT TAB-02		P		11673			7638		
049	01	71479400	5	1		PC LABEL LOG CD SW AND ADJUST		P							
050	01	71479500	2	1		PC LABEL A/C D/C CABLE INTER		P							
051	01	61391104	9	1		PC GND WIRE ASSY 4.5 16GA		A							
052	01	95586018	8	300		FT TAPE, COPPER FOIL W 1.00		B							
053	01	61391107	2	1		PC GND WIRE ASSY 12.5 16GA		A							
054	01	51776601	0	1		PC CLAMP, CBL (4) 3/32DIA NOM		B							
055	01	15010307	5	1		PC ID EMBLEM, PRODUCT MEDIUM AL		P							
056	01	71492174	9	1		PC GROUND CLIP CRT		A		11747			7705		
057	01	51917050	0	500		PC MAGNET BAR		P		11747			7705		
058	01	51917051	8	500		PC MAGNET BAR		P		11747			7705		
059	01	51917052	8	500		PC MAGNET BAR		P		11747			7705		
060	01	51004063	7	100		OZ ADHESIVE, SEALANT SIL RUBBER		B		11747			7705		
061	01	16042739	9	REF		PC GEOM DIST CORRECTION		D		11747			7705		

BUILD ARC 440

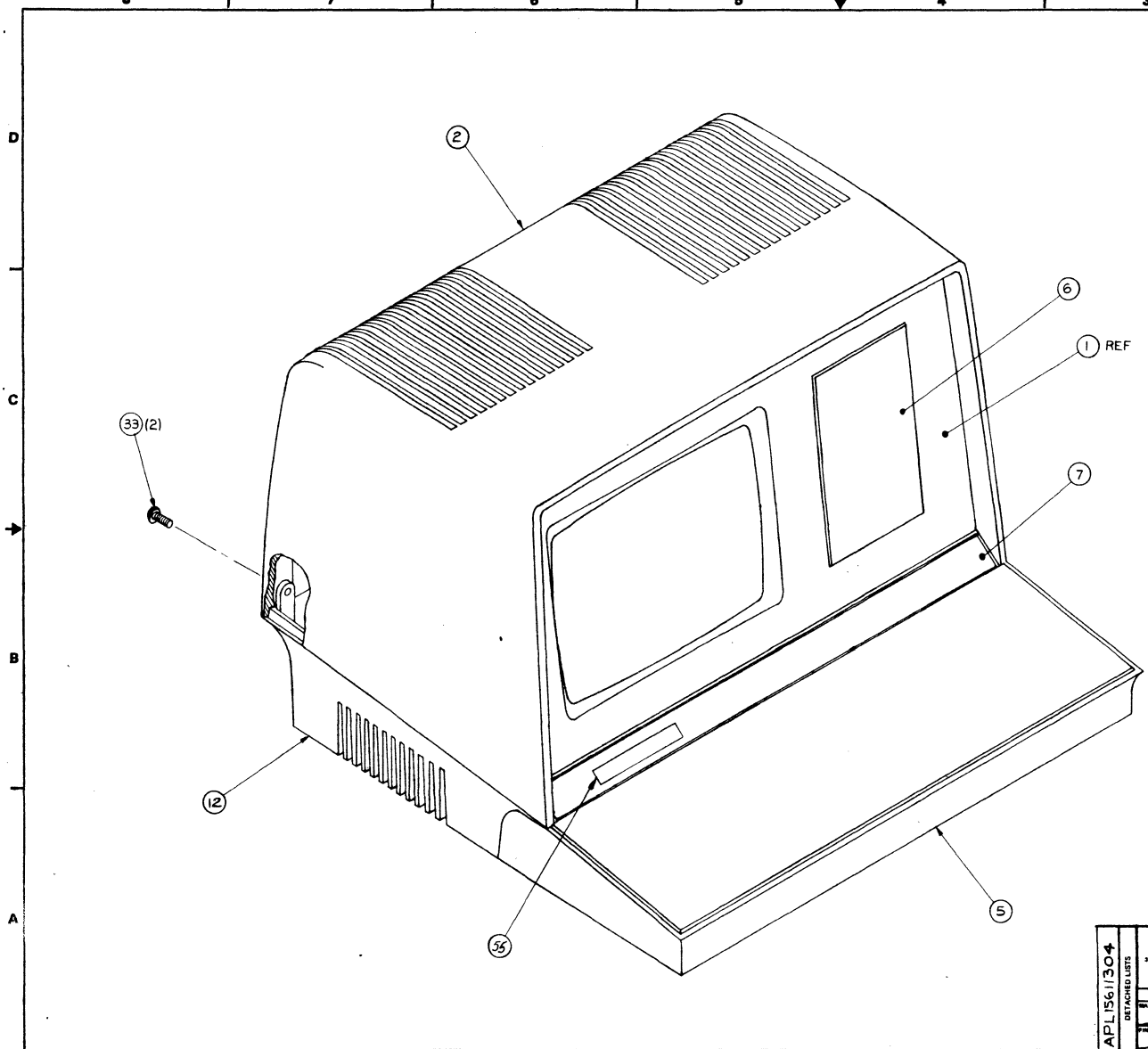
**ASSEMBLY PARTS LIST**

PRINT DATE: 01-30-78  
 PAGE: 4  
 FILE CHANGE NO.: 00012745

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		15630308		3	L	D	TERM, DSPL UL 50/60HZ (TA)		N	REL	03-04-76		CC614C	01-30-78	
ITEM NO.	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT	
						0863 TOTAL LINES									



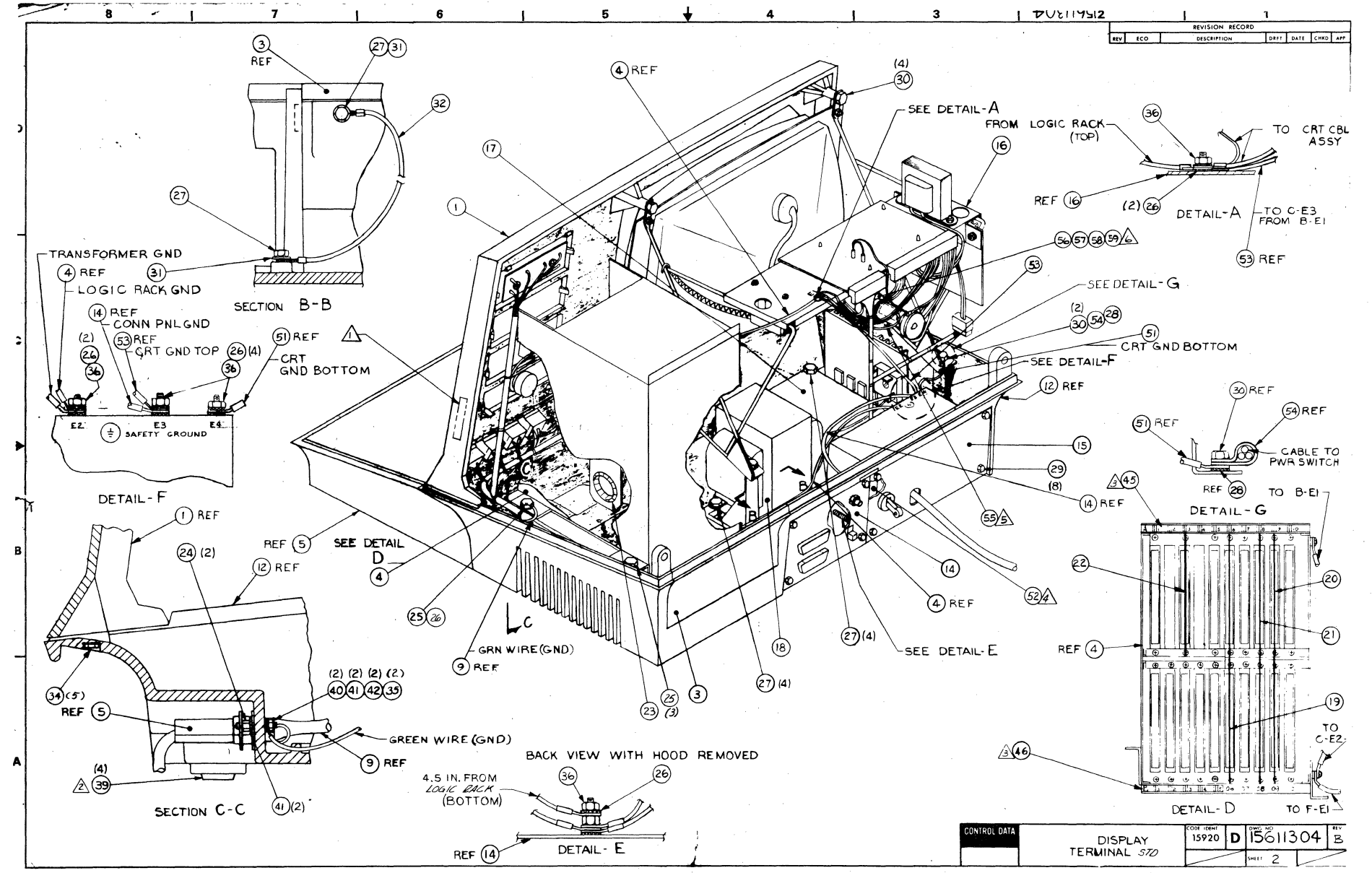
SHEET REVISION STATUS				REVISION RECORD			
REV	ECO	DESCRIPTION	DRY	DATE	CHKD	APP	
3	2						
A	A	2253 71 BRUSHED CLAS A		7/31/76		PRY	
B	B	2253 71 REMOVED REMO DETN F		8/1/76		CVL	
C	C	2253 71 ADDED NOTE 7 & F/N 62		8/23/76		ENR	
D	D	12629 P/L CHG ONLY		8/24/76		E.E.	
E	E	F/N 1 WAS 71491937		8/27/76		b-36	



- NOTES:
- ▲ MARK "TOP ASSY 15611304" IN AREA SHOWN PER CDC SPEC 10121508.
  - ▲ BRUSH OFF EXCESS PAINT OVER SPRAY AND SOLVENT CLEAN BEFORE APPLYING.
  - ▲ SEE ENGRG SPEC 16036800. COLOR CODE KEYING SPECIFICATION.
  - ▲ ATTACH F/N 52 (COPPER FOIL) TO F/N 12 APPROXIMATELY AS SHOWN, DRIVE SCREWS THRU FOIL, THEN TIGHTEN.
  - ▲ INSTALL CRT GROUND CLIP, F/N 56 AS FOLLOWS;
    1. INSERT FLAG PIN IN CONNECTOR BPI-14.
    2. ATTACH RING LUG TO STUD E1 ON VIDEO DISPLAY ASSY.
    3. INSTALL METAL CLIP UNDER LINEARITY SHIELD WHICH IS UNDER YOKE AND RING MAGNET ASSY.
  - ▲ IF REQD INSTALL F/N's 57, 58 AND 59 WITH ADHESIVE F/N 60 PER CDC SPEC 16042739, GEOMETRIC DISTORTION CORRECTION.
  - 7 CUT SLEEVING (F/N 62) INTO 1.0 INCH LENGTHS, SOAK FOR 10 MINUTES IN XYLOL. INSTALL PREPARED SLEEVING OVER CONTACTS OF SWITCH PINS 52-3, 53-3, 53-6, 55-3 & L.E.D. ASSY PINS 64 7.

CONTROL DATA		TITLE	
DRAWN BY: <i>[Signature]</i> 7-27-76		DISPLAY TERMINAL 370	
CHECKED BY: <i>[Signature]</i> 8/1/76		CODE IDENT: 15920	DRAWING NO: 15611304
ENGINEER: <i>[Signature]</i> 8/1/76		SCALE: EC15611303	
APPROVED: <i>[Signature]</i> 8/27/76		SHEET 1 OF 3	

REVISION RECORD					
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD



CONTROL DATA	DISPLAY	CODE IDENT	QWID	REV
	TERMINAL 572	15920	D 15611304	B
		PAGE 2		

REV	ECO	DATE	CHG	APP

1

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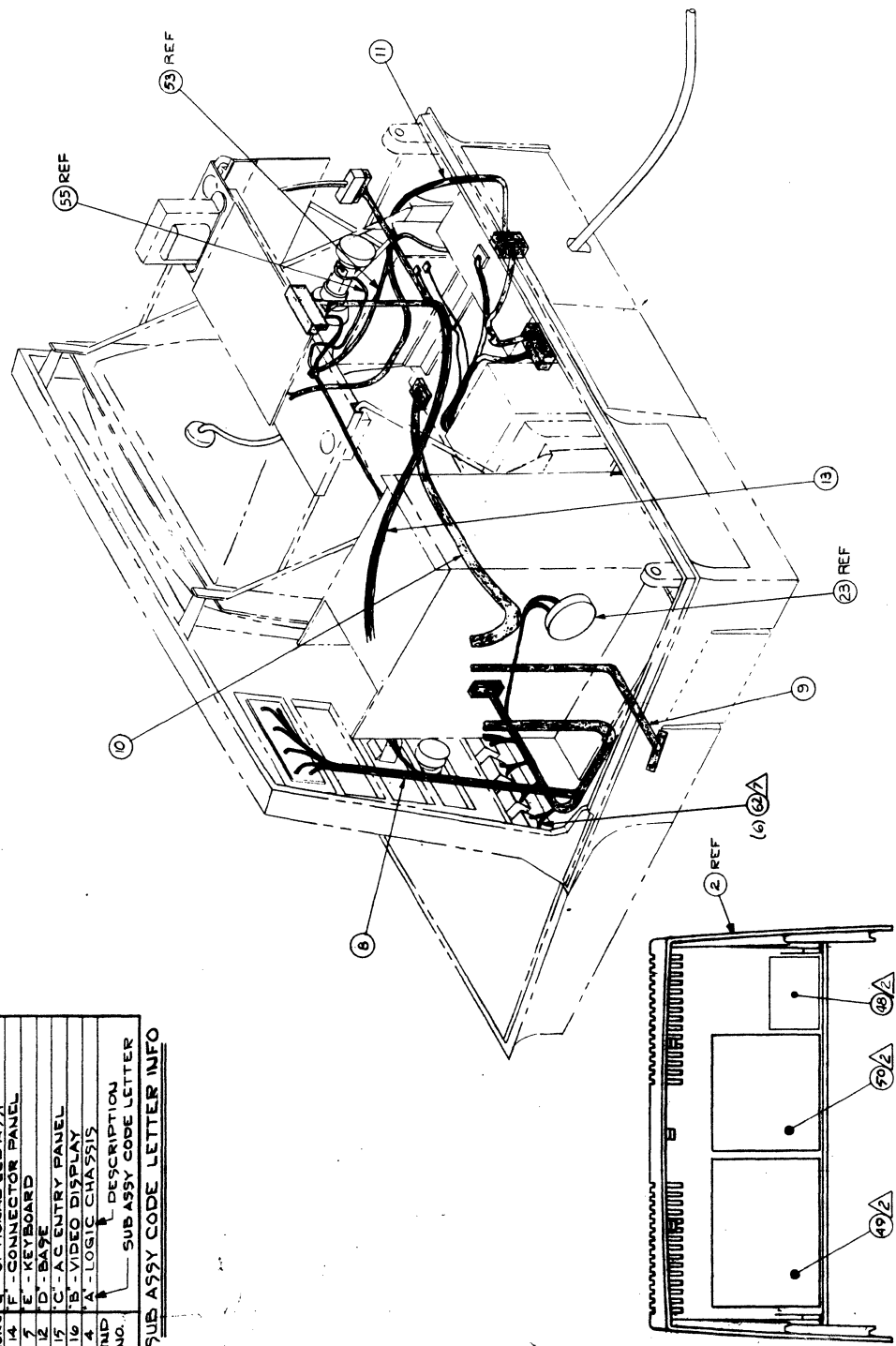
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9	L - INDICATOR PANEL
7	K - SWITCH PANEL
17	H - POWER SUPPLY
NONE	G - OPTIONAL LED ASSY
14	F - CONNECTOR PANEL
2	E - KEYBOARD
12	D - BASE
15	C - AC ENTRY PANEL
16	B - VIDEO DISPLAY
4	A - LOGIC CHASSIS
FNIP	L - DESCRIPTION
NO.	- SUB ASSY CODE LETTER

**SUB ASSY CODE LETTER INFO**



CABLE ROUTING DIAGRAM

INSIDE VIEW OF HOOD

REV	DATE	CHG	APP

CONTROL DATA  
DISPLAY TERMINAL 570

15920 D 15611304 C

3



BUILD ARC 440

**ASSEMBLY PARTS LIST**

										PRINT DATE	PAGE	FILE CHANGE NO.		
										04-27-78	1	00012701		
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION			MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
0860	15611304	5	E	D	TERM DSPL 80X12 FTZ 50HZ (TA)			N	REL	10-28-76	CC614D	04-27-78		
TRND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	03	71491937	4	1		PC REPLACED BY 71492176 12701		F			12701	12701		7817
001	04	71492176	4	1		PC BEZEL CRT 12 IN PLASTIC		F					7817	
002	01	71491938	6	1		PC HOOD, TERMINAL 2SHIELDED*		F						
003	01	71491939	6	1		PC PANEL, BASE 2SHIELDED*		F						
004	01	61401002	3	1		PC LOGIC CHASSIS ASSY FTZ		A						
005	01	61407520	6	1		PC KEYBOARD ASSY 95 KEY (SHIELD)		N						
006	01	61370601	9	1		PC PANEL ASSY INDICATOR		A						
007	01	61375801	0	1		PC SWITCH PNL ASSY		A						
008	01	61370700	9	1		PC CABLE ASSY (FRONT)		A						
009	01	61402600	3	1		PC CABLE ASSY KEYBOARD INTERNAL		A						
010	01	61401200	3	1		PC CABLE ASSY D.C. POWER		A						
011	01	61375500	6	1		PC CABLE ASSY (POWER ON)		A						
012	02	71492276	2	1		PC BASE, TERMINAL (SHIELDED)		P		11965			7709	
013	01	61374900	1	1		PC CABLE ASSY (CRT)		A						
014	01	61371000	3	1		PC PANEL ASSY (CONNECTOR)		A						
015	01	61374003	4	1		PC PANEL ASSY (AC ENTRY) 50 HZ		A						
016	01	61370905	4	1		PC VIDEO DISPLAY ASSY		N						
017	01	90421700	7	1		PC CD ASSY 4DWD PW SPLY FLTR 9V		A						
018	01	51905600	6	1		PC XFORMER POWER		P						
019	01	90445705	8	1		PC CD ASSY 4BXD-4 REFRESH CONT		S						
020	01	90442100	5	1		PC CD ASSY 4BYD-1 PROCESSOR BD		S						

BUILD ARC 440

**ASSEMBLY PARTS LIST**

										PRINT DATE	PAGE	FILE CHANGE NO.		
										04-27-78	2	00012701		
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION			MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
0860	15611304	5	E	D	TERM DSPL 80X12 FTZ 50HZ (TA)			N	REL	10-28-76	CC614D	04-27-78		
TRND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
021	01	90444900	6	1		PC CD ASSY 5ACD-3 MEMORY		A						
022	01	90393600	3	1		PC CD ASSY 4BBD +5V 10AMP		S						
023	01	51908902	3	1		PC ALARM AUDIBLE LUG FIG 2		P						
024	01	71455801	2	2		PC STANDOFF MALE/FEMALE 4-40 SIL		P						
025	01	51858501	3	4		PC SCR TP6 HEX-WSHR SLT 10X1/2		B						
026	01	10126403	4	10		PC WSHR NO.10 EXT TOOTH LK TYP A		B						
027	01	51858529	4	10		PC SCR TP6 HEX-WSHR SLT 8X3/8		B		12629	12629		7812	7812
027	02	51917790	1	10		PC SCREW HEX WSHR HD 8-18X1/2		B		12629			7812	
028	01	10126402	6	1		PC WSHR NO.8 EXT TOOTH LK TYP A		B						
029	01	00860303	7	8		PC MSCR SLF-LK6 HEX 6-32X3/8		B						
030	01	00860311	0	6		PC MSCR SLF-LK6 HEX 8-32X3/8		B						
031	01	10125606	3	2		PC WASHER FLT NO.8 STL CP		B						
032	01	61391105	6	1		PC GND WIRE ASSY 7.5 160A		A						
033	01	10127153	4	2		PC MSCR PAN PHL 1/4-20X 1/2		B						
034	01	51858503	9	5		PC SCR TP6 HEX-WSHR SLT 10X3/4		B						
035	02	95125301	2	010		LOC TITE SEALANT RED		B		11774			7732	
036	01	10125108	0	5		PC NUT, HEX MSCR 10-32 STL CP/2P		B						
037	01	66299632	1	REF		PC GENEALOGY LIAT DSPLY		D						
039	01	51805801	1	4		PC BUMPER, RUBBER .300H SLF-STKG		P						
040	01	10125603	0	2		PC WASHER FLT NO.4 STL CP		B						
041	01	10126400	0	4		PC WSHR NO.4 EXT TOOTH LK TYP A		B						

BUILD ARC 440

**ASSEMBLY PARTS LIST**

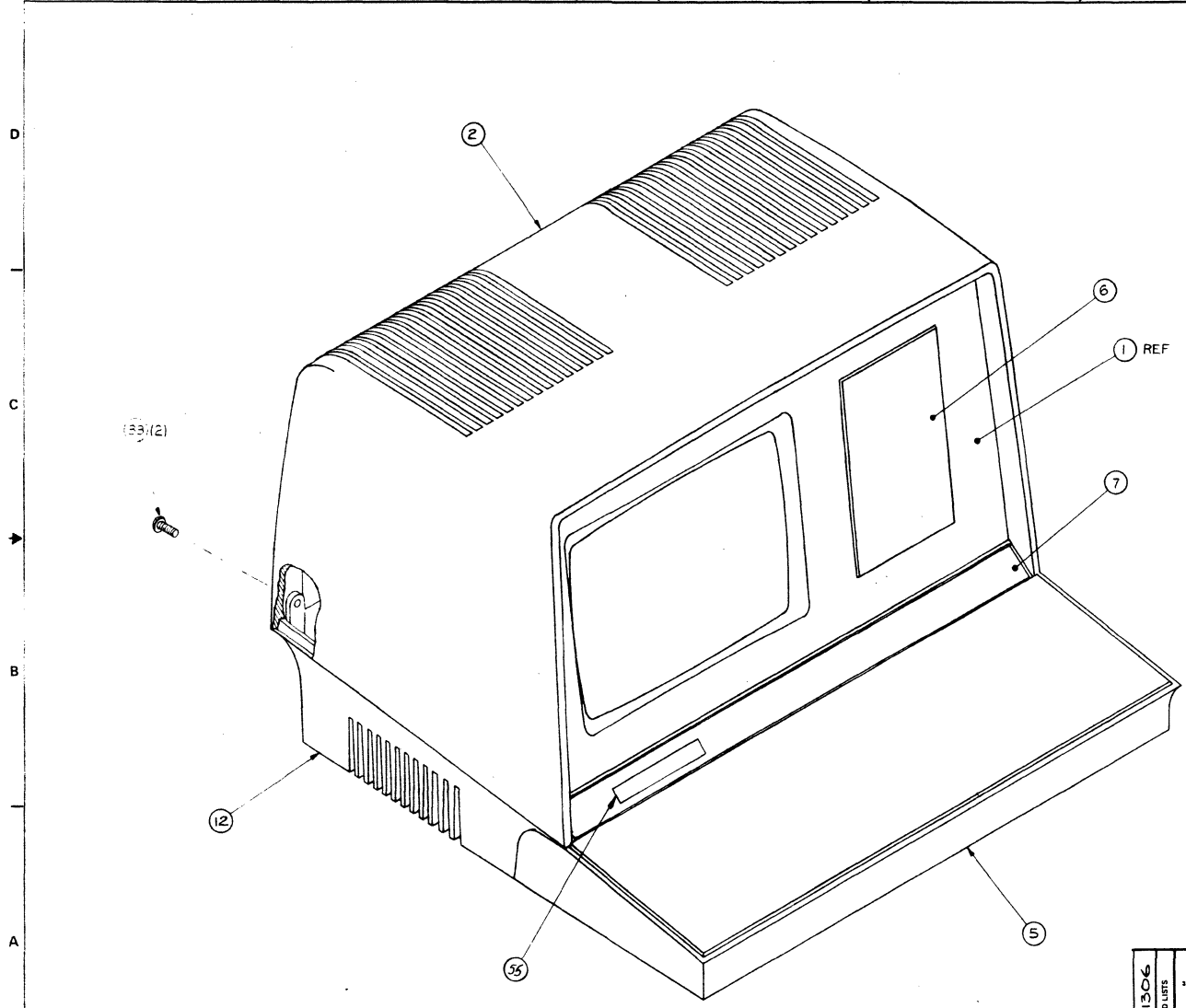
PRINT DATE	PAGE	FILE CHANGE NO.
04-27-78	3	00012701

DIV.		ASSEMBLY NUMBER		REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		15611304		5	E D	TERM DSPL 80X12 FTZ 50HZ (TA)		N	REL	10-28-76		CC614D	04-27-78	
TPIND NO	LI	PART NUMBER	CD	IN	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
042	01	10125103	1		2		PC NUT, HEX MSCR 4-40 STL CP/ZP	B						
045	01	71474100	6		1		PC LABEL A, CC CHAS 6.4IN VINYL	P						
046	01	71474106	3		1		PC LABEL B, CC CHAS 3.4IN VINYL	P						
048	01	71479302	3		1		PC LABEL, CARD PLACEMENT TAB-02	P						
049	01	71479400	5		1		PC LABEL LOG CD SW AND ADJUST	P						
050	01	71479500	2		1		PC LABEL A/C D/C CABLE INTER	P						
051	01	61391104	9		1		PC GND WIRE ASSY 4.5 16GA	A						
052	01	95558018	8		300		FT TAPE, COPPER FOIL W 1.00	B						
053	01	61391107	2		1		PC GND WIRE ASSY 12.5 16GA	A						
054	01	51776601	0		1		PC CLAMP, CBL (4) 3/32DIA NOM	B						
055	01	15010307	5		1		PC ID EMBLEM, PRODUCT MEDIUM AL	P						
056	01	71492174	9		1		PC GROUND CLIP CRT	A						
057	01	51917050	0		500		PC MAGNET BAR	P						
058	01	51917051	8		500		PC MAGNET BAR	P						
059	01	51917052	6		500		PC MAGNET BAR	P						
060	01	51004063	7		100		OZ ADHESIVE, SEALANT SIL RUBBER	B						
061	01	16042739	9	REF			PC GEOM DIST CORRECTION	D						
062	01	24528627	3		500		FT TBG, INSUL NO.13 CLEAR UL PVC	B		11965A			7706	
							0060 TOTAL LINES							



1905119512

SHEET REVISION STATUS				REVISION RECORD			
REV	ECO	DESCRIPTION	DRFT	DATE	CHRD	APP	
3	21	REV					
A	A	A 1245371	RELEASED CLASS A				
B	B	B CD11946	REMOVED ITEM 10 DETAIL F	30	11/77	CPM	
C	C	C CD11965	ADDED NOTE 7 & F/N 62	TS	11/77	CPM	
C	B	D 12629	P/L CHG ONLY	E.E.	12/77	EE	
E	E	E 12745	REVISED PER ECO	EE	2/1/78	EE	



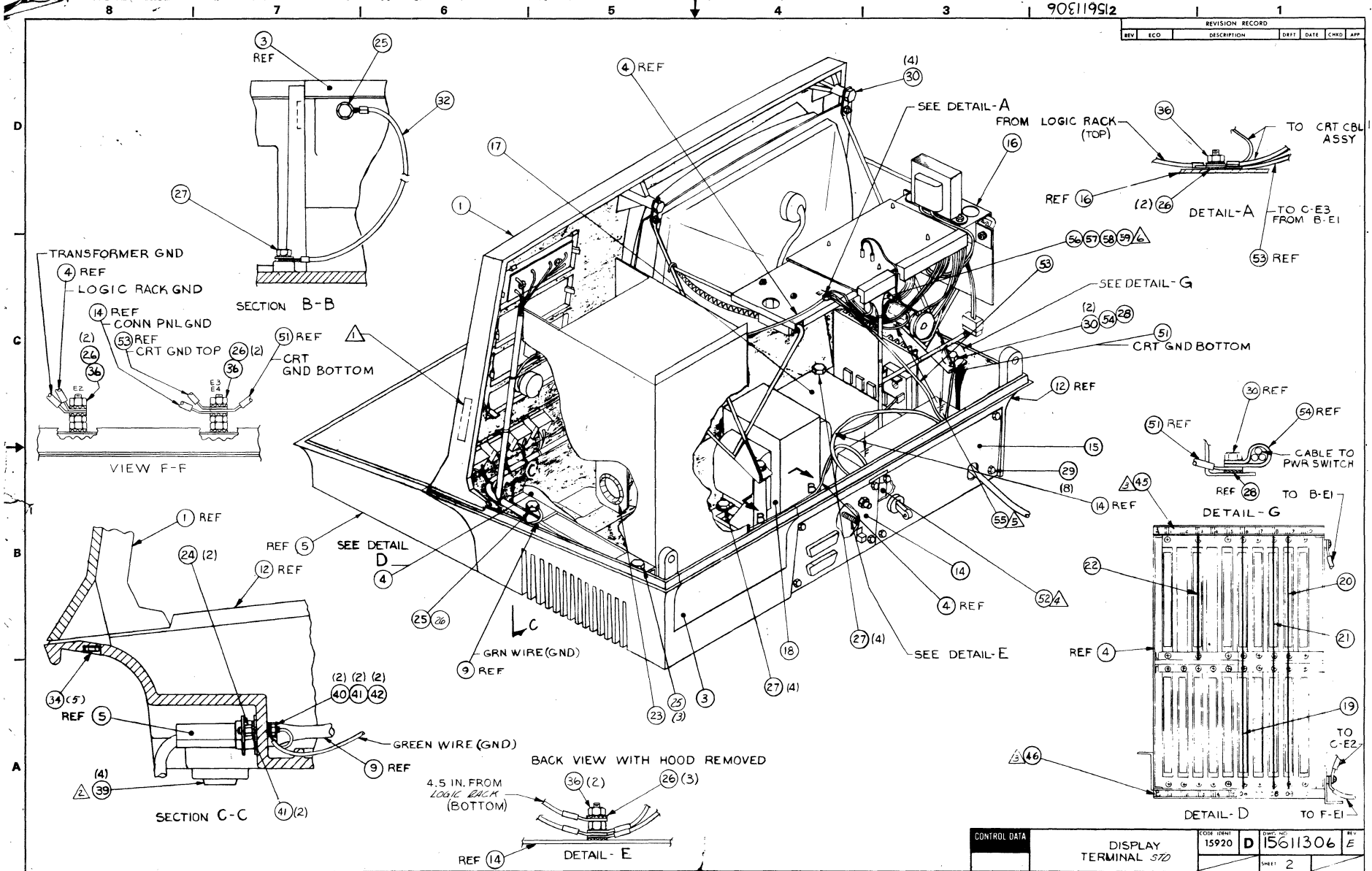
NOTES:

- ▲ MARK "TOP ASSY 15611306" IN AREA SHOWN PER CDC SPEC 10121508.
- ▲ BRUSH OFF EXCESS PAINT OVER SPRAY AND SOLVENT CLEAN BEFORE APPLYING.
- ▲ SEE ENGRG SPEC 16036800. COLOR CODE KEYING SPECIFICATION.
- ▲ ATTACH F/N 52 (COPPER FOIL) TO F/N 12 APPROXIMATELY AS SHOWN, DRIVE SCREWS THRU FOIL, THEN TIGHTEN.
- ▲ INSTALL CRT GROUND CLIP, F/N 56 AS FOLLOWS:
  1. INSERT FLAG PIN IN CONNECTOR BPI-14.
  2. ATTACH RING LUG TO STUD 'E1' ON VIDEO DISPLAY ASSY.
  3. INSTALL METAL CLIP UNDER LINEARITY SHIELD WHICH IS UNDER YOKE AND RING MAGNET ASSY.
- ▲ IF REQ'D INSTALL F/N'S 57, 58 AND 59 WITH ADHESIVE F/N 60 PER CDC SPEC 16042739, GEOMETRIC DISTORTION CORRECTION.
- 7 CUT SLEEVING (F/N 62) INTO 1.0 INCH LENGTHS. SOAK FOR 10 MINUTES IN XYLOL. INSTALL PREPARED SLEEVING OVER CONTACTS OF SWITCH PINS 52-3, 53-3, 53-6, 55-3 & LED ASSY PINS 6 & 7.

APL15611306 DETACHED LISTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES		CONTROL DATA		TITLE	
	3 PLACE ±	2 PLACE ±	ANGLE ±	FINISH USED ON	DISPLAY TERMINAL STD	
	DO NOT SCALE DRAWING		DESIGNED BY	DATE	CODE IDENT	DRAWING NO
	MATERIAL		ENGINEER	DATE	15920	D 15611306
PARTS		APPROVED	DATE	SCALE		
		EC	11/77	EC 15611305 SHEET 1 OF 3		

90119512

REVISION RECORD					
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD APP



CONTROL DATA	DISPLAY TERMINAL STD	CODING UNIT	15920	DRWG NO.	D 15611306	REV.	E
		SHEET	2				

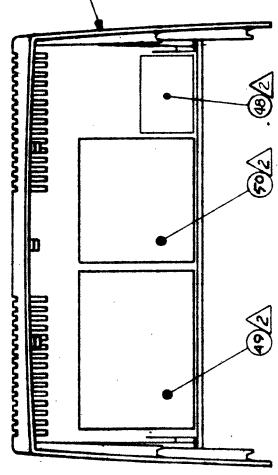
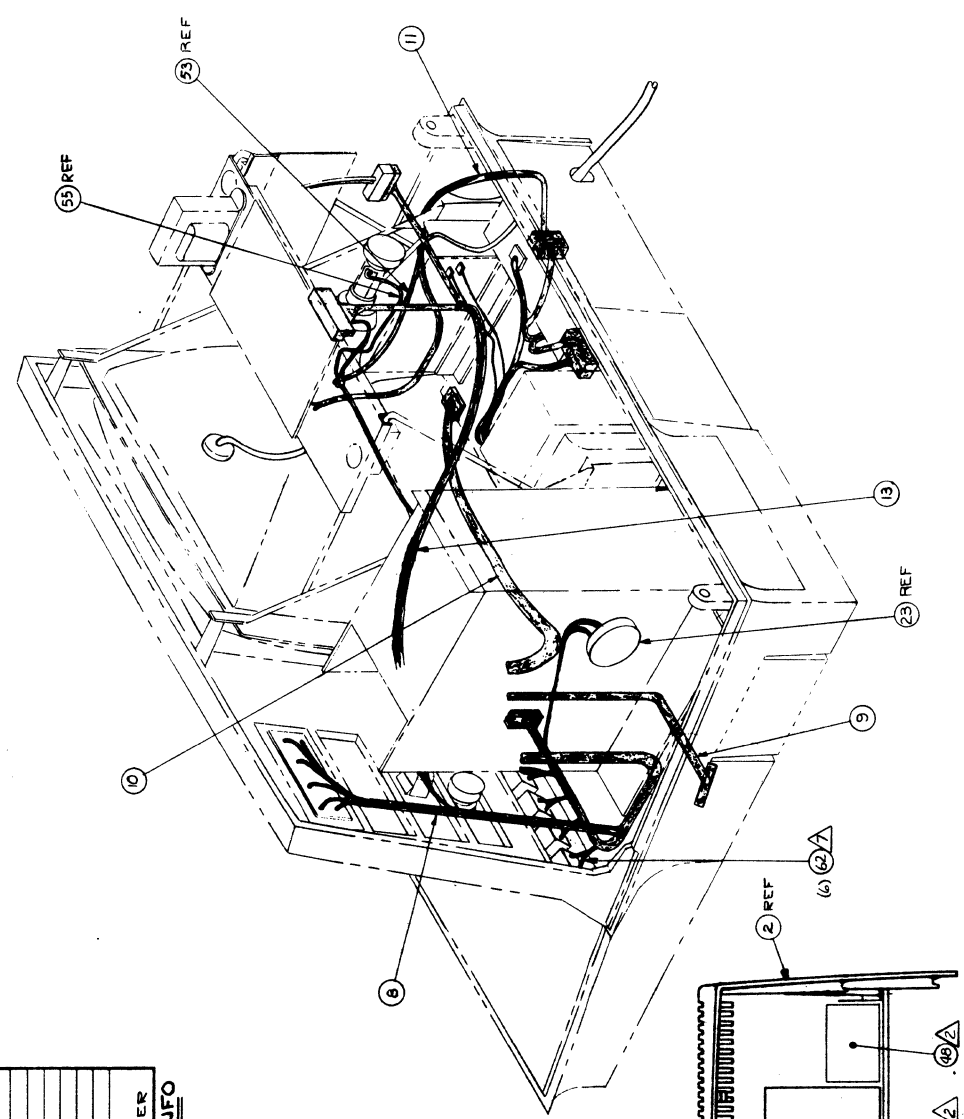
REV	ECO	DESCRIPTION	DATE	BY	CHKD	APP

15611306

1

6	L - INDICATOR PANEL
7	K - SWITCH PANEL
IT118	H - POWER SUPPLY
NONE	G - OPTIONAL LED ASSY
14	F - CONNECTOR PANEL
2	E - KEYBOARD
12	D - BASE
15	C - AC ENTRY PANEL
16	B - VIDEO DISPLAY
4	A - LOGIC CHASSIS
FIND NO.	DESCRIPTION
	SUB ASSY CODE LETTER

**SUB ASSY CODE LETTER INFO**



CABLE ROUTING DIAGRAM

INSIDE VIEW OF HOOD

CONTROL DATA	DISPLAY TERMINAL S70	REV. NO. D	15611306	REV. E
15920				



BUILD ARC 440										ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.
										TERM. DSPL FTZ 50/60HZ (TA)				02-09-77	1	12745 00011965
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE						
0860	15611306	0	<b>E</b>	0		N	REL	10-28-76	CC614E	02-09-77	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT	
TP/IND NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD								
001	01	71491937	0	1		PC REZFI CRT 17 IN SHIELDED	P									
002	01	71491938	8	1		PC HOOD TERMINAL SHIELDED	P									
003	01	71491939	6	1		PC PANEL ACCESS	P									
004	01	61401002	3	1		PC LOGIC CHASSIS ASSY FTZ	A									
005	01	61407520	8	1		PC KEYBOARD ASSY 95 KEY (SHIELD)	N									
006	01	61370601	9	1		PC PANEL ASSY INDICATOR	A									
007	01	61375801	0	1		PC SWITCH PNL ASSY	A									
008	01	61370700	9	1		PC CABLE ASSY (FRONT)	A									
009	01	61402600	3	1		PC CABLE ASSY KEYBOARD INTERNAL	A									
010	01	61401200	3	1		PC CABLE ASSY D.C. POWER	A									
011	01	61375500	8	1		PC CABLE ASSY (POWER ON)	A									
012	01	71491974	3	1		PC HASF TERM SHIELDED	P		11965	11965			7706	7706		
012	02	71492276	2	1		PC HASF TERMINAL SHIELDED	P									
013	01	61374900	1	1		PC CABLE ASSY (CRT)	A									
014	01	61371000	3	1		PC PANEL ASSY (CONNECTOR)	A									
015	01	61371104	3	1		PC PANEL ASSY (AC ENTRY) 60 HZ	A		12745	12745						
016	01	61370905	4	1		PC VIDEO DISPLAY ASSY	G									
017	01	90421700	7	1		PC CD ASSY 40WD PW SPLY FLTR 9V	A									
018	01	51905600	6	1		PC XFORMER POWER	P									
019	01	90445705	8	1		PC CD ASSY 4RXD-4 REFRESH CONT	A									
020	01	90442100	5	1		PC CD ASSY 4BYD-1 PROCESSOR RD	A									

BUILD ARC 440										ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.
										TERM. DSPL FTZ 50/60HZ (TA)				02-09-77	2	12745 00011965
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE						
0860	15611306	0	<b>E</b>	0		N	REL	10-28-76	CC614E	02-09-77	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT	
TP/IND NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD								
021	01	90444900	6	1		PC CD ASSY 5ACD-3 MEMORY	N									
022	01	90393600	3	1		PC CD ASSY 4BRD +5V 10AMP	A									
023	01	51908902	3	1		PC ALARM AUDIBLE LUG FIB 2	P									
024	01	71455801	2	2		PC STANDOFF MALE/FEMALE 4-40 STL	P									
025	01	51858501	3	3		PC SCREW 10X1/2 TYPE A HEX HD	R		12745	12745						
026	01	10126403	4	3		PC WSHR NO.10 EXT TOOTH LK TYP A	B		12745	12745						
027	02	51917790		10		PC SCREW HEX WSHR HD TYPE B	B		12629	12745						
028	01	10126402	6	1		PC WSHR NO.8 EXT TOOTH LK TYP A	R		12745							
029	01	00860303	7	8		PC MSCR SELF-LKG HEX HD 6-32X3/8	B									
030	01	00860311	0	6		PC MSCR SELF LKG HEX HD 8/32X3/8	B									
031	01	10125606	3	2		PC WASHER FLT NO.8 STL CP	B			12745						
032	01	61391105	6	1		PC GND WIRE ASSY 7.5 16GA	A									
033	01	10127153	4	2		PC SCRW MACH PH 1/4-20X1/2 CRSRC	B									
034	01	51858503	9	5		PC SCREW 3/4L SZ 10 HEX	R									
035	01	95125301	2	AR		OZ LOC TITE SEALANT RED	B			12745						
036	01	10125108	0	5		PC NUT HEX MCH 10-32 STL CP OR Z	R									
037	01	66299633	9	REF		PC GENFALOGY LIAT DISPLAY	D									
039	01	51805801	1	4		PC RUMBER, RUBBER .300M SLF-STKG	B									
040	01	10125603	0	2		PC WASHER FLT NO.4 STL CP	B									
041	01	10126400	0	4		PC WSHR NO.4 EXT TOOTH LK TYP A	B									
042	01	10125103	1	2		PC NUT HEX MCH 4-40 STL 6P OR ZP	B									

BUILD ARC 440

### ASSEMBLY PARTS LIST

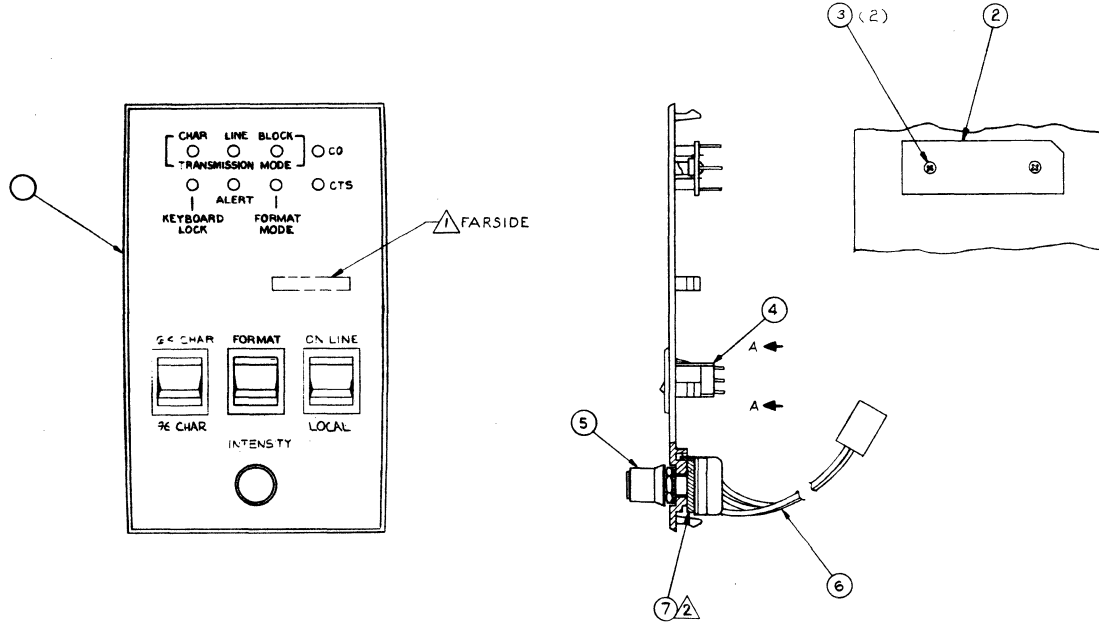
PRINT DATE 02-09-77 PAGE 3 FILE CHANGE NO. 0001145

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE				
0860	15611306	0	0		TERM. DCDL FTZ 50/60H7 (T&)	N	RFL	10-28-76	CC&1AE	02-09-77				
ITEM NO	LI	PART NUMBER	CD	REV.	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
045	01	71474100	6		1		PC LABFI A, CC CHAS 6.4IN VINYL	P						
046	01	71474106	3		1		PC LABFI B, CC CHAS 3.4IN VINYL	P						
048	01	71479301	5		1		PC LABFL, CARD PLACEMENT TAR-01	P						
049	01	71479400	5		1		PC LABFI LOG CD SW AND ADJUST	P						
050	01	71479500	2		1		PC LABFL A/C D/C CARLE INTFR	P						
051	01	61391104	9		1		PC GND WIRE ASSY 4.5 16GA	G						
052	01	95558018	8		300		PC TAPF, COPPER FOIL W 1.00	B						
053	01	61391107	2		1		PC GND WIRE ASSY 12.5 16GA	A						
054	01	51776601	0		1		PC CLAMP, CRL (4) 3/32DIA NOM	B						
055	01	15010307	5		1		PC ID FWBLEW, PRODUCT MEDIUM AL	P						
056	01	71492174	9		1		PC GROUND CLIP CRT	A						
057	01	51917050	0		500		PC MAGNET BAR	P						
058	01	51917051	8		500		PC MAGNET BAR	P						
059	01	51917052	6		500		PC MAGNET BAR	P						
060	01	51004063	7		100		PC ADHESIVE, AMBER SYN ELASTOMER	B						
061	01	16042739	9	REF			PC GEOM DIST CORRECTION	D						
062	01	24528627	3		500		FT TUBING INS SZ 13 CLEAN	B		11965A			7706	
0050 TOTAL LINES														

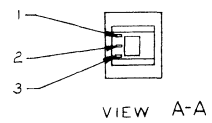
62962300 B

PART NO	
61370600	INACTIVE-REPLACED BY 61370601
01	INDICATOR PANEL ASSY

SHEET REVISION STATUS		REVISION RECORD					
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP	
		RELEASED CLASS		11/27			
01	COAS	REVISED PER ECO		11/27			
02	C295	ADDED FN 7.8 NOTE 2		5-6-75			
A	10453-6	RELEASED CLASS A		5/17/75			
B	10880	REVISED PER ECO		11/27			
C	11007	DWG CHG ONLY		10-13			
D	11040	ADD TAB CH. UNCHANGED TO COO		5/17/75			
				5/17/75			



NOTES:  
 1. MARK "ASSY 61370600" IN AREA SHOWN PER CDC SPEC 10121508.



DATE APPROVAL  
 DOCUMENT  
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APL 61370601 APL 61370600	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES	CONTROL DATA	TITLE
	3 PLACE 2 3 PLACE 2 ANGLES 2	FIRST USED-ON 20/8/74	INDICATOR PANEL ASSEMBLY
DO NOT SCALE DRAWING	CHECKED BY D. WELLS	DATE 10/8/74	CODE IDENT
MATERIAL	ENGINEER	15920	D
APPROVED	DATE	61370600	DRAWING NO
			15920
			61370600
			SCALE
			NHA1561400
			SHEET / OF

7-33/7-34





BUILD ARC 220

**ASSEMBLY PARTS LIST**

PRINT DATE	PAGE	FILE CHANGE NO.
12-10-75	1	00011040

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE
0860		61370601		9	D	A	PANEL ASSY INDICATOR		A	REL	05-09-75	CC6B1A/B	12-10-75
Y/IND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/M	WK IN	WK OUT
001	01	71453100	1	1		PC INDICATOR PANEL	P						
002	01	90411600	1	1		PC CD ASSY 4CKD (LED PANEL)	G						
003	01	18607900	0	2		PC SCREW 4-24X1/4	B						
004	01	61401100	5	3		PC SWITCH ASSY	A						
005	01	51015101	3	1		PC KNOR SKIRTED PUSH ON	P						
006	01	61375200	5	1		PC CONTROL ASSY (INTENSITV)	G						
0006 TOTAL LINES													

DWN	D. Wells	10/27/74	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO	REV
CHKD				INTENSITY CONTROL CABLE ASSY	A	61375200	A
ENG				FIRST USED ON	NHA	SHEET 1 of 3	
MFG			CODE IDENT	CC 614 / CC 681	61370600		
APPR		7-23-75	15920				

SHEET REVISION STATUS				REVISION RECORD						
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP		
					RELEASED CLASS "C"		10-14-74	H.H.		
			01	01	01	C039	ADDED PIN NOS TO POT	R	11-18-74	M.C.T.
			02	01	02	C0110	CHG LENGTH AT 6.0 TO 15.0	R	1-14-75	M.C.T.
			03	03	03	C212	ADDED FIN & ADDED PIN VIEW OF CONN	R	3-27-75	M.C.T.
			A	A	A	10653-1	RELEASED CLASS A		4-29-75	M.C.T.
			A	A	A	9401-14	ADD INT DIV LABEL		5-3-75	M.C.T.

**REVISION NOTICE**

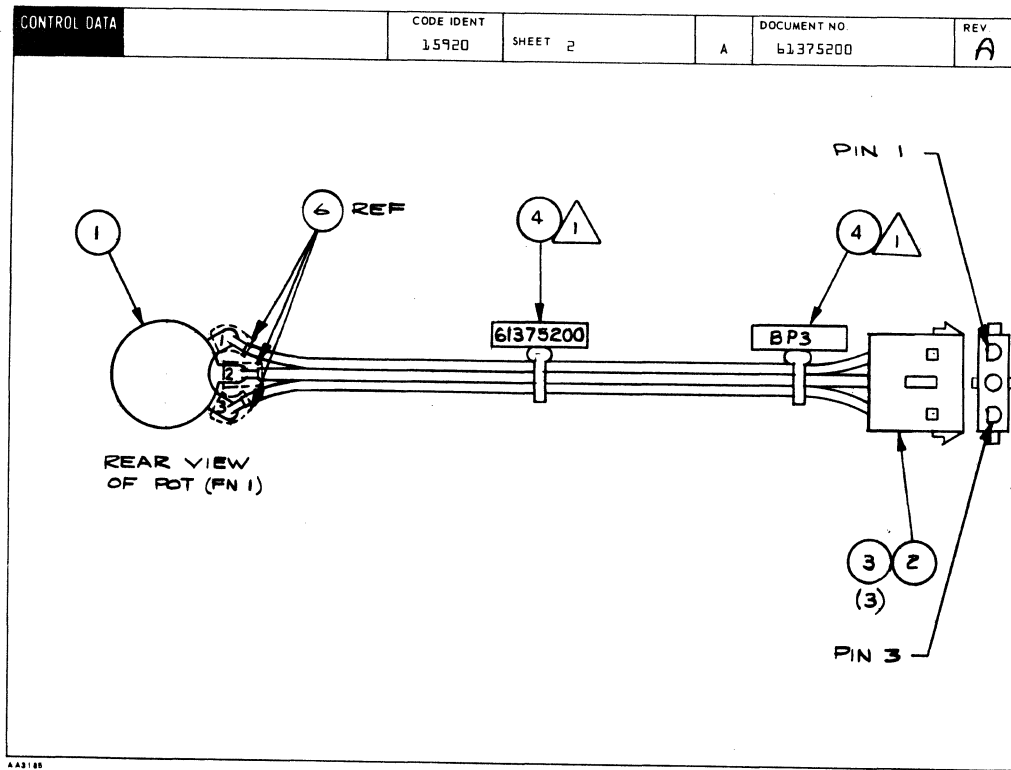
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NOTES:  
 1. Apply label to cable per drawing 82191061, Method B. Mark as shown.

APL 61375200  
 DETACHED LISTS

AA3180 REV. 8/71

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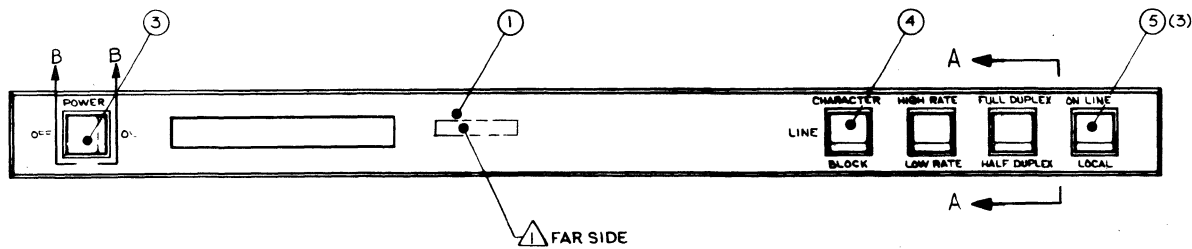


AA3180

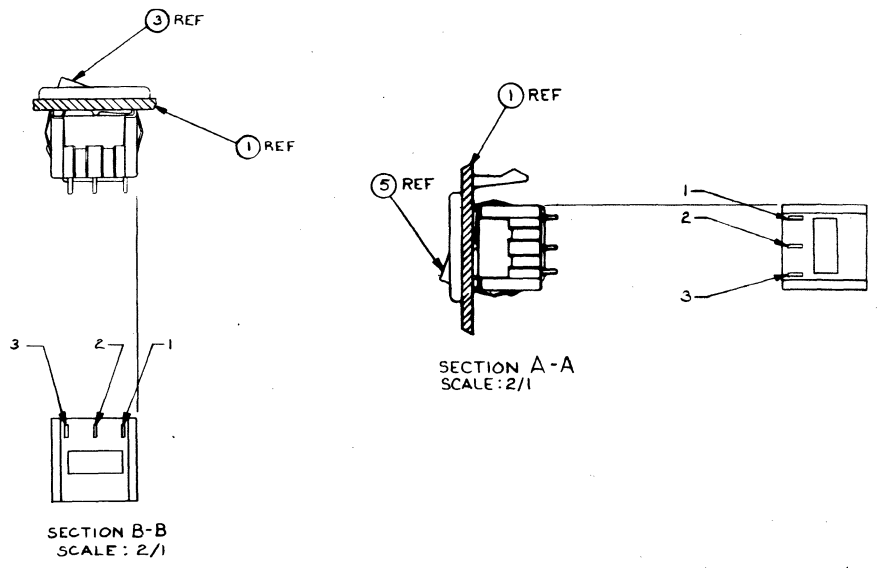
PRINTED IN U.S.A.



SHEET REVISION STATUS		REVISION RECORD					
REV	ECO	DESCRIPTION	APP	DATE	CHK	APP	
01	CD4-F	RELEASED CLASS		10/77		235	
02	CD103	REVISED PER EGO		11/77		235	
03	CD103	REMOVED CDC EMBLEM		11/77		235	
04	CD310	ADDED SECTION B-B		12/77		235	
05	10653-7	Released Class A		10/78		235	



NOTES:  
 △ MARK ASSY 61370400 IN AREA SHOWN PER CDC SPEC 10121508.  
 △ SECTION A-A TYPICAL FOR ITEMS 4 AND 5.



APL 61370400 ATTACHED LISTS	TOLERANCES FRACTIONS DECIMALS ANGLES		TITLE SWITCH PANEL ASSEMBLY	
	DO NOT SCALE DRAWING	DESIGNED BY CC614A	CODE IDENT 15920	DRAWING NO D 61370400
DATE 11/77			SCALE 1/1	SHEET OF 1/1

BUILD ARC 104

### ASSEMBLY PARTS LIST

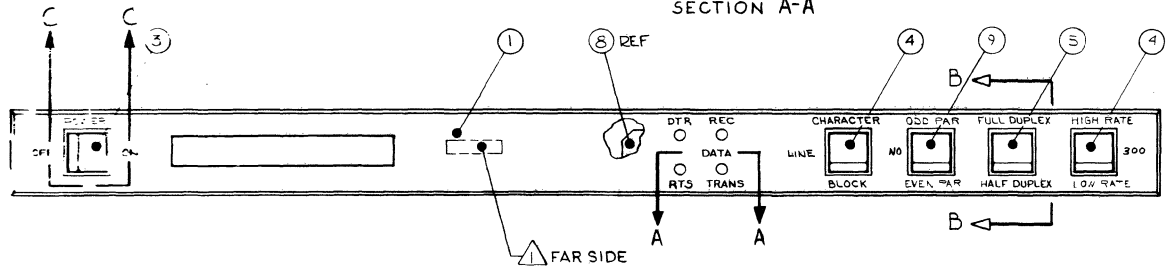
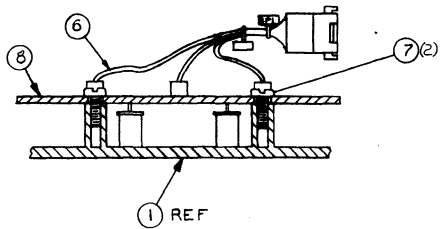
PRINT DATE	PAGE	FILE CHANGE NO.
05-19-75	1	010653-7

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. DESG.	FILE DATE	
0860		61378A00		S	A	D	PANEL ASSY (SWITCH)	A	REL	05-14-75	CC614A	05-19-75	
TRND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	71453000	S	1		PC PANEL SWITCH							
003	01	51906412	S	1		PC SWITCH ROCKER							
004	01	51906401	D	1		PC SWITCH ROCKER							
005	01	51906400	D	3		PC SWITCH ROCKER							
							0004 TOTAL LINES						

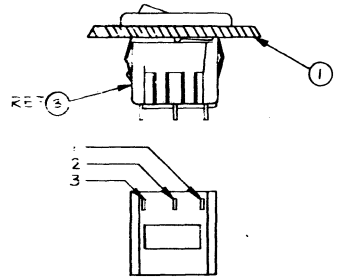
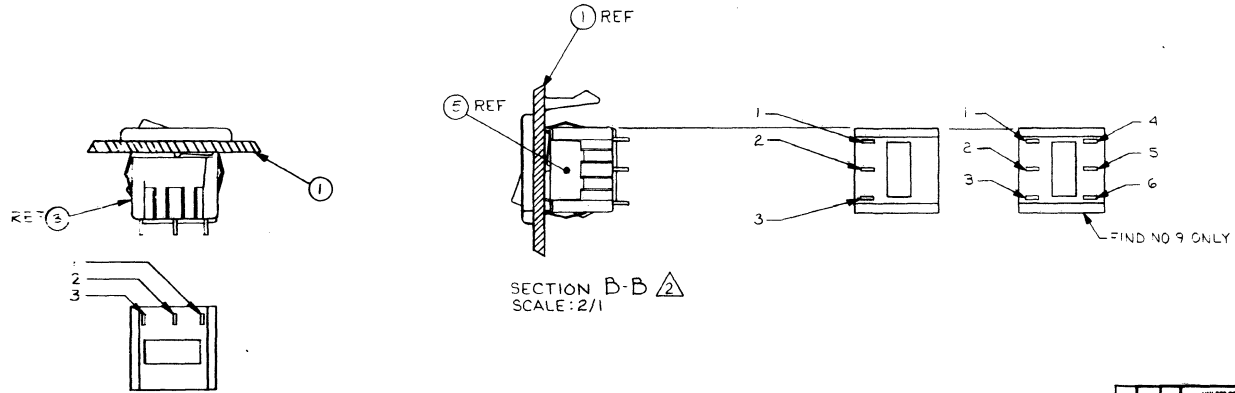
7-40

PART NO.	61375800	INACTIVE REPLACED BY 61375801
	61375801	SW PNL L.E.D. ASSY

SHEET REVISION STATUS		REVISION RECORD				
REV	ECO	DESCRIPTION	INT	DATE	CHK	APP.
		RELEASED CLASS				
01	COAS	REVISED PER ECO				
02	CD103	REMOVED CDC SERIAL				
03	C178	REVISED PNL GEB				
04	C810	ADDED SECTION C-C				
A	0658-7	RELEASED CLASS A				
B	CD1080	REVISED PER ECO				
B	0961-18	ADD INT DIV LABEL				
C	CD11040	ADDED TAB ON THE GCD				



NOTES:  
 △ MARK ASSY 61375800 IN AREA SHOWN PER CDC SPEC 10121508.  
 △ SECTION B-B TYPICAL FOR FIND NO. 4 & 5



SECTION C-C  
SCALE 2/1

SECTION B-B  
SCALE: 2/1

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62962300 B

APL 61375801 APL 61375800 DETACHED LISTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	CONTROL DATA	TITLE
	TOLERANCES SPACE 1 2 3 4 5 6 FINISH 1 2 3 4 5 6 ANGLE 1 2 3 4 5 6	CC614A	SWITCH PANEL L.E.D. ASSEMBLY
DO NOT SCALE DRAWING	CHECKED BY	CODE IDENT	DRAWING NO
	DESIGNED BY	15920	D 61375800
	ENGINEER		
	DATE		
	APPROVED		
	SCALE 1/1		

BUILD ARC 220

**ASSEMBLY PARTS LIST**

PRINT DATE 12-10-75 PAGE 1 FILE CHANGE NO. 00011040

DIV.		ASSEMBLY NUMBER		REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE	
0860		61375800		2	C	REPLACED BY 61375801 11040		A	INA	12-05-75	CC614A	12-10-75	
ITEM NO.	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	71456100	8	1		PC PANEL SWITCH	P						
003	01	51906412	5	1		PC SW, ROCKER SPDT ON-NONE-ON	P						
004	01	51906401	8	1		PC SW, ROCKER SPDT ON-OFF-ON	P		10880	10880		7529	7529
004	02	51906401	8	2		PC SW, ROCKER SPDT ON-OFF-ON	P					7529	
005	01	51906400	0	3		PC SW, ROCKER SPDT ON-NONE-ON	P			10880			7529
005	02	51906400	0	1		PC SW, ROCKER SPDT ON-NONE-ON	P		10880			7529	
006	01	61377900	8	1		PC CABLE ASSY LED	G						
007	01	18607900	0	2		PC SCREW 4-24X1/4	B						
008	01	90417300	2	1		PC CD ASSY 40FD(LED PANEL)	G						
009	01	51906407	5	1		PC SW, ROCKER DPDT ON-OFF-ON	P		10880			7529	
0010 TOTAL LINES													

BUILD ARC 220

**ASSEMBLY PARTS LIST**

PRINT DATE 12-10-75 PAGE 1 FILE CHANGE NO. 00011040

DIV.		ASSEMBLY NUMBER		REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE	
0860		61375801		0	C	SWITCH PNL ASSY		A	REL	05-14-75	CC6B1A/B	12-10-75	
ITEM NO.	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	71456100	8	1		PC PANEL SWITCH	P						
003	01	61401102	1	1		PC SWITCH ASSY	A						
004	01	61401101	3	2		PC SWITCH ASSY	A						
005	01	61401100	5	1		PC SWITCH ASSY	A						
006	01	61377900	8	1		PC CABLE ASSY LED	G						
007	01	18607900	0	2		PC SCREW 4-24X1/4	B						
008	01	90417300	2	1		PC CD ASSY 40FD(LED PANEL)	G						
009	01	61401103	9	1		PC SWITCH ASSY	A						
0008 TOTAL LINES													

DWN	K. Trautman	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO	REV
CHKD	<i>[Signature]</i>		CABLE ASSY LED	A	61377900	A
ENG	<i>[Signature]</i>					
MFG	<i>[Signature]</i>		FIRST USED ON	NHA	SHEET 1 of 3	
APPR	<i>[Signature]</i>	15920	CC614 / CC681	61375800		

SHEET REVISION STATUS				REVISION RECORD				
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
					RELEASED CLASS C		3-19-75	EDA
			01	01	C258 FIN 3 WAS 93747044		4-18-75	<i>[Signature]</i>
			A	A	10653-1 RELEASED CLASS A		4-24-75	M.C.T.
			A	A	9401-14 ADD INT DIV LABEL		5-8-75	M.C.T.

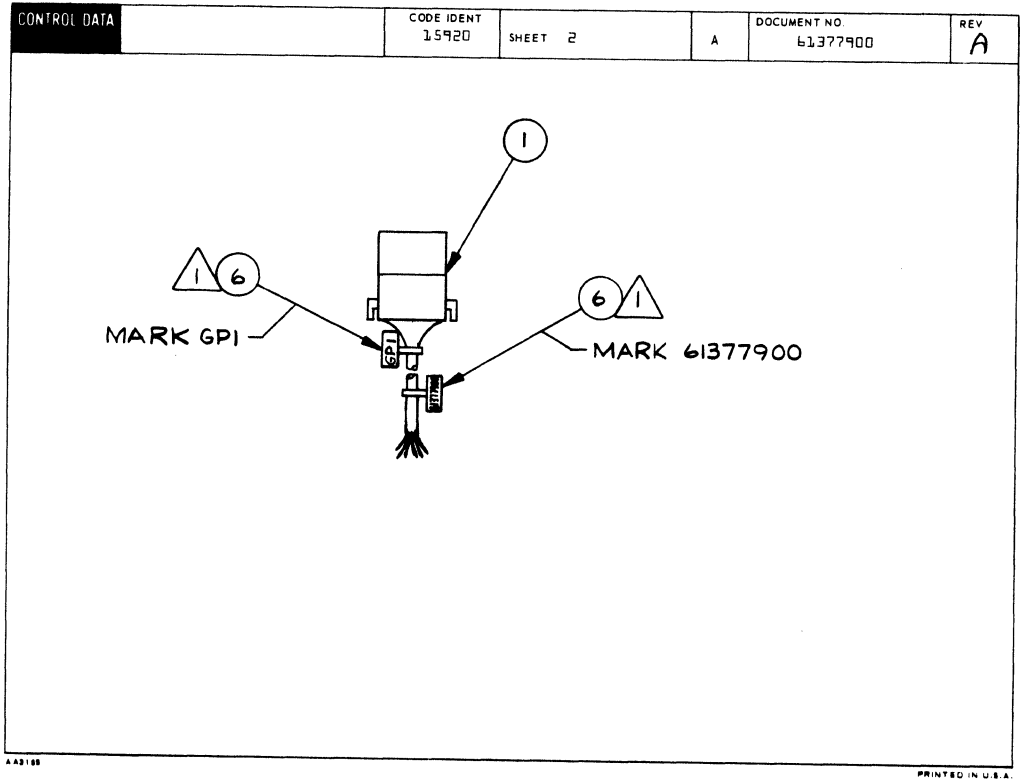
**INTERNATIONAL DOCUMENT**  
 This document is subject to change without prior notice. Users will receive copy only of the revised document.

NOTES:  
 1 Apply Label to Cable per drawing 82191061, Method b. Mark as shown.

APL 61377900
DETACHED LISTS

AA3180 REV. 8-71

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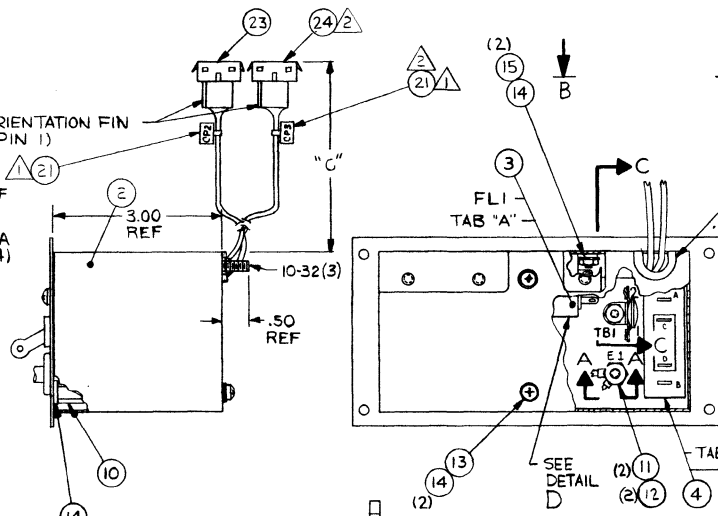
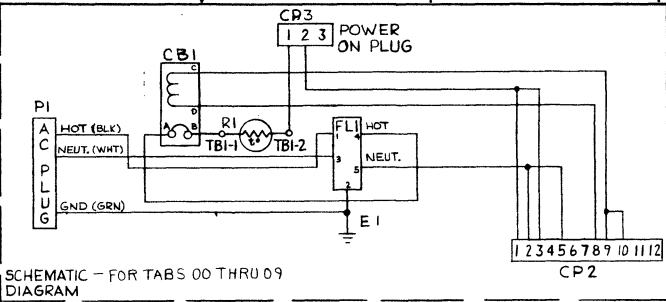
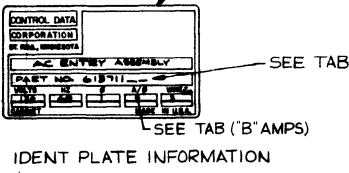
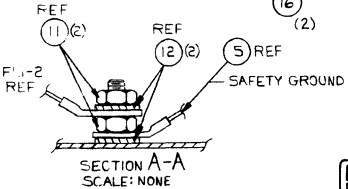
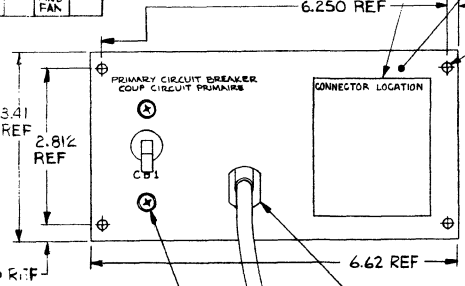
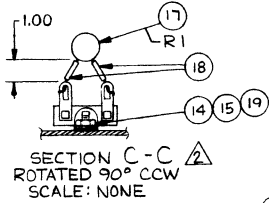
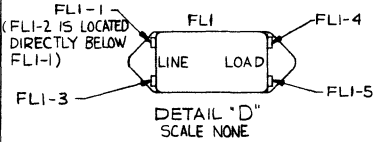
AA3180

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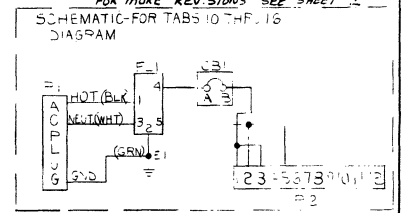




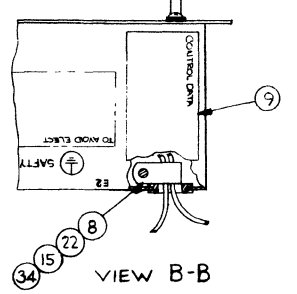
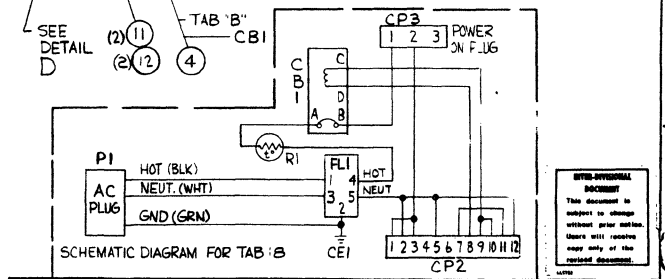
CDC PART NO.	AMPS	"A"	"B"	DIM "C"
61371100	5.0	1.5		
01	5.0	2.0		
02	5.0	2.5		
03	5.0	3.0		
04	5.0	3.5		
05	5.0	4.0		
06	10.0	5.0		
07	10.0	6.0		
08	10.0	7.0		
09	10.0	8.0		
01	5.0	5.0		2.00
02	5.0	5.0		1.50
03	5.0	5.0		
04	5.0	5.0		
05	5.0	5.0		
06	5.0	5.0		
07	5.0	5.0		
08	5.0	5.0		
09	5.0	5.0		



SHEET REVISION STATUS	REV	ECO	DESCRIPTION	DRFT	DATE	CHDR	APP
	01	004-1	RELEASED CLASS A		10/13/64		
	02	C134	MOVED GROUND STUD CHANGED DETAILS IN SECTION B		11/16/64		
	03	C215	ADDED PART FROM PL RND NO. 5 22 THRU 32		3/20/75		
	04	C258	FIN B WAS 2464004 27 LK 2		4/20/75		
	05	16459-2	RELEASED CLASS A		10/13/64		
	06	C10734	REVISED PER ECO		10/13/64		
	07	C10735	REVISED PER ECO		10/13/64		
	08	380174	ADD INT DIM LABEL		10/13/64		
	09	D 11206	ADD F/N 34		10/13/64		
	10	ED1195	REVISED PER ECO		10/13/64		
	11	ED1250	ADDED SHT 2, AND DIM'S		10/13/64		
	12	G 11277	ADDED TAB 17		10/13/64		
	13	H 11457	ADDED TAB 18		10/13/64		
	14	J 11525	PL CHANGE ONLY		4/21/64		
	15	K 11658	ADDED TAB 19		10/13/64		
	16	L ED1160	UNACTIVATED TAB 17 R/B TAB 19		10/13/64		
	17	M ED1134	TAB 18 FIN B WAS 2464004 27 LK 2		10/13/64		



- NOTES:
- △ APPLY LABEL TO CABLE PER DRAWING 82191001, METHOD C & MARK AS INDICATED.
  - △ FOR TABS 00 THRU 09 AND 17 ONLY. NOT USED ON TABS 10 THRU 16, '8419.
  - △ FOR TABS 17, 19, SEE SHT 2 OF DRAWING.
  - △ LOCATE APPROXIMATELY AS SHOWN - TAB 18 ONLY.

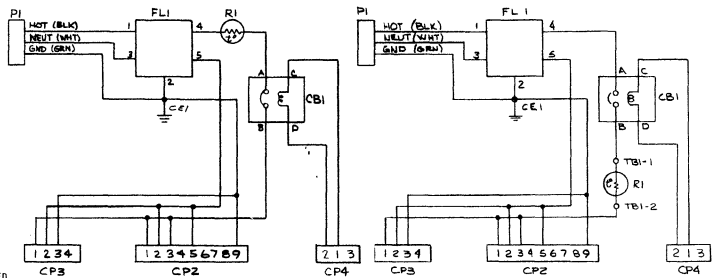


DETACHED LISTS APL 61371100 THRU APL 61371100	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	CONTROL DATA CORPORATION	TITLE
	TOLERANCES	DATE	AC. ENTRY ASSEMBLY
	3 PLACE 3 PLACE ANGLE	CC 614 A	60 HZ
	DO NOT SCALE DRAWING	DESIGNED BY	15920
MATERIAL	CHECKED BY	D	61371100
ENGINEER	DATE	15920	15920
APPROVED	DATE	15920	15920

62962300 B

7-45/7-46

SHEET REVISION STATUS				REVISION RECORD					
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP	REV	ECO	DESCRIPTION
2	1								
N	N	CD11957							
		ADDED FIN SB 6-B		1/27/77					

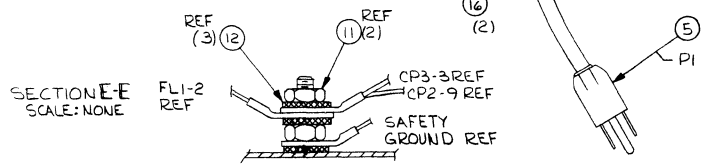
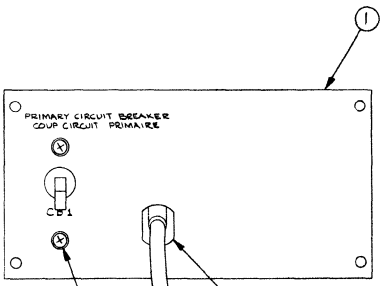
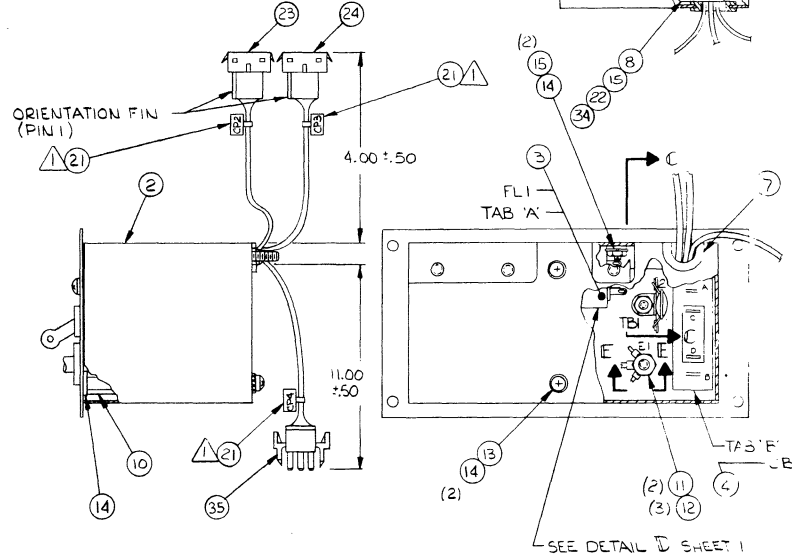
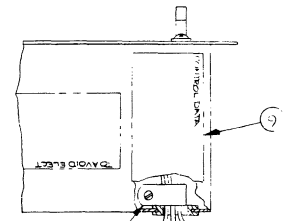


SCHMATIC DIAGRAM  
TAB 19

SCHMATIC DIAGRAM  
TAB 17

- SPECIFICATION INFORMATION**
- I. INPUT
    - A. VOLTAGE - 96 TO 128 VOLTS.
    - B. CURRENT - SEE TABULATION TABLE (TABULATED FROM 1.5 TO 8.0 AMPERES MAXIMUM).
    - C. OVERCURRENT PROTECTION - TOGGLE CIRCUIT BREAKER INCLUDED. TABS 00-08 & 17-19 ARE WITH THE RELAY TRIP COIL CAPABLE OF TRIPPING CIRCUIT BREAKER FROM AN EXTERNAL SOURCE. FOR DETAILED INFORMATION ON CIRCUIT BREAKER SEE CDC-DWG 51907700.
    - D. FREQUENCY - 47 TO 440 HZ.
  - III. UL AND CSA INFORMATION - THIS ASSEMBLY SHALL BE CONSTRUCTED WITH UL RECOGNIZED POWER CORD, RFI FILTER AND CIRCUIT BREAKER SWITCH. IT SHALL BE CONSTRUCTED TO FACILITATE UL RECOGNITION IN THE EQUIPMENT.
  - IV. PHYSICAL DIMENSIONS - THE APPROXIMATE SIZE 3.41 X 6.62 X 3.5. REFER TO DRAWING, SHEET 1.

- APPLICABLE DOCUMENTS**
- CDC-DWG 51899700 FILTER, RFI 115-275 VAC
  - CDC-DWG 51907700 CIRCUIT BREAKER WITH TRIP COIL



ORIENTATION FIN (PIN 1)  
TABS 17 & 19 ONLY

CONTROL DATA	PANEL ASSY (AC ENTRY)	CDR IDENT	DWG NO	REV
	60 HZ	15920	D 61371100	N
		SHEET	2	



BUILD ARC 104										ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.
										02-10-77				1	0011957A	
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION			MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE				
0860	61371104	3	N	D	PANEL ASSY (AC ENTRY) 60 HZ			A	REL	04-28-75	LIAT	02-10-77				
TRIND NO	LI	PART NUMBER	CD	REV.	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT		
001	01	71455100	9		1		PC PLATF, AC ENTRY 60HZ (CRS)	P								
002	01	71455000	1		1		PC COVER AC ENTRY	P								
003	01	51899703	6		1		PC FILTER, RFI 5A 115-275V SLD	P								
004	01	51907705	1		1		PC CB W/TRIP COIL 3.5AMP 250VAC	P								
005	01	51899900	8		1		PC CORN, 3 WIRE PWR UL 9FT GRA	P								
006	01	36158909	6		1		PC RUSHING, STRAIN-REL BLK NYL	B								
007	01	51809821	5	AR			FT CHAN, RUBBER 1/32 SLT EXTR U	B		11206	11206		7606	7606		
007	02	51809821	5		167		FT CHAN, RUBBER 1/32 SLT EXTR U	B					7606			
008	01	24565002	3		1		PC CLAMP, 1/4DIA CARLE BLK NYLON	B								
009	01	15010500	5		1		PC ID PLATE, CABINET SMALL VINYL	P								
010	01	36053425	9		1		PC STANDOFF, HEX CFS 6-32X3.000	P								
011	02	10125108	0		2		PC NUT 4FX MCH 10-32 STL CP OR Z	B		10733			7528			
012	01	10126403	4		2		PC WSHR NO.10 EXT TOOTH LK TYP A	B								
013	01	10127113	8		2		PC WSCR PAN PHL 6-32X3/8 (TYP I)	B								
014	01	10126401	8		6		PC WSHR NO.6 EXT TOOTH LK TYP A	B								
015	01	10125105	6		4		PC NUT HEX MCH 6-32 STL CP OR ZP	B								
016	01	10127111	2		2		PC WSCR PAN PHL 6-32X1/4 (TYP I)	B								
017	01	51908602	9		1		PC THMS, DISC 2.5 OHM 10P 14MM	P								
018	01	51797414	3		167		FT TBG, INS .066DIA T/W NAT TEF	B		11206	11206		7606	7606		
018	02	24563704	6		167		FT INS SLVNG HI TEMP 18AWG	B					7606			
019	01	36085800	5		1		PC STRIP, TERM LUG-TYPE (52)	P								
020	01	61369800	0	REF			PC W/L AC ENTRY PANEL ASSY 60HZ	D								

BUILD ARC 104										ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.
										02-18-77				2	0011957A	
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION			MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE				
0860	61371104	3	N	D	PANEL ASSY (AC ENTRY) 60 HZ			A	REL	04-28-75	LIAT	02-10-77				
TRIND NO	LI	PART NUMBER	CD	REV.	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT		
021	01	94277409	2		2		PC STRAP CABLE TIE TYPE 6	B								
022	01	10126103	0		3		PC WSHR NO.6 INTL TOOTH LOCK STL	B								
023	01	51905905	9		1		PC CONN RECPT 12 CONTACTS	P								
024	01	51905901	8		1		PC CONN RECPT 3 CONTACTS	P								
025	01	51906200	4		9		PC CONTACT, SKT 20-14GA STRIP T	P		11525	11525		7619	7619		
025	02	51906200	4		6		PC CONTACT, SKT 20-14GA STRIP T	P					7619			
026	01	62121109	3		4		PC TERM RECPT FSTN 16-14 AWG BLU	B								
027	01	51797236	0		1		PC LUG, CRMP R TERM 16-14GA 105S	B								
028	01	93463444	5		500		FT WIR 18GA STRD YEL 300V UL PVC	W								
029	01	93464222	4		2		FT WIR 18GA STRD RED 300V UL PVC	W								
030	01	93464444	4		4	250	FT WIR 18GA STRD YEL 300V UL PVC	W								
031	01	93463555	8		624		FT WIR 18GA STRD GRN 300V UL PVC	W								
032	01	24528617	4		333		FT TBG, INSUL NO.6 BLK UL PVC	B								
033	01	51797217	0		1		PC LUG, CRMP R TERM #22-18GA 10S	B		11206			7606			
034	01	10125605	5		1		PC WSHR NO.6 TYP A PLAIN STL CP	R								
035	01	51906201	2		3		PC CONTACT, SKT 20-14GA STRIP T	P		11525			7619			
							003R TOTAL LINES									

DWN	R. Trautman	ENTR: A A	TITLE	W/L AC ENTRY PANEL ASSY 6DHZ	PREFIX	WL	DOCUMENT NO	61369800	REV	C
CHKD			FIRST USED ON	CCG14/CCGB1	NHA	61371100	SHEET 1 of 2			
ENGR			CODE IDENT	15920						
MFG			SHEET REVISION STATUS							
APPR			REVISION RECORD							
			2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
							RELEASED CLASS "C"		10-15-74	J.L.
			01	01	01	CD110	ADDED COM. IDENT 14	1-9-75	1-14-75	W.L.
			02	02	02	CZ15	MOVED PARTS TO NHA	A	3-28-75	W.L.
			03	03	03	C25B	COND. "A" LENGTH WAS 5	F	4-21-75	W.L.
			A	A	A	10653-2	RELEASED CLASS A		4-21-75	W.L.
			A	B	B	CD10795	WL CHG ONLY	J.M.	7/8/75	W.L.
			C	C	C	11206	CHG LENGTH (5,10,12)	M.P.	7/10/75	W.L.
NOTES:										
1. For find no. identification see APL 61371100 thru 61371109.										
										DETACHED LISTS

AAS180 REV. 8/71

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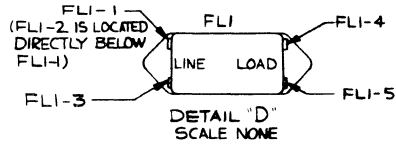
ENTR: A A					CODE IDENT	15920	SHEET	2	WL	DOCUMENT NO.	61369800	REV.	C
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS		
1			0	6	P1			FL1	1	32	PWR CORD (HOT)		
2			9	6	P1			FL1	3	32	PWR CORD (NEUT)		
3			5	3	P1			CE1		27	PWR CORD (GND)		
4	30	16	4	5	CP3	1	24-25	TB1		2	LINE HOT TO SW		
5	30	16	4	3	FL1	4	32	CB1	A	26	HOT TO C.B.		
6	30	16	4	4	CB1	B	26	TB1		1	HOT FROM C.B.		
7	29	16	2	5	CB1	C	26	CP2	9	23-25	TRIP VOLTAGE		
8	28	18	4	3	CP2	9	23-25	CP2	10	23-25	TRIP VOLTAGE		
9	29	16	2	5	CB1	D	26	CP2	8	23-25	TRIP RETURN		
10	30	16	4	4	CP3	2	24-25	CP2	1	23-25	HOT FROM SW		
11	28	18	4	3	CP2	1	23-25	CP2	3	23-25	HOT FROM SW		
12	30	16	4	4.5	FL1	5	32	CP2	2	23-25	NEUTRAL		
13	28	18	4	3	CP2	2	23-25	CP2	5	23-25	NEUTRAL		
14	31	18	5	7.5	FL1	2	32	CE1		33	GROUND		

AAS180 REV. 8/71

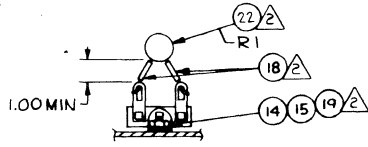
PRINTED IN U.S.

62962300 B

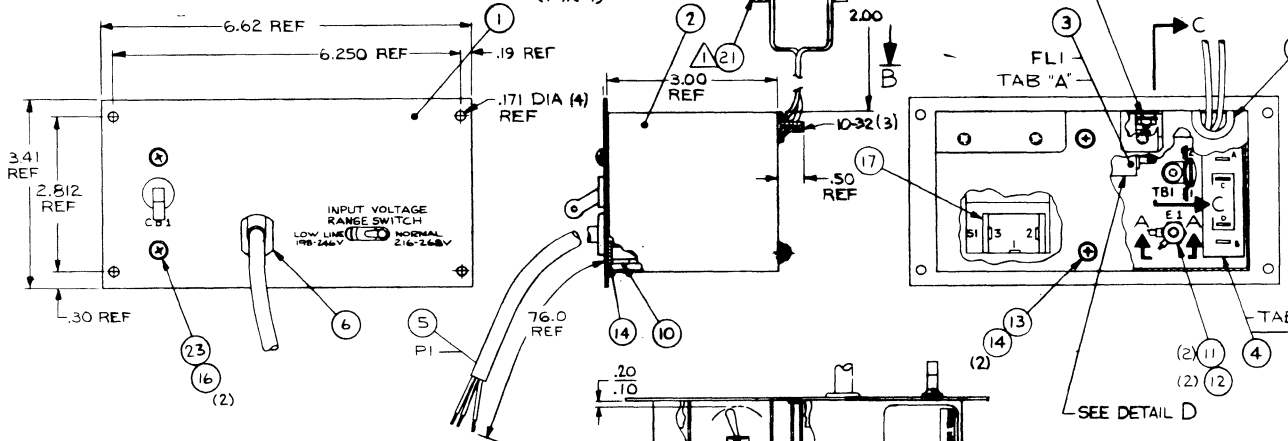
CDC PART NO.	AMPS	
	"A"	"B"
61374000	5.0	1.0 WITH
01	5.0	1.5 TRIP
02	5.0	2.0 COIL
03	5.0	2.5
04	5.0	3.0
05	5.0	3.5
06	5.0	4.0
07	5.0	5.0
08	5.0	5 WITH
09	5.0	1.0 OUT
10	5.0	2.0 TRIP
11	5.0	3.0 COIL
12	5.0	4.0
13	5.0	5.0



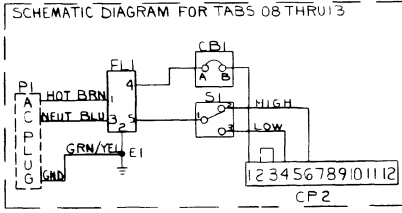
DETAIL "D" SCALE NONE



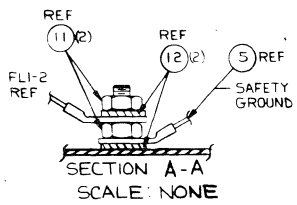
SECTION C-C ROTATED 90° CCW SCALE NONE



SCHEMATIC DIAGRAM FOR TABS 00 THRU 07



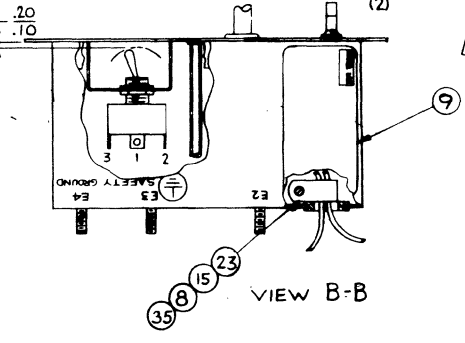
NOTES:  
 △ APPLY LABEL TO CABLE PER DRAWING 82191061, METHOD 6. MARK AS INDICATED.  
 △ FOR TABS 00 THRU 07 ONLY NOT USED ON TABS 08 THRU 13.



SECTION A-A SCALE NONE

CONTROL DATA	
OPERATION:	AC ENTRY ASSEMBLY
PART NO:	61374000
DATE:	
BY:	
CHKD:	
REV:	

IDENT PLATE INFORMATION



VIEW B-B

EMPTY REVISION STATUS		REVISION RECORD	
REV	ECO	DESCRIPTION	DATE
2	1	RELEASED CLAS	
01	004	REVISION 1001 RELEASED TO CHANGE CLASS OF PLUG USED	11-10-74
02	C124	REVISED CABLE STRINGS IDENTIFIED WIRE DETAILS	1/14/75
03	C235	REVISED PER ECO	4-1-75
04	C258	REVISED PER ECO	4-24-75
05	A0693-2	RELEASED CABLES A	5-1-75
06	ED1078	REVISED PER ECO	5/2/75
07	CD1079	REVISED PER ECO	1/9/76
08	CD10971	REVISED PER ECO	2/27/76
09	CD1146	REVISED PER ECO	4-23-76
10	CD1162	ADD F/N 3.5	5-1-76
11	CD1250	ADDED SHT 2, AND DIM'S	7/24/76

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		TOLERANCES		TITLE	
3 PLACE	2 PLACE	ANGLE	FRONT VIEW	AC. ENTRY ASSEMBLY	
±.005	±.010	±.010	CC614B	50 HZ	
DO NOT SCALE DRAWING		DESIGNED BY	DATE	CODE IDENT	DRAWING NO.
		15920	61374000	THRU 61374033	
		APPROVED	DATE	SCALE	SHEET 1 OF 2
				1/1	

7-49

REVISION RECORD		REV.	ECO	DESCRIPTION	DATE	CHKD	APP

**SPECIFICATION INFORMATION**

- I. INPUT
    - A. VOLTAGE - SELECTED BY RANGE SWITCH
      1. 190 TO 246 VOLT (LOW LINE)
      2. 216 TO 268 VOLTS (NORMAL)
    - B. CURRENT - SEE TAPPLATION TABLE (TABULATED FROM 1.0 TO 5.0 AMPERES MAXIMUM).
  - C. OVERCURRENT PROTECTION - TOGGLE CIRCUIT BREAKER INCLUDED. THIS ASSEMBLY IS NOT TO BE USED WITH THE GREATLY OVERCURRENT PROTECTABLE SOURCE. FOR DETAILED INFORMATION ON CIRCUIT BREAKERS SEE CDC-ONE 51607700.
  - D. FREQUENCY - 47 TO 440 HZ.
- II. RFI - RFI FILTER IS PROVIDED TO REDUCE RADIATED SUSCEPTIBILITY AND CONDUCTED EMISSIONS FOR DETAIL INFORMATION ON THE RFI FILTER SEE CDC-ONE 51899700.
  - III. UL AND CSA INFORMATION - THIS ASSEMBLY SHALL BE CONSTRUCTIONED WITH AN APPROVED AND LISTED FILTER AND CIRCUIT BREAKER SWITCH. CHECKING OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE EQUIPMENT.
  - IV. PHYSICAL DIMENSIONS - THE APPROXIMATE SIZE 2.41 X 6.62 X 3.5. REFER TO DRAWING, SHEET 1.

**APPLICABLE DOCUMENTS**

- CDC-ONE 51899700 FILTER, RFI 115-275 MFC
- CDC-ONE 51607700 CIRCUIT BREAKER WITH TRIP COIL

CONTROL DATA	PANEL ASSY (AC ENTRY)		50 HZ
	COORDINATE	QWC NO	REV
	15920	D 61374000	G
		SHEET 2	



BUILD ARC 104

**ASSEMBLY PARTS LIST**

PRINT DATE 01-14-76 PAGE 1 FILE CHANGE NO. 00011250

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61374002	6	G	U	PANEL ASSY (AC ENTRY) 50 HZ	A	REL	04-28-75	LIAT	01-14-76			
FOUND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	71455200	7	1		PC PLATE AC ENTRY 50 HZ	P						
002	01	71455000	1	1		PC COVER AC ENTRY	P						
003	01	51899703	6	1		PC FILTER RFI 115-250 VAC	P						
004	01	51907702	8	1		PC CB TRIP COIL 275V 2.0AMP	P						
005	01	71446500	2	1		PC CBL ASSY (AC PWR) WIRE PREP 50HZ	N		10971	10971		7538	7538
005	02	71446502	8	1		PC CBL ASSY (AC PWR) W/PREP 50HZ	N		10971			7538	
006	01	36158909	6	1		PC BUSHING STRAIN RELIEF	P			10733	10733	7528	7528
006	02	36158910	4	1		PC BUSHING STRAIN RELIEF	P		10733			7528	
007	01	51809821	5	AR		FT CHANNEL RUBBER EXT U 1/32 SLT	P			11206	11206	7606	7606
007	02	51809821	5	167		FT CHANNEL RUBBER EXT U 1/32 SLT	P		11206			7606	
008	01	24565002	3	1		PC CABLE CLAMP 0.250 DIA	B						
009	01	15010500	5	1		PC I.D. PLATE CAPINET	P						
010	01	36053425	9	1		PC STANDOFF HEX 6-32 3.000	P						
011	01	10125108	0	1		PC NUT MACH HEX STL CP 10-32	B			10733	10733	7528	7528
011	02	10125108	0	2		PC NUT MACH HEX STL CP 10-32	B		10733			7528	
012	01	10126403	4	1		PC WASHER LOCK EXT NO. 10	B			11206	11206	7606	7606
012	02	10126403	4	2		PC WASHER LOCK EXT NO. 10	B		11206			7606	
013	01	10127113	8	2		PC SCREW PAN HD 6-32X3/8 CAD PLY	B						
014	01	10126401	8	6		PC WASHER EXT TONTH LOCK NO.6	B						
015	01	10125105	6	4		PC NUT MACH HEX STL CP 6-32	R						
016	01	10127111	2	2		PC SCREW MACH 6-32X1/4 PAN HD	B						
017	01	51902400	4	1		PC SWI TOGGLE 10A 250V	P						
018	01	51797414	3	167		FT TUBING INS THIN WALL	B			11206			7606

BUILD ARC 104

**ASSEMBLY PARTS LIST**

PRINT DATE 01-14-76 PAGE 2 FILE CHANGE NO. 00011250

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61374002	6	G	U	PANEL ASSY (AC ENTRY) 50 HZ	A	REL	04-28-75	LIAT	01-14-76			
FOUND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
018	02	24563704	6	167		FT INS SLVNG HI TEMP 18AWG	B		11206			7606	7606
019	01	36085800	5	1		PC LUG TERMINAL STRIP	P						
020	01	61375600	6	REF		PC W/L AC ENTRY PANEL ASSY 50HZ	D						
021	01	94277409	2	2		PC STRAP CABLE TIE TYPE 6	P						
022	01	51908602	9	1		PC THMS, DISC 2.5 OHM 10P 14MW	P						
023	01	10126103	0	3		PC INT TOOTH LK WSHR #6	B						
024	01	51905905	9	1		PC CONN RECPT 12 CONTACTS	P						
025	01	51905901	8	1		PC CONN RECPT 3 CONTACTS	P						
026	01	51906200	4	9		PC CONTACT, SKT 20-14GA STRIP T	P						
027	01	62121109	3	4		PC TERM RECP FSTN 16-14 AWG BLU	B						
029	01	93463444	5	167		FT WIR 18GA STRD YEL 300V UL PVC	W						
030	01	93464222	4	2		FT WIR 16GA STRD RED 300V UL PVC	W			11206	11206	7606	7606
030	02	93464222	4	1		FT WIR 16GA STRD RED 300V UL PVC	W		11206			7606	
031	01	93464444	4	5	500	FT WIR 16GA STRD YEL 300V UL PVC	W			11206	11206	7606	7606
031	02	93464444	4	3	200	FT WIR 16GA STRD YEL 300V UL PVC	W		11206			7606	
032	01	93463555	8	624		FT WIR 18GA STRD GRN 300V UL PVC	W						
033	01	24528617	4	333		FT TUBING INS SZ 6 BLACK	B						
034	01	51797217	0	1		PC LUG, CRMP R TERM #22-18GA 10S	B			11206	11206	7606	7606
034	02	51797217	0	2		PC LUG, CRMP R TERM #22-18GA 10S	B		11206			7606	
035	01	10125605	5	1		PC WASHER FLT NO.6 STL CP	B		11206			7606	

BUILD ARC 104

**ASSEMBLY PARTS LIST**

PRINT DATE 01-14-76 PAGE 3 FILE CHANGE NO. 00011250

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61374002	6	G	U	PANEL ASSY (AC ENTRY) 50 HZ	A	REL	04-28-75	LIAT	01-14-76			
FOUND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
						0043 TOTAL LINES							



BUILD ARC 104

**ASSEMBLY PARTS LIST**

PRINT DATE	PAGE	FILE CHANGE NO.
02-09-77	1	00012040

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	6137A003	A	H	D	PANEL ASSY (AC ENTRY) 50 HZ	A	REL	04-28-75	LIAT	02-09-77			
TRND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	71455200	7	1		PC PLATF AC ENTRY 50 HZ	P						
002	01	71455000	1	1		PC COVFR AC ENTRY	P						
003	01	51899703	6	1		PC FILTR, RFI 5A 115-275V SLD	P						
004	01	51907703	6	1		PC CB W/TRIP COIL 2.5AMP 250VAC	P						
005	01	71446500	2	1		PC CBL ASSY (AC PWR) WIRE PREP 50HZ	G		10971	10971		7538	7538
005	02	71446502	8	1		PC CBL ASSY (AC PWR) W/PREP 50HZ	N		10971			7538	
006	01	36158909	6	1		PC BUSHING, STRAIN-REL BLK NYL	R		10733	10733		7528	7528
006	02	36158910	4	1		PC BUSHING, STRAIN-REL BLK NYL	R		10733			7528	
007	01	51809821	5	AR		FT CHAN, RUBBER 1/32 SLT EXTR U	B		11206	11206		7606	7606
007	02	51809821	5	167		FT CHAN, RUBBER 1/32 SLT EXTR U	B		11206			7606	
008	01	24565002	3	1		PC CLAMP, 1/4 DIA CABLE BLK NYLON	B						
009	01	15010500	5	1		PC ID PLATE, CABINET SMALL VINYL	P						
010	01	36053425	9	1		PC STANDOFF, HEX CFS 6-32X3.000	P						
011	01	10125108	0	1		PC NUT HEX MCH 10-32 STL CP OR Z	B		10733	10733		7528	7528
011	02	10125108	0	2		PC NUT HEX MCH 10-32 STL CP OR Z	B		10733			7528	
012	01	10126403	4	1		PC WSHR NO.10 EXT TOOTH LK TYP A	B		11206	11206		7606	7606
012	02	10126403	4	2		PC WSHR NO.10 EXT TOOTH LK TYP A	B		11206			7606	
013	01	10127113	8	2		PC WSCR PAN PHL 6-32X3/8 (TYP I)	B						
014	01	10126401	8	6		PC WSHR NO.6 EXT TOOTH LK TYP A	B						
015	01	10125105	6	4		PC NUT HEX MCH 6-32 STL CP OR ZP	B						
016	01	10127111	2	2		PC WSCR PAN PHL 6-32X1/4 (TYP I)	B						
017	01	51902400	4	1		PC SWI TOGGLE 10A 250V	P						
018	01	51797414	3	167		FT TBG, INS .066 DIA T/W NAT TEF	B		11206			7606	

BUILD ARC 104

**ASSEMBLY PARTS LIST**

PRINT DATE	PAGE	FILE CHANGE NO.
02-09-77	2	00012040

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	6137A003	A	H	D	PANEL ASSY (AC ENTRY) 50 HZ	A	REL	04-28-75	LIAT	02-09-77			
TRND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
018	02	24563704	6	167		FT INS SILVNG HI TEMP 18AWG	B		11206			7606	
019	01	36085800	5	1		PC STRIP, TERM LUG-TYPE (52)	P						
020	01	61375600	6	REF		PC W/L AC ENTRY PANEL ASSY 50HZ	D						
021	01	94277409	2	2		PC STRAP CABLE TIE TYPE 6	R						
022	01	51908602	9	1		PC THMS, DISC 2.5 OHM 10P 14W	P						
023	01	10126103	0	3		PC WSHR NO.6 INTL TOOTH LOCK STL	B						
024	01	51905905	9	1		PC CONN RECPT 12 CONTACTS	P						
025	01	51905901	8	1		PC CONN RECPT 3 CONTACTS	P						
026	01	51906200	4	9		PC CONTACT, SKT 20-14GA STRIP T	P						
027	01	62121109	3	4		PC TERM RECPT FSTN 16-14 AWG BLU	B						
029	01	93463444	5	167		FT WIR 18GA STRD YEL 300V UL PVC W	W						
030	01	93464222	4	2		FT WIR 18GA STRD RED 300V UL PVC W	W		11206	11206		7606	7606
030	02	93464222	4	1		FT WIR 18GA STRD RED 300V UL PVC W	W		11206			7606	
031	01	93464444	4	5	500	FT WIR 16GA STRD YEL 300V UL PVC W	W		11206	11206		7606	7606
031	02	93464444	4	3	200	FT WIR 16GA STRD YEL 300V UL PVC W	W		11206			7606	
032	01	93463555	8	624		FT WIR 18GA STRD GRN 300V UL PVC W	W						
033	01	24528617	4	333		FT TRG, INSUL NO.6 BLK UL PVC	B						
034	01	51797217	0	1		PC LUG, CRMP R TERM +22-18GA 10S	R		11206	11206		7606	7606
034	02	51797217	0	2		PC LUG, CRMP R TERM +22-18GA 10S	B		11206			7606	
035	01	10125605	5	1		PC WSHR NO.6 TYP A PLAIN STL CP	R		11206			7606	

BUILD ARC 104

# ASSEMBLY PARTS LIST

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION			MC	STATUS	PRINT DATE		PAGE	FILE CHANGE NO.	
0860		6137A003		A	N	D	PANEL ASSY (AC ENTRY) 50 HZ			A	REL	02-09-77		3	00012040	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
SPIND NO	LI	PART NUMBER	CD	IN	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT		
							0043 TOTAL LINES									

DWN	R. Trautman	10-15-74	CONTROL DATA	TITLE	W/L AC ENTRY PANEL ASSY 50 HZ	PREFIX	WL	DOCUMENT NO.	61375600	REV.	E	
CHKD	D. W. Hall	10/15/74		FIRST USED ON	CC614/CC661	NHA	61374000	SHEET 1 of 2				
ENG	H. A. ...	10/15/74										
MFG	H. A. ...	10/15/74										
APPR	H. A. ...	10-15-74	CODE IDENT	15920								

SHEET REVISION STATUS					REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	APP	REV	ECO	DESCRIPTION	DRFT	DATE	APP
		RELEASED CLASS		10-13-74	J.H.						
01	01	ADDED COND IDENT 14		1-14-75	D.W.H.						
02	02	MOVED PARTS TO NHA		5-27-75	D.W.H.						
03	03	LENGTH OF COND #14 WMS 3		4-23-75	D.W.H.						
A	A	RELEASED CLASS A		7-28-75	J.H.						
B	B	CD10741 WL CHG ONLY		7/27/75	J.H.						
C	C	CD10795 WL CHG ONLY		7/27/75	J.H.						
D	D	CD10832 WL CHG ONLY		7/18/75	J.H.						
E	E	CD11206 CHG LENGTHS (4 THRU 12)		12-29-75	J.H.						

NOTES:  
1. For find no. identification see APL 61374000 thru 61374007.

DETACHED LISTS

AA3180 REV. 8/71

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CONTROL DATA				CODE IDENT	SHEET	WL	DOCUMENT NO.	REV.	
				15920	2		61375600	E	
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN	ACCESS FIND NO.	DESTINATION	ACCESS FIND NO.	REMARKS
1			1		PL		FL1	1 33	PWR CORD {HOT}
2			6		PL		FL1	3 33	PWR CORD {NEUT}
3			5/4		PL		CE1	34	PWR CORD {GND}
4	31	16	4"	5.5"	CP3	1 25-26	TB1	2	LINE HOT TO SW
5	31	16	4"	2.5"	FL1	4 33	CB1	A 27	HOT TO C.B.
6	31	16	4"	4"	CB1	8 27	TB1	1	HOT FROM C.B.
7	30	16	2"	5"	CB1	C 27	CP2	9 24-26	TRIP VOLTAGE
8	30	16	2"	5.5"	CB1	D 27	CP2	8 24-26	TRIP VOLTAGE RETURN
9	31	16	4"	3"	CP3	2 25-26	CP2	1 24-26	HOT FROM SW
10	31	16	4"	7"	FL1	5 33	S1	1 33	NEUTRAL TO H/L SW
11	31	16	4"	7"	S1	2 33	CP2	6 24-26	NEUTRAL {HIGH}
12	31	16	4"	8.5"	S1	3 33	CP2	4 24-26	NEUTRAL {LOW}
13	29	18	4"	2"	CP2	2 24-26	CP2	3 24-26	JUMPER
14	32	18	5"	7.5"	FL1	2 33	CE1	34	GROUND

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DWN	R. Trautman	7/16/75	CONTROL DATA	TITLE	W/L AC ENTRY PANEL ASSY 50 HZ	PREFIX	WL	DOCUMENT NO.	61375601	REV	E
CHKD	D. Garner	7/16/75		FIRST USED ON	CC614/CC681	NHA	61374000	SHEET	1 of 2		
ENG			CODE IDENT								
MFG			15920								
APPR											

SHEET REVISION STATUS										REVISION RECORD			
2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP						
C	C	C	CD10795	GENERATED PER ECO	D	7/16/75	WLT						
C	D	D	CD10832	WL CHG ONLY	JM	7/19/75	WLT						
E	E	E	CD11206	CHG LENGTH (5,6,10,11,12)	MD	12-30-75	WLT						

NOTES:  
1. For find no. identification see SPL 61374000 thru 61374007.

DETACHED LISTS

AA3180 REV. 8-71

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CONTROL DATA				CODE IDENT	15920	SHEET	2	WL	DOCUMENT NO.	61375601	REV	E	
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN	ACCESS FIND NO.	DESTINATION	ACCESS FIND NO.	REMARKS				
1			1		P1		FL1	1	33	PWR CORD (HOT)			
2			6		P1		FL1	3	33	PWR CORD (NEUT)			
3			5/4		P1		CE1		34	PWR CORD (GND)			
5	31	16	4	2.5"	FL1	4	CB1	A	27	HOT TO C.B.			
6	31	16	4	4"	CB1	8	CP2	1	24, 26	HOT FROM C.B.			
10	31	16	4	7"	FL1	5	S1	1	33	NEUTRAL TO H/L SW			
11	31	16	4	7"	S1	2	CP2	6	24, 26	NEUTRAL (HIGH)			
12	31	16	4	8.5"	S1	3	CP2	4	24, 26	NEUTRAL (LOW)			
13	29	18	4	2"	CP2	2	24, 26	CP2	3	24, 26	JUMPER		
14	32	18	5	7.5"	FL1	2	CE1		34	GROUND			

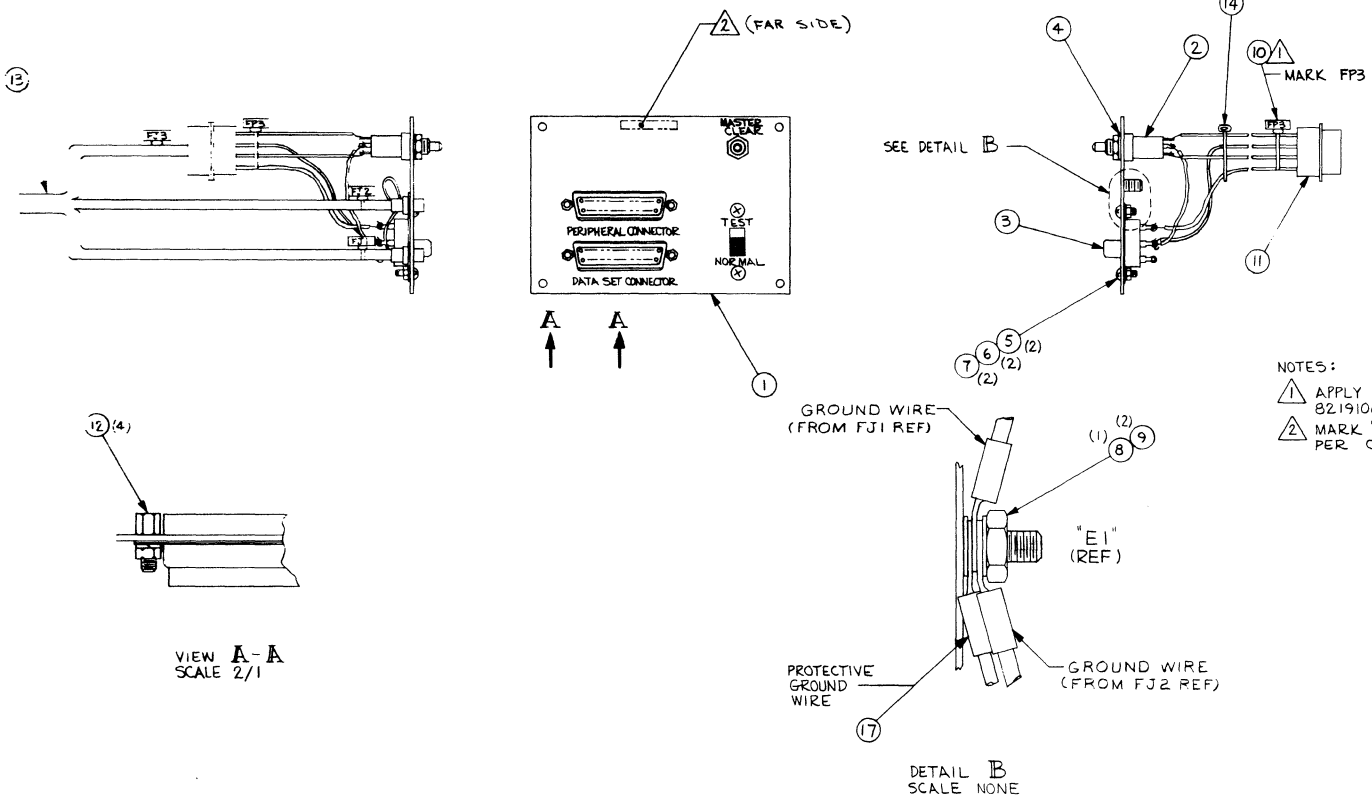
AA3183 REV. 8-71

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62962300 B

7-57/7-58

SHEET REVISION STATUS		REVISION RECORD					
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP	
01	CO45	RELEASED CLASS					
		REVISED PER ECO					
02	C106	ADDED GND WIRE DIST. FORCED ON DETAIL B		1-6-75			
03	C288	ADDED W/N 14 2mm DS		7-21-75			
05	C287	MOVED PL FROM WL 61371000		10-24-75			
A	1055-7	RELEASED CLASS A		5-14-75			
A	3901-10	ADD INT DIV LABEL		5-3-75			
B	1099-3.5	DETAIL B EST MISCCEL		11-16			
C	101323	REVISED PER ECO		5-7-76			



APL 61371000 RELEASED CLASS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES:	FINISH	CC614A	TITLE	CONNECTOR PANEL ASSY	
	3 PLACE 2 / 2 / 2 / 2	FIRST MSD ON	DAK	10-7-74	BOOK IDENT	15920
	DO NOT SCALE DRAWING	DATE	10-7-74	DRAWING NO	D 61371000	
	MATERIAL	ENGR		SCALE	1/1	NHA-15620700
DESIGN	MTG		APP			SHEET / OF /

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BUILD ARC 104

**ASSEMBLY PARTS LIST**

PRINT DATE		PAGE	FILE CHANGE NO.										
02-12-76		1	00011323										
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61371000	3	C	U	PANEL ASSY (CONNECTOR)	A	REL	05-14-75	CC614A	02-12-76			
ITEM NO.	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	71455600	B	1		PC PANEL-CONNECTOR	P						
002	01	18797101	S	1		PC SWITCH-PB MOMENTARY CONTACT	P						
003	01	51781602	L	1		PC SWITCH SLIDE 3PDT LOCKING	P						
004	01	10126106	J	1		PC INT TOOTH LK WSHR .250	B						
005	01	10127102	L	2		PC MSCR PAN PHL 4-40X1/4 (TYP I)	B						
006	01	10126101	A	2		PC INT TOOTH LK WSHR #4	B						
007	01	10125103	L	2		PC NUT HEX MCH 4-40 STL 6P OR ZP	B						
008	01	10125108	U	1		PC NUT HEX MCH 10-32 STL CP OR Z	B						
009	01	10126105	S	2		PC INT TOOTH LK WSHR #10	B						
010	01	94277409	Z	1		PC STRAP CABLE TIE TYPE 6	P						
011	01	61376200	A	REF		PC W/L CONNECTOR PANEL	O						
012	01	94288024	B	4		PC LKG DEVICE, CONN TYP # W/TYP3	P						
013	01	61369900	B	1		PC CABLE ASSY (CONNECTOR PANEL)	N						
014	01	94277400	L	1		PC STRAP CABLE TIE TYPE 1	P						
015	01	24548301	L	1		FT WIR 24GA STRD BLK 300V UL PVC	W						
016	01	24548310	Z	4	750	FT WIR 24GA STRD WHT 300V UL PVC	W						
017	01	93462555	Y	1	666	FT WIR 20GA STRD GRN 300V UL PVC	W						
017	02	61391106	A	1		PC GND WIRE ASSY 9.5 16GA	G		10935A	10935		7543	7543
018	01	93942014	Z	10		PC CONTACT PIN 30-22 STRIP	P						
019	01	93948002	B	1		PC CONNECTOR 12 PIN HOUSING	P						
020	01	51797217	U	2		PC LUG, CRMP R TFRM #22-18GA 10S	B			10935			7543

BUILD ARC 104

**ASSEMBLY PARTS LIST**

PRINT DATE		PAGE	FILE CHANGE NO.										
02-12-76		2	00011323										
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61371000	3	C	U	PANEL ASSY (CONNECTOR)	A	REL	05-14-75	CC614A	02-12-76			
ITEM NO.	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
						0021 TOTAL LINES							

DWN	D.A. King	10-9-71	ON WHI DATA	TITLE	W/L CONNECTOR PANEL ASSY	PREFIX	WL	DOCUMENT NO.	61376200	REV	C
CHKD	<i>[Signature]</i>	<i>[Signature]</i>		FIRST USED ON	CC614A	NHA	61371000	SHEET 1 of 3			
ENG	<i>[Signature]</i>	<i>[Signature]</i>									
MFG	<i>[Signature]</i>	<i>[Signature]</i>									
APPR	<i>[Signature]</i>	<i>[Signature]</i>	CODE IDENT								
			15920								

SHEET REVISION STATUS				REVISION RECORD							
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP			
					RELEASED CLASS						
		01	01	01	C0110	REVISED PER ECO	<i>[Signature]</i>	10-15-71	<i>[Signature]</i>		
		02	02	02	C258	QTY F/N 4 WAS 11	<i>[Signature]</i>	1-14-75	<i>[Signature]</i>		
		03	03	03	C267	DELETED PARTS LIST	<i>[Signature]</i>	4-29-75	<i>[Signature]</i>		
		A	A	A	10653-5	RELEASED CLASS A	<i>[Signature]</i>	5/1/75	<i>[Signature]</i>		
		B	A	B	10935	*13 WAS 20GA, 11 LONG	<i>[Signature]</i>	1-7-76	<i>[Signature]</i>		
		C	A	C	CD11323	REVISED PER ECO	<i>[Signature]</i>	2-19-76	<i>[Signature]</i>		

NOTES:  
1. For Find No. identification see APL 61371000.

DETACHED LISTS

AA3180 REV. 8/71

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CONTROL DATA	CODE IDENT	SHEET	WL	DOCUMENT NO.	REV
	15920	2	WL	61376200	A

TEST MODE SWITCH  
S2

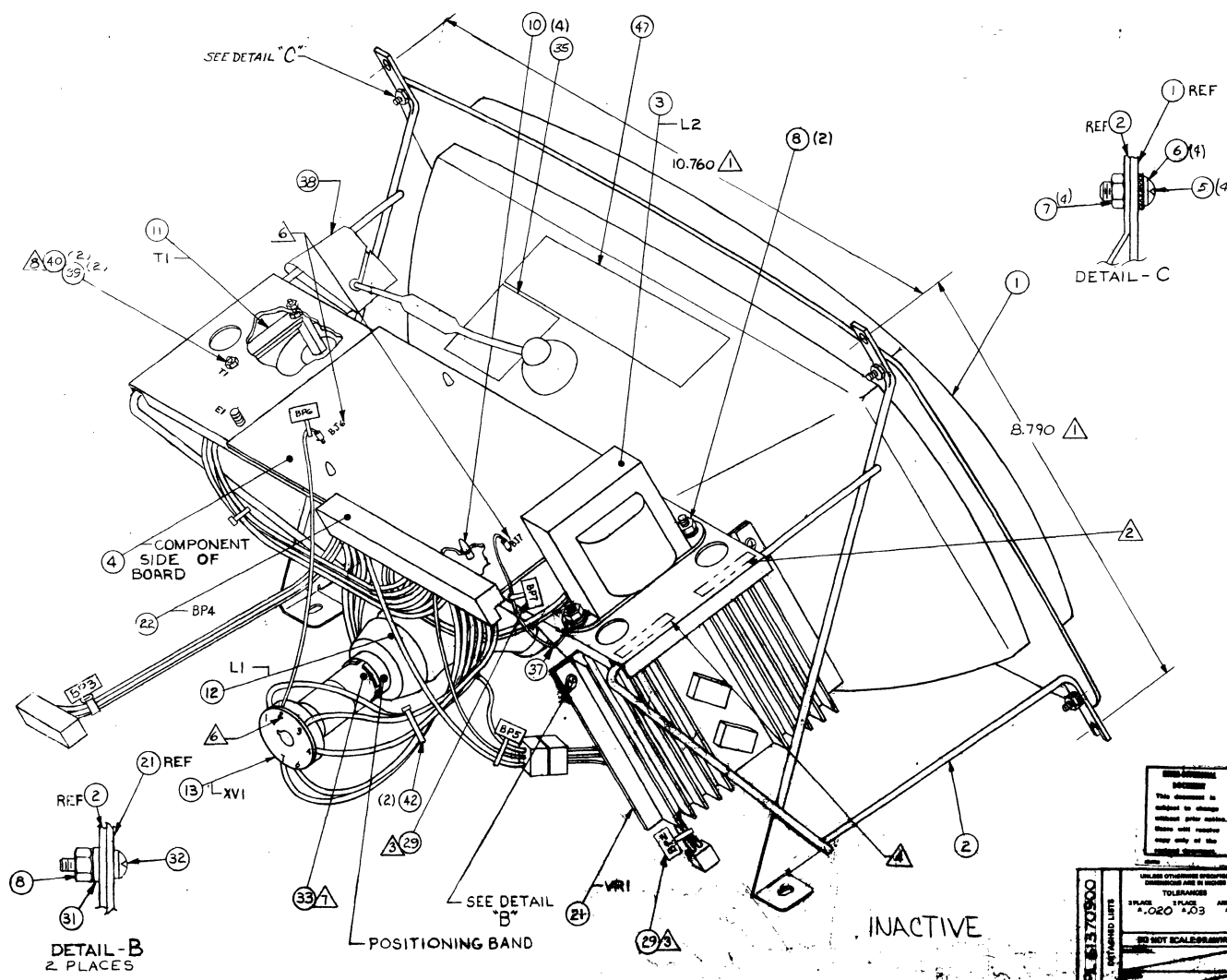
WIRING VIEW

AA3180

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SHEET REVISION STATUS		REVISION RECORD				
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP.
		RELEASED CLASS				
D1	CO43	SEE CO				
D2	CD103	SEE ECO				
D3	CO131	ADDED FIND NO. 34				
D4	C146	ADDED FIND NO. 34.437				
D5	C227	SEE CO				
D6	C240	ADDED CBL TIE STRAPS				
D7	C282	ADDED FIND NO. 35				
A	W683-7	RELEASED CLASS A				
B	CD10754	REVISED PER ECO				
E	PREP-14	ADD INT DIV LABEL				
E	CD10918	PL CHANGE ONLY				
D	CD11000	REVISED PER ECO				
E	CD11074	MOVED ITEM 35, ADDED ITEM 7				
F	CD11226	REVISED PER ECO				
G	CD11280	DELETED DETAILS A & D				
H	CD11302	APL CHG ONLY				
J	CD11386	REMOVED ITEM 35, ADDED ITEM 7				



- NOTES:
- ▲ CRT TO BE FIXTURED ON FRAME.
  - ▲ MARK "ASSY 61370900" IN AREA SHOWN PER CDC SPEC 10121508.
  - ▲ APPLY LABEL TO CABLE PER DRAWING 82191061, METHOD 6. MARK AS SHOWN.
  - ▲ MARK SERIAL NO. "S/N \_\_\_\_\_" IN AREA SHOWN PER CDC STD. 1.01.025 AND CDC SPEC 10121508.
  - ▲ SHOWN FOR REFERENCE ONLY AND MAY NOT APPEAR ON PART.
  - ▲ INSTALL LINEARITY SLEEVE WITH COPPER SIDE AGAINST THE CRT GLASS AND THE ETCHED EDGE TOWARD THE YOKE (F/N 12). TWO EDGES SHALL MEET ON A LINE PARALLEL WITH THE CRT AXIS AND ALIGNED WITH PIN 7 OF CRT. INITIALLY APPROXIMATELY ONE HALF OF SLEEVE LENGTH IS INSERTED INTO YOKE.
  - ▲ DO NOT REMOVE OR LOOSEN NUTS ON HV FLYBACK UNIT, FIND "11". USE NUTS, FIND \*40, TO MOUNT UNIT TO FRAME, FIND \*2.

**VIDEO DISPLAY ASSEMBLY NON-COMPOSITE**

ITEM: **61370900**

DO NOT SCALE DIMENSIONS

UNLESS OTHERWISE SPECIFIED TOLERANCES:

FRACTIONS: ±.020 ±.03

DECIMALS: ±.005 ±.01

ANGLES: ±.005

DO NOT SCALE DIMENSIONS

DATE: **15820**

DESIGNED BY: **CC614**

DRAWN BY: **CC614**

CHECKED BY: **CC614**

APPROVED BY: **CC614**

DATE: **15820**

SCALE: **1:1**

PROJECT: **61370900**

REV: **0**

ISSUED BY: **CC614**

DATE: **15820**

BUILD ARC 440

### ASSEMBLY PARTS LIST

PRINT DATE	PAGE	FILE CHANGE NO.
08-02-76	1	0011386C

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61370900	5	J	D	REPLACED BY 61370902 11386C	N	INA	07-29-76	LIAT	08-02-76			
ITEM NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	51907300	1	1		PC CRT (12 IN) PHOSPHOR GRA P4	P						
002	01	71456300	4	1		PC FRAME VIDEO DISPLAY	P						
003	01	51906800	1	1		PC COIL 320 MILLIHENRY	P			11226		7605	7604
003	02	61407419	3	1		PC CHOKE ASSY	A		11226				
004	03	90433000	8	1		PC REPLACED BY 90445717 11302	A		10913	11302		7532	7613
004	04	90445717	3	1		PC CD ASSY 5BVD-1 N/COMP VIDEO	A		11302			7613	
005	01	10127123	7	4		PC SCREW MACH 8-32 X 1/2 PAN HD	B			11000		7546	7546
005	02	10127122	9	4		PC SCREW MACH 8-32 X 3/8 PAN HD	B		11000				
006	01	10126402	6	4		PC WSHR NO.8 EXT TOOTH LK TYP A	B						
007	01	10125106	4	4		PC NUT MACH HEX STL CP 8-32	B			11000		7546	7546
007	02	10122902	9	4		PC NUT TWIN SELF LOCKING 8-32	B		11000				
008	01	10125105	6	4		PC NUT HEX MCH 6-32 STL 6P OR ZP	B			11000		7546	7546
008	02	10122901	1	4		PC NUT TWIN SELF LOCKING 6-32	B		11000				
010	01	51777326	3	4		PC SPRT, CKT RD 3/16 F-R FIG 2	P						
011	01	51908300	0	1		PC TRANSFORMER FLYBACK	P			11226		7605	7604
011	02	61407417	7	1		PC HIGH VOLTAGE TRANSFORMER ASSY	A		11226				
012	01	51907000	7	1		PC YOKE DEFL ASSY	P			11226		7605	7604
012	02	61407418	5	1		PC YOKE ASSY	A		11226				
013	01	51906700	3	1		PC CRT SOCKET, 7 PIN MINIATURE	P			11226		7605	7604
013	02	61407416	9	1		PC CRT CAP ASSY	A		11226				
014	01	51752300	7	1		PC LEAD ELEC ANODE 40 KV DC	W			11226			7604
015	02	51909001	3	1		PC RECT HI VOLT RE4 18KV FOR 40V	P		10756	11226		7529	7604
016	01	24534710	9	250	FT	INS SLEEVE 3/R BLACK	B			11226			7604
017	01	93463222	5	2	FT	WIR 18GA STRD RED 300V UL PVC	W			11226			7604
018	01	93463000	5	500	FT	WIR 18GA STRD BLK 300V UL PVC	W			11226			7604

BUILD ARC 440

### ASSEMBLY PARTS LIST

PRINT DATE	PAGE	FILE CHANGE NO.
08-02-76	2	0011386C

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61370900	5	J	D	REPLACED BY 61370902 11386C	N	INA	07-29-76	LIAT	08-02-76			
ITEM NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
019	01	51654700	7	2		PC CONTACT RECT ELEC 24-2n AWG	P			11226			7604
020	01	51905804	4	3		PC CONT, PIN 20-14GA .130INS STR	P			11226			7604
021	01	61376300	2	1		PC REPLACED BY 61376302 11280	A			11280		7613	7613
021	02	61376302	8	1		PC REPLACED BY 61407441 11386	A		11280	11386C		7613	7636
021	03	61407441	7	1		PC REGULATOR ASSY +15V	A		11386C				
022	01	51652907	0	1		PC CONN, PC EDGE 22 POS 3.588W	P			11226		7605	7604
022	02	61407420	1	1		PC CABLE ASSY VIDEO DISPLAY	A		11226				
023	01	94219903	5	22		PC CONTACT, FLAG 22-18AWG STRIP	P			11226			7604
024	01	51906001	6	2		PC CONN PLUG 3 PIN	P			11226			7604
025	01	51905800	2	3		PC CONT, PIN 20-14GA .130INS STR	P			11226			7604
026	01	93462444	6	4		FT WIR 20GA STRD YEL 300V UL PVC	W			11226			7604
027	01	93503333	2	4 166	FT	WIR 24GA STRD ORN 600V UL PVC	W			11000		7546	7546
027	02	93505333	0	4 666	FT	WIR 20GA STRD ORN 600V UL PVC	W		11000	11226		7546	7604
028	01	61378200	2	REF		PC W/L VIDEO DISPLAY	D						
029	01	94277409	2	5		PC STRAP CABLE TIE TYPE 6	P			11226			7604
029	02	94277409	2	2		PC STRAP CABLE TIE TYPE 6	P		11226				
030	01	10125606	3	4		PC WASHER FLT NO.8 STL CP	B			11000		7546	7546
030	02	16035100	3	REF		PC RASTER SCAN CRT DISPLAY	D		11000				
031	01	10125605	5	3		PC WSHR NO.6 TYP A PLAIN STL CP	B			11280		7613	7613
031	02	10125605	5	2		PC WSHR NO.6 TYP A PLAIN STL CP	B		11280				
032	01	10127114	6	2		PC SCREW MACH PAN HD 6-32X1/2 ST	B			11000		7546	7546
032	02	10127113	8	2		PC MSCR PAN PHL 6-32X3/8 (TYP I)	B		11000	11280		7546	7613
032	03	10127114	6	2		PC SCREW MACH PAN HD 6-32X1/2 ST	B		11280			7613	
033	01	71468100	4	1		PC SLEFVE LINEARTTY CONTROL	P						
035	01	24547501	7	1		PC PLATF WARNING DANGER HV	P			11280			7613

BUILD ARC 440

### ASSEMBLY PARTS LIST

PRINT DATE 08-02-76 PAGE 3 FILE CHANGE NO. 0011386C

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE
0860		61370900		5	J	D	REPLACED BY 61370902 11386C		N	INA	07-29-76	LJAT	08-02-76
TRND NO.	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
035	02	51916874	4	1	PC	PLATE, DANGER VINYL WMT/RED	P		11280			7613	
036	01	93462555	9	250	FT	WIR 20GA STRD GRN 300V UL PVC	W			11226			7604
037	01	51797200	6	1	PC	LUG, CRMP R TFRM +22-186A 6SS	B			11226		7605	7604
037	02	61391108	0	1	PC	GND WIRE ASSY 5.0 20GA SOCKET	A		11226			7605	
038	01	10125603	0	2	PC	WASHER FLT NO.4 STL CP	B			11000			7546
038	02	71485400	7	1	PC	INS SPACER ANODE LEAD	B		11000			7546	
039	01	10126101	4	2	PC	INT TOOTH LK WSHR #4	B						
040	01	10125103	1	2	PC	NUT HEX MCH 4-40 STL 6P OR ZP	B						
041	01	24534706	7	125	FT	INS SLEEVE 1/R BLACK	B			11226			7604
042	01	94277400	1	2	PC	STRAP CABLE TIE TYPE 1	P						
043	01	24534712	5	300	FT	INS SLEEVE 1/2 BLACK	B		10756	11226		7529	7604
044	01	51500283	0	1	PC	RES FXD FILM 250 MEG 2W 5P	P		10756	11226		7529	7604
045	01	95637305	4	1	PC	DIO SIL 1N4005 600PIV 1.1V/1A	P		10756	11226		7529	7604
046	01	94842184	7	1	PC	CAP FXD CER 0.02UF 1KV	P		10756	11226		7529	7604
047	01	71479200	9	1	PC	LABEL MONITOR ADJUSTMENT	P		11074			7545	
048	01	51914022	5	2	PC	WASHER SHOULDER SCR 6	P		11280	11386C		7613	7636
049	01	51776502	6	2	PC	WASHER-FLAT FIBRE NO.6	B		11280	11386C		7613	7636
0067 TOTAL LINES													

DWN	R. Trautman	ON THE DRAWING	TITLE	W/L VIDEO DISPLAY	PREFIX	WL	DOCUMENT NO.	61378200	REV.	D			
CHKD			FIRST USED ON	CC614	NHA	61370900	SHEET 1 OF 3						
ENG			CODE IDENT	15920									
MFG													
APPD													
SHEET REVISION STATUS					REVISION RECORD								
					3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
										RELEASED CLASS "C"		12-17-74	EDA
					01	01	01	CD110	CHG WIRE LENGTHS ON COND IDENT 21-23	WAS 1-9-75	1-14-75	Dud	
					02	02	02	C146	REVISED PER ECO	RT 2-12-75	2/14/75	S.B.	
					03	03	03	C227	ADDED REMARKS TO W/L	MP 4-23-75	4-23-75	S.B.	
					04	04	04	C282	CHG'D WIRE LENGTHS	MP 5-4-75	5-4-75	S.B.	
					05	05	05	C33B	ADDED COND IDENT 27, 28	MP 6-4-75	6-4-75	S.B.	
					A	A	A	10653-B	RELEASED CLASS A	MP 7-13-75	7-13-75	S.B.	
					B	B	B	CD10996	WL CHG ONLY	MP 7-24-75	7-24-75	S.B.	
					C	C	C	CD11000	WL CHG ONLY	MP 11-13-75	11-13-75	S.B.	
					D	D	D	CD11226	REVISED PER ECO	MP 3-6-76	3-6-76	S.B.	
NOTES:													
1. For Find Number Identification, See APL 61370900.													
												DETACHED LISTS	

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PRINTED IN

				CODE IDENT	SHEET	WL	DOCUMENT NO.	REV.	
				15920	2		61378200	D	
CONDUCTOR IDENT	FIND NO	GAUGE (REF)	COLOR (REF)	LENGTH (APPROX)	ORIGIN	ACCESS FIND NO	DESTINATION	ACCESS FIND NO	REMARKS
1	13				XV1	7	BP4	1	
2	13				XV1	3	BP4	20	
3	13				XV1	6	BP4	4	
4	13				XV1	2	BP6		CONTACT POST
5	13				XV1	1	BP4	2	
6	13				XV1	4	BP4	15	FIL. GND
7	3				L2	1	BP4	7	VERT PEAKING COIL
8	3				L2	2	BP4	6	VERT PEAKING COIL
9	12				L1	GRN	BP4	9	VERT YOKE
10	12				L1	YEL	BP4	10	VERT YOKE
11	22								
12	22								
13	11				T1	5	BP4	13	-190V TAP
14	11				T1	7	BP4	14	HV GND
15	11				T1	1	BP4	16	+465V TAP
16	11				T1	3	BP4	17	PRIMARY, FLYBACK
17	11								PRIMARY, GND FLYBACK
18	12				L1	RED	BP4	18	HORZ YOKE
19	12				L1	BLU	BP4	19	HORZ YOKE

AA3180 REV. 8-76

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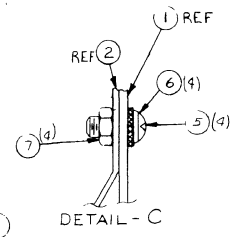
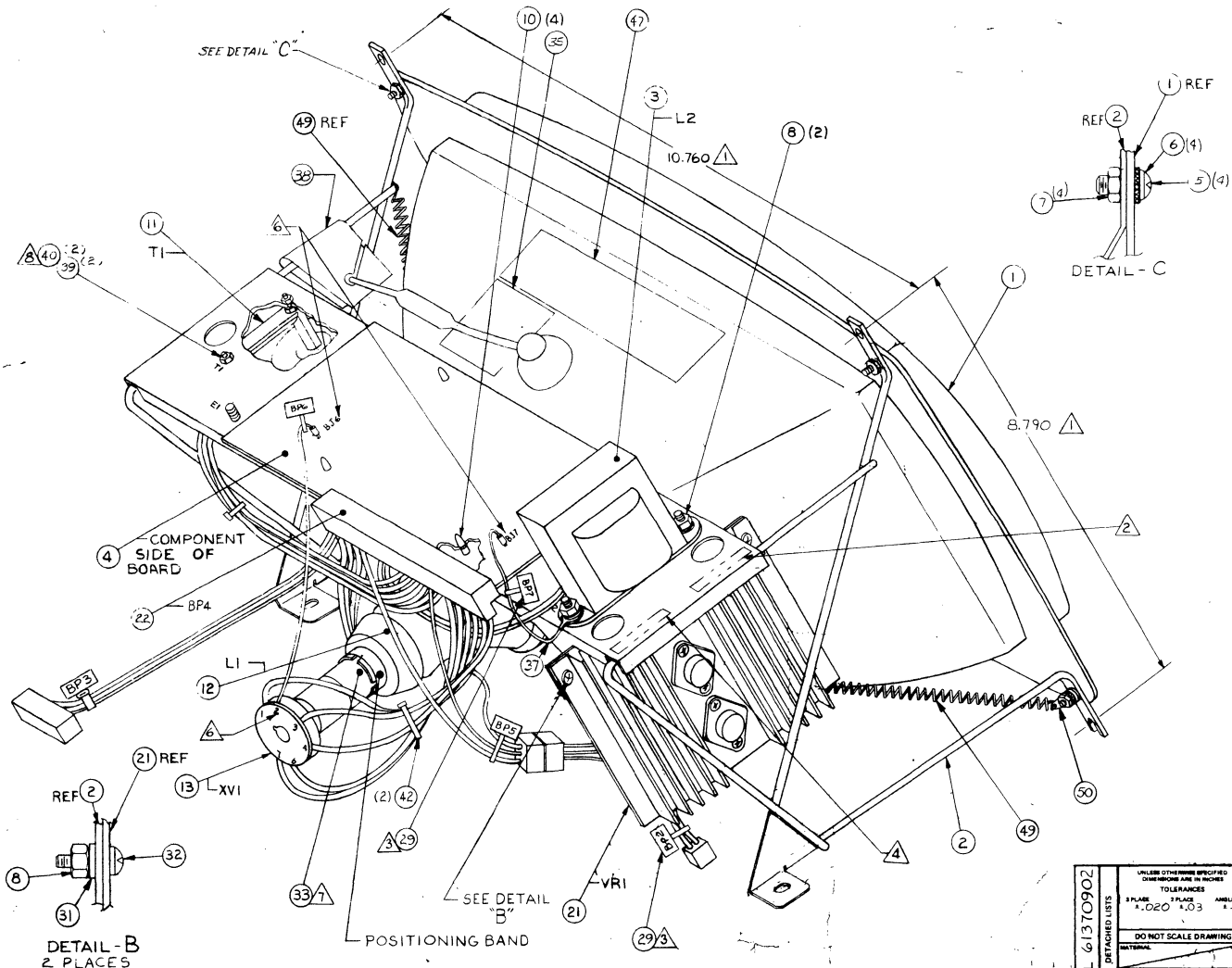




62962300 B

7-67/7-68

SHEET REVISION STATUS		REVISION RECORD				
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP
A	10653-11	RELEASED CLASS		7/21/70		
B	1207	APL CHANGE ONLY		8/27/71		



DETAIL - B  
2 PLACES

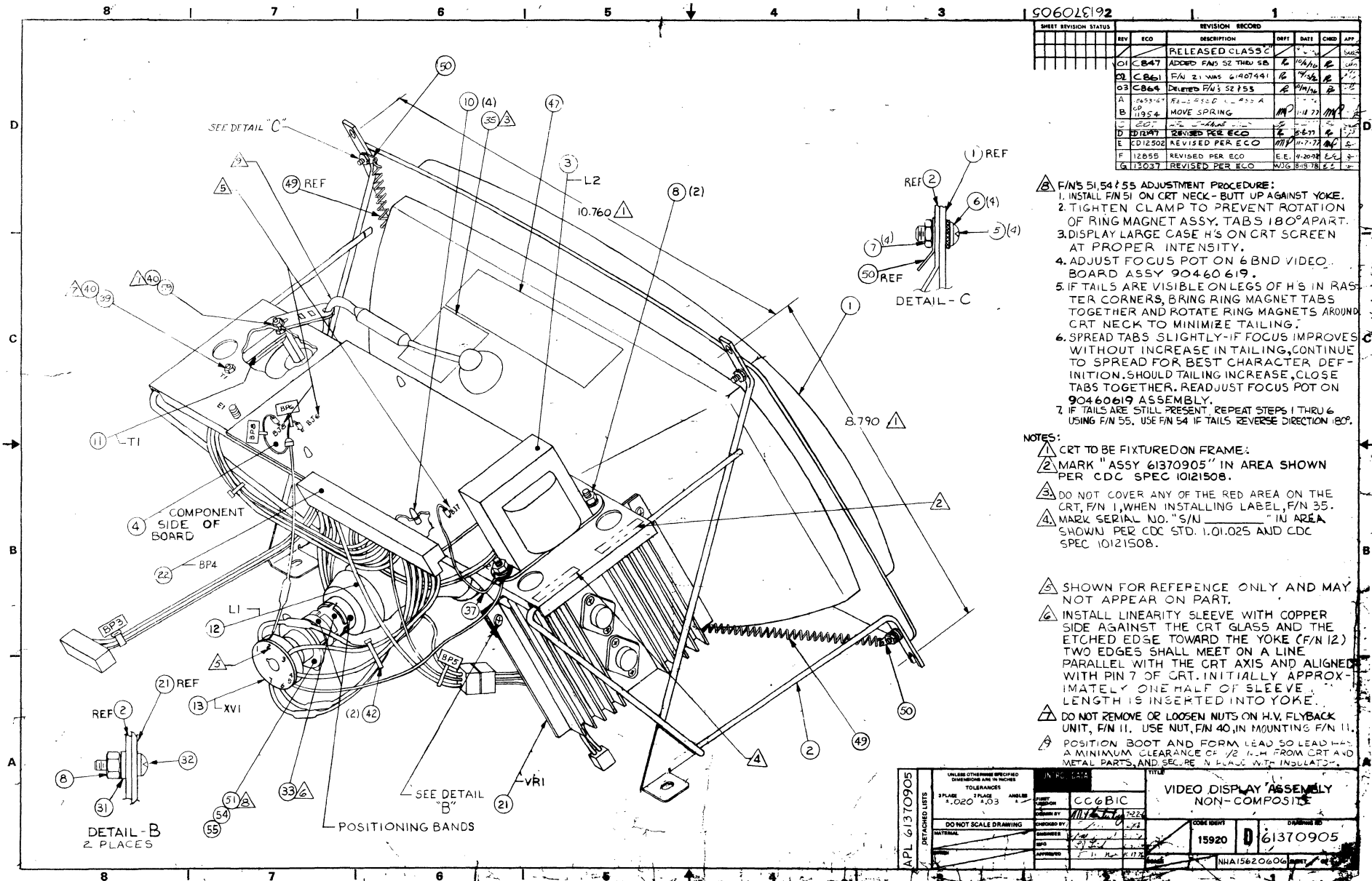
- NOTES:
- △ CRT TO BE FIXTURED ON FRAME.
  - ② MARK "ASSY 61370902" IN AREA SHOWN PER CDC SPEC 10121508.
  - △ APPLY LABEL TO CABLE PER DRAWING 82191061, METHOD 6. MARK AS SHOWN.
  - ④ MARK SERIAL NO. "S/N \_\_\_\_\_" IN AREA SHOWN PER CDC STD. 1.01.025 AND CDC SPEC 10121508.
  - △ SHOWN FOR REFERENCE ONLY, AND MAY NOT APPEAR ON PART.
  - △ INSTALL LINEARITY SLEEVE WITH COPPER SIDE AGAINST THE CRT GLASS AND THE ETCHED EDGE TOWARD THE YOKE (F/N 12). TWO EDGES SHALL MEET ON A LINE PARALLEL WITH THE CRT AXIS AND ALIGNED WITH PIN 7 OF CRT. INITIALLY APPROXIMATELY ONE HALF OF SLEEVE LENGTH IS INSERTED INTO YOKE.
  - ⑧ DO NOT REMOVE OR LOOSEN NUTS ON HV FLYBACK UNIT. FIND "11". USE NUTS, FIND "40", TO MOUNT UNIT TO FRAME. FIND "2".

APL 61370902 DETACHED LISTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	15N-90 DATA	TITLE
	TOLERANCES 3 PLACE .020 2 PLACE .03 ANGLES .5	CC614	VIDEO DISPLAY ASSEMBLY NON-COMPOSITE
DO NOT SCALE DRAWING	DESIGNED BY	CHKD BY	CODE IDENT
DATE	APPROVED	DATE	D 61370902
APPROVED	DATE	DATE	15920
APPROVED	DATE	DATE	NHA 15630334



BUILD ARC 440				ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.				
								03-23-77	1	00012107				
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE				
0060	61370902	1	B	D	VIDEO DISPLAY ASSY	0	REL	07-23-76	CC614	03-23-77				
1	PART NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01		51907300	1	1		PC CRT 12IN PHOS P4 GLOSS-NIM 43	P						
002	01		71486300	4	1		PC FRAME VIDEO DISPLAY	P						
003	01		61407419	3	1		PC CHOKE ASSY	A						
004	01		90448717	3	1		PC CD ASSY SBVD-1 N/COMP VIDEO	A						
005	01		10127122	9	4		PC SCREW MACH 8-32 X 3/8 PAN HD	B						
006	01		10126402	6	4		PC WSHR NO.8 EXT TOOTH LK TYP A	B						
007	01		10122902	9	4		PC NUT TWIN SELF LOCKING 8-32	B						
008	01		10122901	1	4		PC NUT TWIN SELF LOCKING 6-32	B						
010	01		51777314	9	4		PC SPRT, CKT BD 3/16 NYL FIG 2	P						
011	01		61407417	7	1		PC REPLACED BY 61407695 12107	A		12107	12107		7715	7715
011	02		61407695	8	1		PC HIGH VOLTAGE TRANSFORMER ASSY	A						
012	01		61407418	5	1		PC YOKE ASSY	A						
013	01		61407416	9	1		PC CRT CAP ASSY	A						
021	01		61407441	7	1		PC REGULATOR ASSY +15V	A						
022	01		61407420	1	1		PC CABLE ASSY VIDEO DISPLAY	A						
028	01		61370200	2	REF		PC W/L VIDEO DISPLAY	D						
029	01		94277409	2	2		PC STRAP CABLE TIE TYPE 6	B						
030	01		16035100	3	REF		PC RASTER SCAN CRT DISPLAY	D						
031	01		10125605	5	2		PC WSHR NO.6 TYP A PLAIN STL CP	B						
032	01		10127113	8	2		PC WSCR PAN PHL 6-32X3/8 (TYP I)	B						
033	01		71468100	4	1		PC SLEEVE LINEARITY CONTROL	B						

BUILD ARC 440				ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.				
								03-23-77	2	00012107				
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE				
0060	61370902	1	B	D	VIDEO DISPLAY ASSY	0	REL	07-23-76	CC614	03-23-77				
1	PART NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
035	01		51916874	4	1		PC PLATE, DANGER VINYL WHT/RED	P						
037	01		61391108	0	1		PC GND WIRE ASSY 5.0 20GA SOCKET	A						
038	01		71485400	7	1		PC INS SPACER ANODE LEAD	B						
039	01		10126101	4	2		PC INT TOOTH LK WSHR #4	B						
040	01		10125103	1	2		PC NUT HEX MCH 4-40 STL CP OR ZP	B						
042	01		94277400	1	2		PC STRAP CABLE TIE TYPE 1	B						
047	01		71479200	9	1		PC LABEL, MON ADJ W/O INTENSITY	P						
049	01		71491984	2	1		PC SPRING-EXT CRT GROUND	P						
050	01		51817102	0	1		PC LUG, R SLD TERM NO 8 FIG 1	B						
							0030 TOTAL LINES							



506018192

SHEET REVISION STATUS		REVISION RECORD				
REV	ECO	DESCRIPTION	DATE	DATE	CHKD	APP.
01	C-B47	RELEASED CLASS	6/16/76		E	
02	C-B61	ADDED F/N 52 THRU 58	6/17/76		E	
03	C-B64	F/N 21 WAS 6107441	6/17/76		E	
		DELETED F/N 52 753	6/17/76		E	
A	1093-67	REL. 550 L - 450 A				
B	1195-4	MOVE SPRING				
C						
D		REVIS PER ECO	6/17/76		E	
E	121508	REVIS PER ECO	11/17/77		E	
F	12655	REVIS PER ECO	11-20-78		E	
G	13037	REVIS PER ECO	11-21-78		E	

- △ F/N 51, 54 & 55 ADJUSTMENT PROCEDURE:
1. INSTALL F/N 51 ON CRT NECK - BUTT UP AGAINST YOKE.
  2. TIGHTEN CLAMP TO PREVENT ROTATION OF RING MAGNET ASSY. TABS 180° APART.
  3. DISPLAY LARGE CASE 'H'S ON CRT SCREEN AT PROPER INTENSITY.
  4. ADJUST FOCUS POT ON 6 BND VIDEO BOARD ASSY 90460619.
  5. IF TAILS ARE VISIBLE ON LEGS OF 'H'S IN RASTER CORNERS, BRING RING MAGNET TABS TOGETHER AND ROTATE RING MAGNETS AROUND CRT NECK TO MINIMIZE TAILING.
  6. SPREAD TABS SLIGHTLY - IF FOCUS IMPROVES WITHOUT INCREASE IN TAILING, CONTINUE TO SPREAD FOR BEST CHARACTER DEFINITION. SHOULD TAILING INCREASE, CLOSE TABS TOGETHER. READJUST FOCUS POT ON 90460619 ASSEMBLY.
  7. IF TAILS ARE STILL PRESENT, REPEAT STEPS 1 THRU 6 USING F/N 55. USE F/N 54 IF TAILS REVERSE DIRECTION 180°.

## NOTES:

- △ CRT TO BE FIXTURED ON FRAME:
- △ MARK "ASSY 61370905" IN AREA SHOWN PER CDC SPEC 10121508.
- △ DO NOT COVER ANY OF THE RED AREA ON THE CRT, F/N 1, WHEN INSTALLING LABEL, F/N 35.
- △ MARK SERIAL NO. "S/N" IN AREA SHOWN PER CDC STD. 1.01.025 AND CDC SPEC 10121508.
- △ SHOWN FOR REFERENCE ONLY AND MAY NOT APPEAR ON PART.
- △ INSTALL LINEARITY SLEEVE WITH COPPER SIDE AGAINST THE CRT GLASS AND THE ETCHED EDGE TOWARD THE YOKE (F/N 12) TWO EDGES SHALL MEET ON A LINE PARALLEL WITH THE CRT AXIS AND ALIGNED WITH PIN 7 OF CRT. INITIALLY APPROXIMATELY ONE HALF OF SLEEVE LENGTH IS INSERTED INTO YOKE.
- △ DO NOT REMOVE OR LOOSEN NUTS ON H.V. FLYBACK UNIT, F/N 11. USE NUT, F/N 40, IN MOUNTING F/N 11.
- △ POSITION BOOT AND FORM LEAD SO LEAD HAS A MINIMUM CLEARANCE OF 1/2 IN. FROM CRT AND METAL PARTS, AND SECURE IN PLACE WITH INSULATOR.

APL 61370905	TOLERANCES		IN RE. DATE	TITLE
	FRAME	ANGLE		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	±.020	±.03	CC6BIC	VIDEO DISPLAY ASSEMBLY NON-COMPOSITE
DO NOT SCALE DRAWING	CHECKED BY: [Signature]		CODE IDENT	DRAWING NO.
MATERIAL	ENGINEER BY: [Signature]		15920	61370905
	APPROVED BY: [Signature]			NHA15620606

BUILD ARC 440

**ASSEMBLY PARTS LIST**

PRINT DATE		PAGE	FILE CHANGE NO.										
08-14-78		1	00013037										
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61370905	4	G	C	VIDEO DISPLAY ASSY	N	REL	10-19-76	CC6B1C	08-14-78			
FOUND NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	51907303	5	1		PC CRT 12IN PHOS P4 GLOSS-MIN 60	P						
002	01	71456300	4	1		PC FRAME VIDEO DISPLAY	P						
003	01	61407419	3	1		PC CHOKE ASSY	A						
004	01	90460619	1	1		PC CD ASSY 6BND-0 (N/COMP VIDEO)	S						
005	01	10127122	9	4		PC MSCR PAN PHL 8-32X 3/8	B						
006	01	10126402	6	4		PC WSHR NO.8 EXT TOOTH LK TYP A	B						
007	01	10122902	9	4		PC NUT TWIN SELF LOCKING 8-32	B						
008	01	10122901	1	4		PC NUT TWIN SELF LOCKING 6-32	B						
010	02	51777314	9	4		PC SPRT, CKT RD 3/16 NYL FIG 2	P		12197			7717	
011	02	61407695	8	1		PC HIGH VOLTAGE TRANSFORMER ASSY	A		12107	12855		7715	7835
011	03	61408075	2	1		PC HIGH VOLTAGE TRANSFORMER ASSY	A		12855			7835	
012	01	61407418	5	1		PC YOKE ASSY	A						
013	02	61407540	6	1		PC CRT CAP ASSY	A			12502		7746	
013	03	61407856	6	1		PC CRT SOCKET ASSY	A		12502			7746	
021	01	61407617	2	1		PC REGULATOR ASSY +15V	A						
022	01	61407420	1	1		PC CABLE ASSY VIDEO DISPLAY	A						
028	02	61378209	2	REF		PC W/L VIDEO DISPLAY	D			12502		7746	7746
028	03	61407887	1	REF		PC W/L VIDEO DISPLAY	D		12502			7746	7746
029	01	94277409	2	2		PC STRAP CARLE TIE TYPE 6	B			12855			7835
030	01	16035100	3	REF		PC RASTER SCAN CRT DISPLAY	D						
031	01	10125605	5	2		PC WSHR NO.6 TYP A PLAIN STL CP	B						
032	01	10127113	8	2		PC MSCR PAN PHL 6-32X 3/8	B						

BUILD ARC 440

**ASSEMBLY PARTS LIST**

PRINT DATE		PAGE	FILE CHANGE NO.										
08-14-78		2	00013037										
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61370905	4	G	C	VIDEO DISPLAY ASSY	N	REL	10-19-76	CC6B1C	08-14-78			
FOUND NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
033	01	71468100	4	1		PC SLEEVE LINEARITY CONTROL	B						
035	01	51916874	4	1		PC PLATE, DANGER VINYL WHT/RED	P						
037	02	61391111	4	1		PC GND WIRE ASSY 3.0 20GA SKT	A		11954			7707	
038	01	71492087	3	1		PC INSULATOR, MOD PAPER UL	P			12855			7835
039	01	10126101	4	3		PC INT TOOTH LK WSHR #4	B			12855		7835	7835
039	02	10126101	4	2		PC INT TOOTH LK WSHR #4	B		12855	13037A		7835	7835
039	03	10126101	4	1		PC INT TOOTH LK WSHR #4	B		13037A			7835	
040	01	10125103	1	1		PC NUT, HEX MSCR 4-40 STL CP/ZP	B			12855		7835	7835
040	02	10125103	1	2		PC NUT, HEX MSCR 4-40 STL CP/ZP	B		12855			7835	
042	01	94277400	1	2		PC STRAP CARLE TIE TYPE 1	B						
047	01	71479201	7	1		PC LABEL, MON ADJ W/INTENSITY	P						
049	01	71491984	2	1		PC SPRING-EXT CRT GROUND	P						
050	02	51817102	0	2		PC LUG, R SLD TERM NO 8 FIG 1	B		11954			7707	
051	01	51917060	9	500		PC MAGNET, RING 108GAUSS YOKE/CRT	P						
054	01	51917061	7	150		PC MAGNET, RING 148GAUSS YOKE/CRT	P						
055	01	51917062	5	350		PC MAGNET, RING 188GAUSS YOKE/CRT	P						
056	01	51673824	2	1		PC SPACER, HEX ALUM 4-40X1.250	P			12855			7835
057	01	10127104	7	1		PC MSCR PAN PHL 4-40X 3/8	B			12855			7835
058	01	62200937	1	REF		PC SCHEMATIC, VIDEO DISPLAY	D						
059	01	10125607	1	1		PC WASHER FLT NO.10 STL CP	B		13037			7832	

BUILD ARC 440

**ASSEMBLY PARTS LIST**

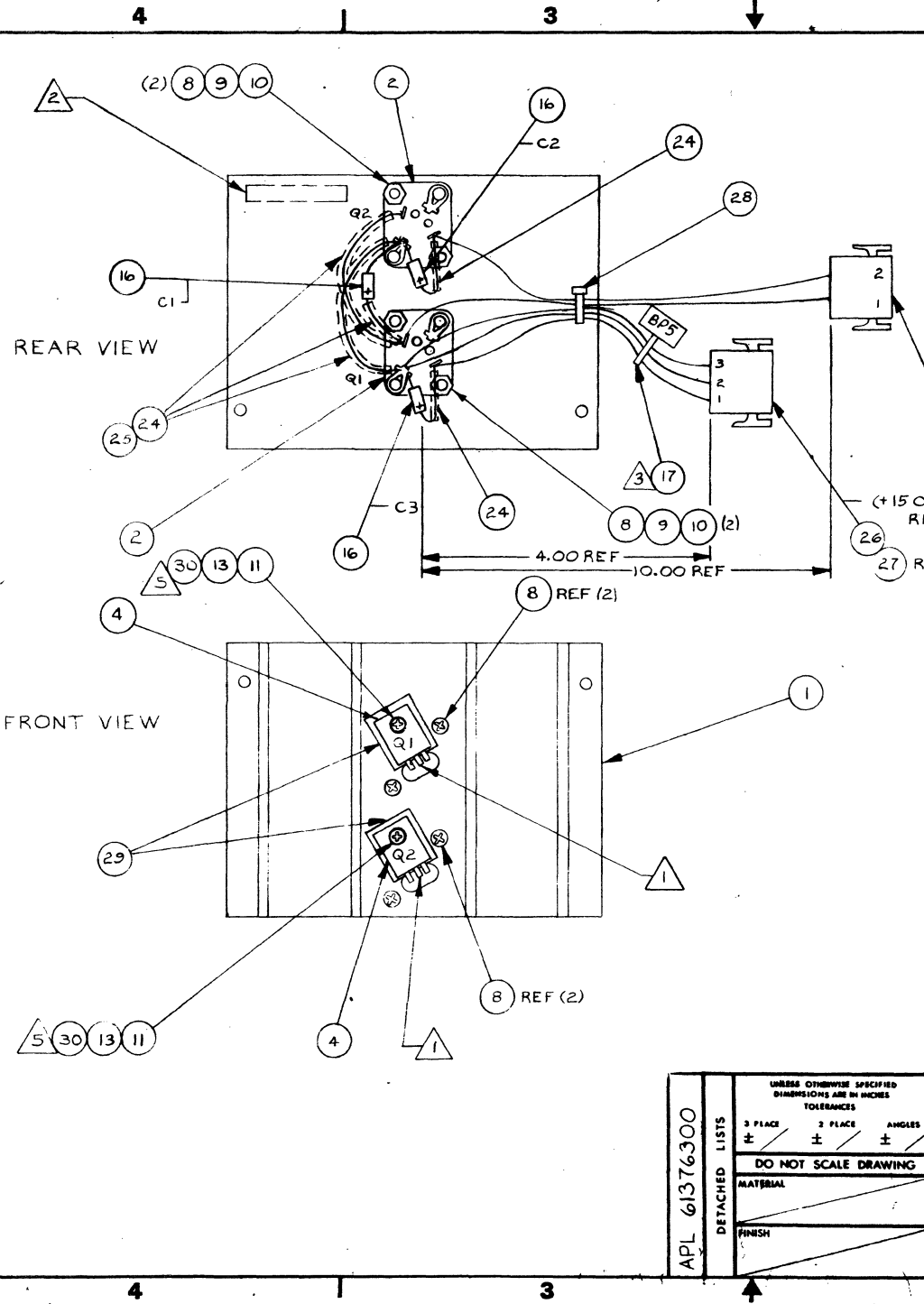
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08-14-78		3	00013037										
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61370905	4	G	C	VIDEO DISPLAY ASSY	N	REL	10-19-76	CC6B1C	08-14-78			
FOUND NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
						0042 TOTAL LINES							

62962300 B

G

B

7-72



SHEET REVISION STATUS		REVISION RECORD					
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP	
		RELEASED CLASS C					
01	C026	REVISED REGULATOR	W	11-12-74		RCB	
02	C227	UPDATE DWG WITH W/L	INT	4-2-75			
03	C240	APPEDED INSULATORS, TIE STRAP	INT	4/14/75			
04	C252	FIN 4 WAS 15130511	R	4-16-75			
A	10653-6	RELEASED CLASS A		3/9/75			
B	CD10834	REVISED PER ECO		4/1/75			
C	CD10893	REVISED NOTE 5 ON DWG		2/23/75			
C	9401-14	ADD INT DIV LABEL		3/11/75			

- NOTES;
1. BREAK OFF CENTER PIN BEFORE MOUNTING.
  2. MARK "ASSY 61376300" IN AREA SHOWN PER CDC SPEC 10121508.
  3. APPLY LABEL TO CABLE PER CDC DWG 82191061, (METHOD 6). MARK AS SHOWN.
  4. REFERENCE DESIGNATIONS ARE SHOWN FOR REFERENCE ONLY AND MAY NOT APPEAR ON PART.
  5. TORQUE 5 TO 8 INCH LBS.

**ISSUE CONTROL**  
**PROPERTY**  
 This document is  
 subject to change  
 without prior notice.  
 Changes require  
 approval of the  
 drawing engineer.

APL 61376300	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES			CONTROL DATA		TITLE	
	3 PLACE ±	2 PLACE ±	ANGLES ±	FIRST USED ON	CCG14A		+15 VOLT REGULATOR ASSY
	DO NOT SCALE DRAWING			DWN	M. Platby 10/14/74		
	MATERIAL			CHKD	R. Brantman 10-25-74		CODE IDENT 15920
FINISH			ENGR	E. J. ARKSE 10/14/74		DRAWING NO 61376300	
			MFG	J. T. 5/1/75			
			APPR	E. J. 5/1/75			
				E. J. 5-9-75		SCALE 1/1	
						NH 61376300	
						SHEET 1 OF 1	

61376300

A

BUILD ARC 230				ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.		
0860 61376300 2 C C				REGULATOR ASSY (+15V)				07-03-75	1	9401-140010003		
DIV	ASSEMBLY NUMBER	CD	REV	DWG	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
FIND NO.	PART NUMBER	CD	QTY	UOM	PART DESCRIPTION	MC	YLD	ECO NO. IN	ECO NO. OUT	S/N	WK IN	WK OUT
001	01	51906301	0	1	PC HEAT SINK	P						
002	01	94835100	2	2	PC SOCKET POWER TRANSISTOR	P						
004	01	15151504	0	2	PC IC +15V REG 350E TB15	P						
008	01	10127105	4	4	PC SCREW MACH PAN HD 4-40X1/2	B						
009	01	10126101	4	4	PC INT TOOTH LK WSHR #4	B						
010	01	10125103	4	4	PC NUT MACH HEX STL CP 4-40	B						
011	01	10607914	1	2	PC SCREW THD/CUTTING 6-20X1/2P/H	P						
013	01	51003962	1	AR	OZ HEAT TRANSFER COMPOUND	B						
016	01	24504333	6	3	PC CAP FXD TANT 2.2UF 20P 35VDCW	P						
017	01	94277409	2	1	PC STRAP CABLE TIE TYPE 6	P						
019	01	61376400	0	REF	PC W/L (REGULATOR ASSY +15V)	D						
020	01	92463000	5	1	200 FT WIR 18GA STRD BLK 300V UL PVC	W						
021	01	92463222	5	1	500 FT WIR 18GA STRD RED 300V UL PVC	W						
022	01	51906200	4	2	PC SOCKET CONTACTS	P						
023	01	51906000	0	1	PC CONN PLUG 2 PIN	P						
024	01	51797420	0	400	FT TUBING INS TPT200/29	P						
025	01	24501801	5	400	FT WIRE BUSS 22GA SOLID CU TP	W						
026	01	51905901	0	1	PC CONN RECPY 3 CONTACTS	P						
027	01	51906204	0	3	PC SOC CONT 20-14GA GOLD STRIP	P						
028	01	94277400	1	1	PC STRAP CABLE TIE TYPE I	P						
029	01	51907804	2	2	PC INSULATOR, PLASTIC FILM	B						

BUILD ARC 230				ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.		
0860 61376300 2 C C				REGULATOR ASSY (+15V)				07-03-75	2	9401-140010003		
DIV	ASSEMBLY NUMBER	CD	REV	DWG	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
FIND NO.	PART NUMBER	CD	QTY	UOM	PART DESCRIPTION	MC	YLD	ECO NO. IN	ECO NO. OUT	S/N	WK IN	WK OUT
030	01	10125803	0	2	PC WASHER SPRNG LOCK 6	B		10636			7529	
					0022 TOTAL LINES							

DWN	Plantenberg	10/15/74	CONTROL DATA	TITLE	W/L +15 VOLT REGULATOR ASSEMBLY	PREFIX	DOCUMENT NO	REV
CHKD	J. J. A.	10-15-74		W/L	61376400			A
ENG	J. J. A.	10-15-74		FIRST USED ON		NHA		
MFG	E. D. G.	5-7-75	CODE IDENT	CCG14A	61376300	SHEET	1 of 3	
APPR	E. D. G.	5-7-75	15920					

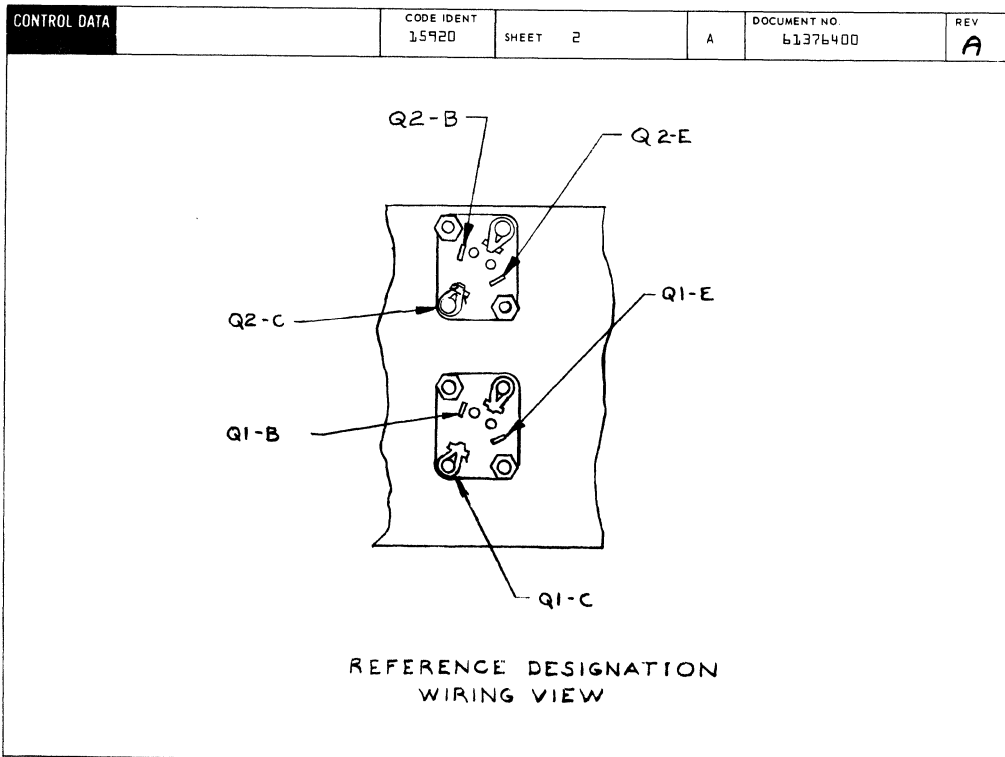
SHEET REVISION STATUS				REVISION RECORD						
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP		
					RELEASED CLASS		10-15-74	J. J. A.		
			01	01	01 C026	CHG WL & REF DES.	11/5/74	RCB		
			02	01	02 C227	DELETED P/L	11-7-75	RCB		
			03	01	03 C240	ADDED NOTE 1.	4/15/75	RCB		
			A	A	A	10653-6	RELEASED CLASS A	5/9/75	MGT.	

NOTES:  
1. For Find Numbers identification, see APL 61376300.

DETACHED LISTS

AA3180 REV. 8/71

PRINTED IN U.S.A.



AA3180

PRINTED IN U.S.A.

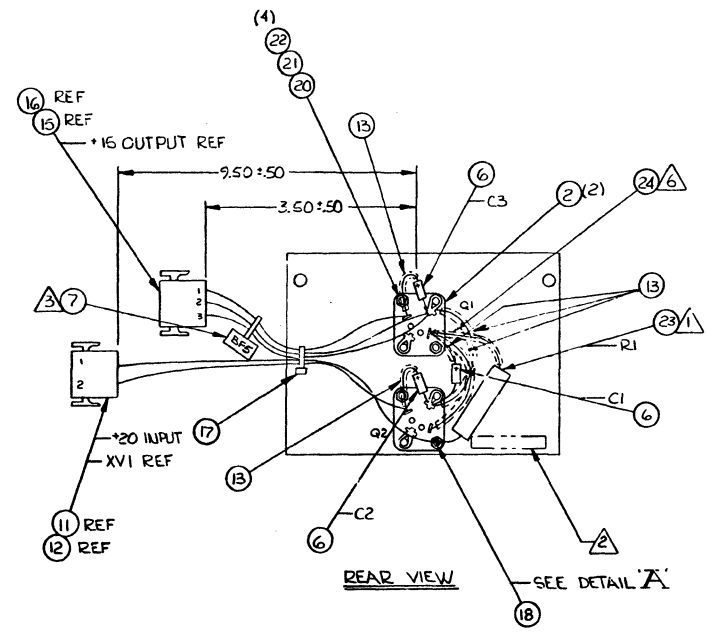
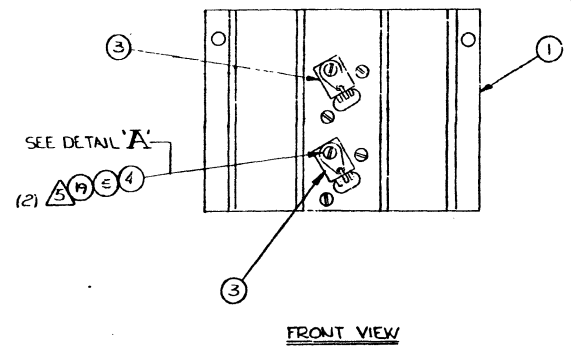
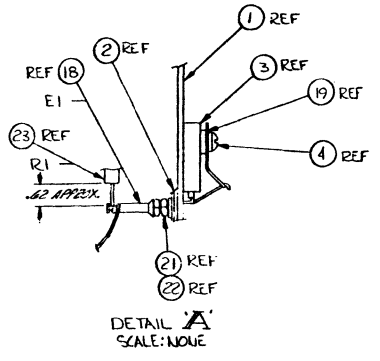




7-76

20672E19 2

SHEET REVISION STATUS		REVISION RECORD					
REV	ECO	DESCRIPTION	DRW	DATE	CHKD	APP	
A	10/23/62	RELEASED CUSPS A					



- NOTES:
- ⚠ KEEP AWAY FROM HEAT SINK.
  - ⚠ MARK "ASSY 61376302" IN AREA SHOWN PER CDC SPEC 10121505.
  - ⚠ APPLY LABEL TO CABLE PER CDC DWS 82191061, METHOD 6. MARK AS SHOWN.
  - 4. REFERENCE DESIGNATIONS ARE SHOWN FOR REFERENCE ONLY AND MAY NOT APPEAR ON PART.
  - ⚠ TORQUE 3.5 ± .5 INCH LBS.
  - ⚠ FIND NO. 24 TO BE PUT ON FIND NO 23 LEAD.

62962300 B

61376302 DETACHED LISTS 3 PLAC ± ± ± DO NOT SCALE DRAWING MATERIAL FINISH	SINGLE OR OTHER SPECIFIC DIMENSIONS AND INCHES TOLERANCES 3 PLAC ± ± ± DO NOT SCALE DRAWING MATERIAL FINISH	<b>CONTROL DATA</b> PART USED ON CC 614 A DWN CHNG MFC APPR	TITLE <b>REGULATOR ASSY          +15 VOLTS</b> CODE IDENT 15920 DRAWING NO 61376302
	SCALE 1/1	N/A 61376302	SHEET 1 OF 1

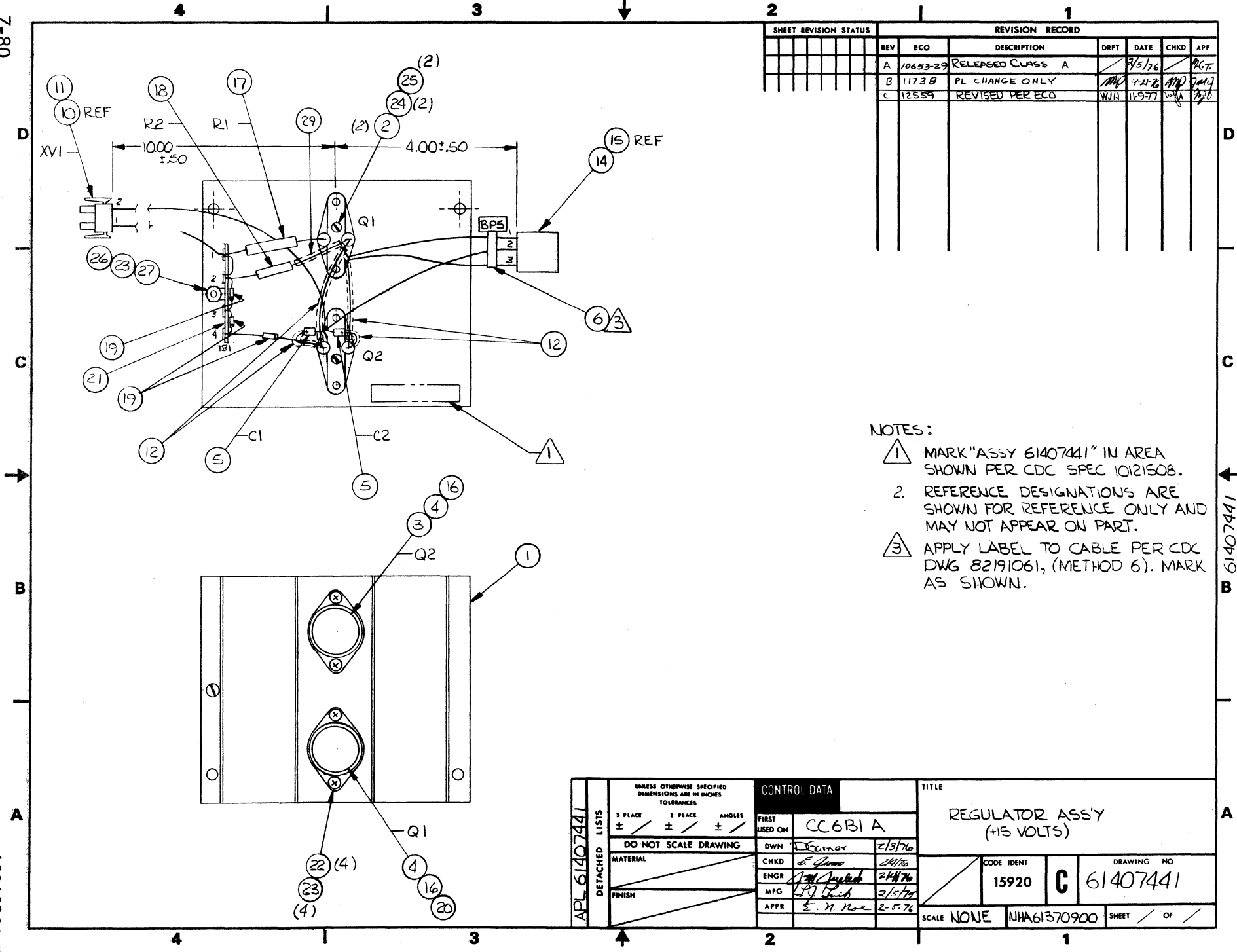
BUILD ARC 230										ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.		
0860										REGULATOR ASSY +15V				02-09-76	1	10653-29		
REV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION					MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE				
	61376302	B	A	U						A	REL	02-05-76	CC614A	02-09-76				
FOUND NO.	LI	PART NUMBER	CD	QUANTITY	L	M	PART DESCRIPTION				MC	YLD	ECO. NO. IN	ECO. NO. OUT	S N	WK IN	WK OUT	
001	01	51906301	0	1			PC HEAT SINK				P							
002	01	94835100	2	2			PC PWR SKT, XSTR PTS-4				P							
003	01	61407437	5	2			PC IC REGULATOR ASSY +15V				A							
004	01	95647425	8	2			PC SCR SH MTL .625L 6-20 PA HD				R							
005	01	51003962	1	AR			CZ PASTE, HEAT XFR CMPD NON-COND				B							
006	01	24504333	0	3			PC CAP FXD TANT 2.2UF 20% 35VDC				F							
007	01	94277409	2	1			PC STRAP CABLE TIE TYPE 6				P							
008	01	61407436	7	REF			PC W/L REGULATOR ASSY +15V				D							
009	01	93463000	5	1	200	FT	WIR 18GA STRD BLK 300V UL PVC				W							
010	01	93463222	5	1	500	FT	WIR 18GA STRD RED 300V UL PVC				X							
011	01	51906200	4	2			PC CONTACT, SKT 20-14GA STRIP T				P							
012	01	51906000	8	1			PC CONN PLUG 2 PIN				P							
013	01	51797420	0	400	FT		TUBING INS THIN WALL				B							
014	01	24501401	5	400	FT		WIRE BUSS 22GA SOLID CU TP				W							
015	01	51905901	8	1			PC CONN RECPT 3 CONTACTS				P							
016	01	51906204	6	3			PC CONTACT, SKT 20-14GA STRIP G				P							
017	01	94277400	1	1			PC STRAP CABLE TIE TYPE 1				P							
018	01	51613801	3	1			PC TERM STUD INSULATED T1594				P							
019	01	10125605	5	2			PC WSHR NO.6 TYP A PLAIN STL CP				B							
020	01	10127105	4	4			PC SCREW MACH PAN HD 4-40X1/2				B							
021	01	10126101	4	4			PC INT TOOTH LK WSHR #4				B							

BUILD ARC 230										ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.		
0860										REGULATOR ASSY +15V				02-09-76	2	10653-29		
REV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION					MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE				
	61376302	B	A	U						A	REL	02-05-76	CC614A	02-09-76				
FOUND NO.	LI	PART NUMBER	CD	QUANTITY	L	M	PART DESCRIPTION				MC	YLD	ECO. NO. IN	ECO. NO. OUT	S N	WK IN	WK OUT	
022	01	10125103	1	4			PC NUT HEX MCH 4-40 STL CP OR ZP				B							
023	01	62065407	0	1			PC RES FXD WW 2.00MM 10W 1P				P							
024	01	24563704	6	900	FT		INS SLVNG HI TEMP 18ANG				B							
0024 TOTAL LINES																		





7-80



62962300 E

APL 61407441	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES			CONTROL DATA		TITLE	
	3 PLACE ± / ± / ±	2 PLACE ± / ± / ±	ANGLES ± / ± / ±	FIRST USED ON	CC6B1 A		REGULATOR ASSY (+15 VOLTS)
	DO NOT SCALE DRAWING			DWN	2/3/76		
	MATERIAL			CHKD	2/1/76	CODE IDENT	DRAWING NO
FINISH			ENGR	2/1/76	15920	C	61407441
			MFG	2/5/76			
			APPR	2-5-76			
			SCALE NONE		NHA61370900	SHEET / OF /	

BUILD ARC 230

**ASSEMBLY PARTS LIST**

PRINT DATE 01-12-78 PAGE 1 FILE CHANGE NO. 00012559

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61407441	7	C	C	REGULATOR ASSY +15V	A	REL	02-05-76	CC6B1A	01-12-78			
FIND NO	LT	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	51906303	6	1		PC HT SINK, SEMI FIG 5 ALUM BLK	P						
002	01	51605400	4	2		PC SOCKET TRANSISTOR TO-3	P						
003	01	15130504	2	1		PC IC UA7800+15 355E POS V RGLTR	P						
004	02	51003962	1	001		OZ PASTE, HEAT XFR CMPD NON-COND	B		11774			7723	
005	01	24504333	6	2		PC CAP FXD TANT 2.2UF 20P 35VDCW	P						
006	01	94277409	2	1		PC STRAP CABLE TIE TYPE 6	B						
007	01	61407442	5	REF		PC W/L REGULATOR ASSY +15V	D						
008	01	93463000	5	1	250	FT WIR 18GA STRD BLK 300V UL PVC	W						
009	01	93463222	5	1	416	FT WIR 18GA STRD RED 300V UL PVC	W						
010	01	51906200	4	2		PC CONTACT, SKT 20-14GA STRIP T	P						
011	01	51906000	8	1		PC CONN PLUG 2 PIN	P						
012	01	51797420	0	400		FT TBG, INS .034DIA T/W NAT TEF	B						
013	01	24501801	5	375		FT WIRE BUSS 22GA SOLID CU TP	W						
014	01	51905901	8	1		PC CONN RECPT 3 CONTACTS	P						
015	01	51906204	6	3		PC CONTACT, SKT 20-14GA STRIP G	P						
016	01	16798719	7	2		PC WSHR, MICA INSUL TO-3 FIG 4	P						
017	01	95596544	7	1		PC RES FXD WW .51 OHM 10P 5WATT	P						
018	01	95596503	3	1		PC RES FXD WW 4.3 OHM 10P 5WATT	P						
019	01	95637304	7	3		PC DIO SIL 1N4004 400PIV 1.1V/1A	P						
020	01	58018602	1	1		PC XSTR 2N4901 POWER PNP STL	P						
021	01	51828014	4	1		PC TERMINAL STRIP 4PIN P TYPE	B						

BUILD ARC 230

**ASSEMBLY PARTS LIST**

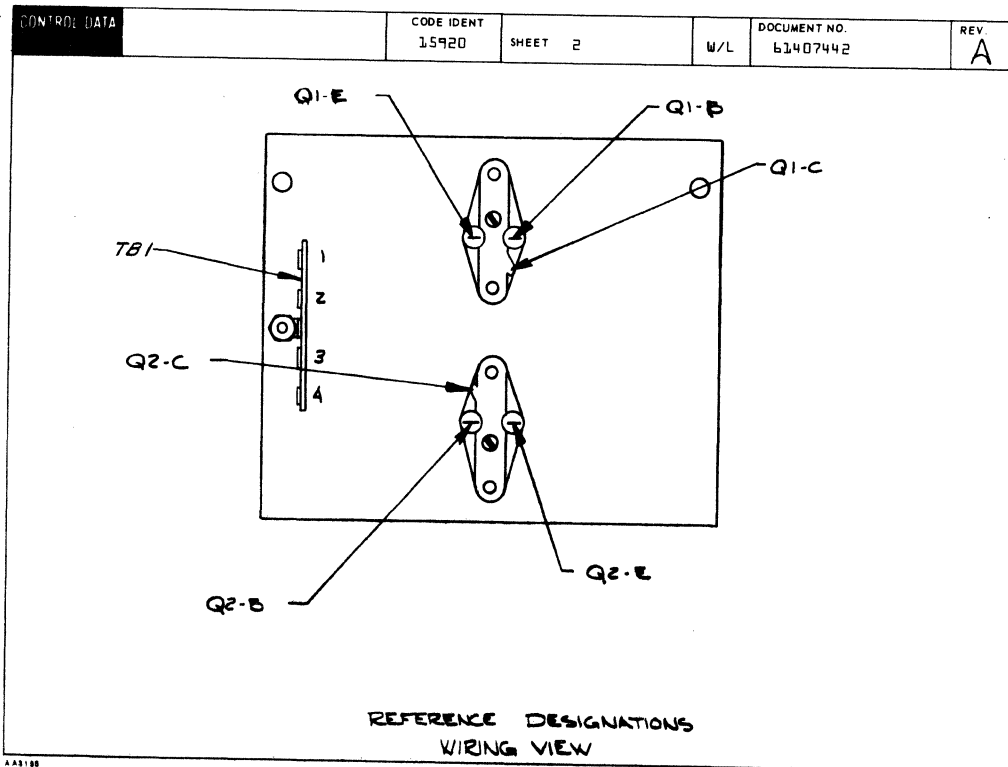
PRINT DATE 01-12-78 PAGE 2 FILE CHANGE NO. 00012559

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61407441	7	C	C	REGULATOR ASSY +15V	A	REL	02-05-76	CC6B1A	01-12-78			
FIND NO	LT	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
022	01	10127115	3	4		PC MSCR PAN PHL 6-32X 5/8	B						
023	01	10126401	8	5		PC WSHR NO.6 EXT TOOTH LK TYP A	B						
024	02	10127102	1	2		PC MSCR PAN PHL 4-40X.250	B		11738	12559		7640	7804
024	03	92745081	7	2		PC MSCR PAN HD 4-40 7/32	B		12559			7804	
025	01	10126400	0	2		PC WSHR NO.4 EXT TOOTH LK TYP A	B						
026	01	10125105	6	1		PC NUT HEX MCH 6-32 .7L CP OR ZP	B						
027	01	10127113	8	1		PC MSCR PAN PHL 6-32X 3/8	B						
028	01	62200812	6	REF		PC SCH DIAG REGULATOR ASSY +15V	D						
029	01	24563704	6	100		FT INS SLVNG HI TEMP 18AWG	B		12559			7804	
						0030 TOTAL LINES							

DWN	D. Garner	2/2/76	CONTROL DATA	TITLE	W/L	DOCUMENT NO.	REV					
CHKD				W/L REGULATOR ASSY (+15V)	W/L	61407442	A					
ENG												
MFG					NHA							
APPR			CODE IDENT	FIRST USED ON	61407441	SHEET	1 of 3					
			15920	CC6B1 A								
SHEET REVISION STATUS				REVISION RECORD								
				3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
				A	A	A	A	10653-29	RELEASED CLASS A		3/5/76	M.G.T.
NOTES: 1. For Find No. Designations see Parts List 61407441. 2. Reference Designations are for Ref Only and may not appear on part.												
												DETACHED LISTS

AA3180 REV. 8/71

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AA3180

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BUILD ARC 230

**ASSEMBLY PARTS LIST**

PRINT DATE 09-15-76 PAGE 1 FILE CHANGE NO. 00011738

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		61407441		7	B	C	REGULATOR ASSY +15V		A	REL	02-05-76		CC681A	09-15-76	
FOUND NO	LI	PART NUMBER	CD	AM	QUANTITY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	51906303	6		1		PC	HT SINK, SEMI FIB 5 ALUM BLK	P						
002	01	51605400	4		2		PC	SOCKET TRANSISTOR TO-3	P						
003	01	15130504	2		1		PC	IC 355E POS VOLTAGE REGULATOR	P						
004	01	51003962	1	AR			OZ	PASTE, HEAT XPR CMPD NON-COND	B						
005	01	24504333	6		2		PC	CAP FXD TANT 2.2UF 20P 35VDCW	P						
006	01	94277409	2		1		PC	STRAP CABLE TIE TYPE 6	B						
007	01	61407442	5			REF	PC	W/L REGULATOR ASSY +15V	D						
008	01	93463000	5		1	250	FT	WIR T88A STRD BLK 300V UL PVC	W						
009	01	93463222	5		1	416	FT	WIR T88A STRD RED 300V UL PVC	W						
010	01	51906200	4		2		PC	CONTACT, SKT 20-148A STRIP T	P						
011	01	51906000	8		1		PC	CONN PLUG 2 PIN	P						
012	01	51797420	0			400	FT	T88, INS .034DIA T/W NAT TEF	B						
013	01	24501801	5			375	FT	WIRE BUSS 228A SOLID CU TP	W						
014	01	51905901	8		1		PC	CONN RECPY 3 CONTACTS	P						
015	01	51906204	6		3		PC	CONTACT, SKT 20-148A STRIP 8	P						
016	01	16798719	7		2		PC	WSHR, MICA INSUL TO-3 FIB 4	B						
017	01	95596544	7		1		PC	RES FXD WW .51 OHM 5W 5P	P						
018	01	95596503	3		1		PC	RES FXD WW 4.3 OHM 5W 5P	P						
019	01	95637304	7		3		PC	DIO SIL IN4004 400PIV 1.1V/1A	P						
020	01	58018602	1		1		PC	XSTR 2N4901 POWER PNP SIL	P						
021	01	51828014	4		1		PC	TERMINAL STRIP 4PIN P TYPE	B						

BUILD ARC 230

**ASSEMBLY PARTS LIST**

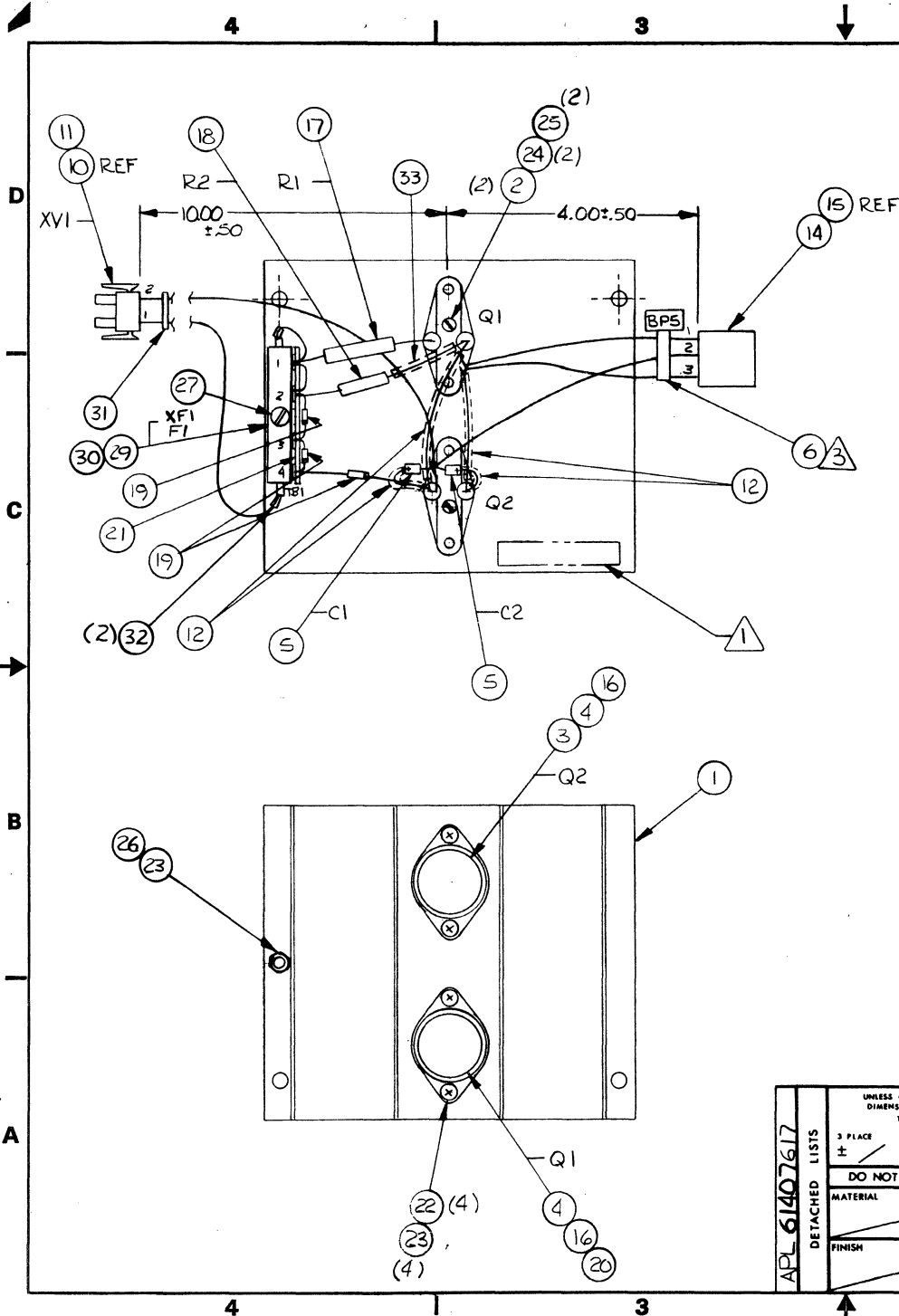
PRINT DATE 09-15-76 PAGE 2 FILE CHANGE NO. 00011738

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		61407441		7	B	C	REGULATOR ASSY +15V		A	REL	02-05-76		CC681A	09-15-76	
FOUND NO	LI	PART NUMBER	CD	AM	QUANTITY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
022	01	10127115	3		4		PC	MSCR PAN PHL 6-32X3/8 (TYP I)	B						
023	01	10126401	8		5		PC	WSHR NO.6 EXT TOOTH LK TYP A	B						
024	01	10127101	3		2		PC	SCRFW 4-40X.187	B						
024	02	10127102	1		2		PC	MSCR PAN PHL 4-40X1/4 (TYP I)	B		11738			7640	7640
025	01	10126400	0		2		PC	WSHR NO.4 EXT TOOTH LK TYP A	B						
026	01	10125105	6		1		PC	NUT HEX MCH 6-32 STL CP OR ZP	B						
027	01	10127113	8		1		PC	MSCR PAN PHL 6-32X3/8 (TYP I)	B						
028	01	62208812	6			REF	PC	SCH DIAG REGULATOR ASSY +15V	D						
								0029 TOTAL LINES							



62962300 E

7-85/7-86



SHEET REVISION STATUS		REVISION RECORD					
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP	
A	10653-67	RELEASED CLASS A		10-19-76		MCT	
B	12559	REVISED PER ECO	WJH	11-9-77	WJA	7-86	

NOTES:

- 1 MARK "ASSY 61407617" IN AREA SHOWN PER CDC SPEC 10121508.
- 2. REFERENCE DESIGNATIONS ARE SHOWN FOR REFERENCE ONLY AND MAY NOT APPEAR ON PART.
- 3 APPLY LABEL TO CABLE PER CDC DWG 82191061, (METHOD 6). MARK AS SHOWN.

APL 61407617 DETACHED LISTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES			CONTROL DATA		TITLE	
	3 PLACE ±	2 PLACE ±	ANGLES ±	FIRST USED ON		CODE IDENT	DRAWING NO
	±	±	±	CC6B1C		15920	C 61407617
	DO NOT SCALE DRAWING			DWN	J. Garner		
	MATERIAL			CHKD	E. Jones		
	FINISH			ENGR	A. L. Gorman		
				MFG	J. J. Lind		
				APPR	E. H. H.		
						SCALE NONE	NHA61370905 SHEET / OF /

61407617



BUILD ARC 230

**ASSEMBLY PARTS LIST**

PRINT DATE 01-12-78 PAGE 1 FILE CHANGE NO. 00012559

DIV.		ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
0860		61407617	2	B	C	REGULATOR ASSY +15V	A	REL	10-19-76	CC681C	01-12-78		
FOUND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	51906303	6	1		PC HT SINK, SEMI FIG 5 ALUM BLK	P						
002	01	51605400	4	2		PC SOCKET TRANSISTOR TO-3	P						
003	01	15130504	2	1		PC IC UA7800+15 355E POS V RGLTR	P						
004	02	51903962	1	001		OZ PASTE, HEAT XFR CMPD NON-COND	B		11774			7723	
005	01	24504333	6	2		PC CAP FXD TANT 2.2UF 20P 35VDCW	P						
006	01	94277409	2	1		PC STRAP CABLE TIE TYPE 6	B						
007	01	61407618	0	REF		PC W/L	D						
008	01	93463000	5	1 250		FT WIR 18GA STRD BLK 300V UL PVC	W						
009	01	93463222	5	1 625		FT WIR 18GA STRD RED 300V UL PVC	W						
010	01	51906200	4	2		PC CONTACT, SKT 20-14GA STRIP T	P						
011	01	51906000	8	1		PC CONN PLUG 2 PIN	P						
012	01	51797420	0	400		FT TBG, INS .034DIA T/W NAT TEF	B						
013	01	24501801	5	375		FT WIRE BUSS 22GA SOLID CU TP	W						
014	01	51905901	8	1		PC CONN RECPT 3 CONTACTS	P						
015	01	51906204	6	3		PC CONTACT, SKT 20-14GA STRIP G	P						
016	01	16798719	7	2		PC WSHR, MICA INSUL TO-3 FTG 4	P						
017	01	95596544	7	1		PC RES FXD WW .51 OHM 10P 5WATT	P						
018	01	95596503	3	1		PC RES FXD WW 4.3 OHM 10P 5WATT	P						
019	01	95637304	7	3		PC DIO SIL 1N4004 400PIV 1.1V/1A	P						
020	01	58018602	1	1		PC XSTR 2N4901 POWER PNP SIL	P						
021	01	51828014	4	1		PC TERMINAL STRIP 4PIN P TYPE	B						

BUILD ARC 230

**ASSEMBLY PARTS LIST**

PRINT DATE 01-12-78 PAGE 2 FILE CHANGE NO. 00012559

DIV.		ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
0860		61407617	2	B	C	REGULATOR ASSY +15V	A	REL	10-19-76	CC681C	01-12-78		
FOUND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
022	01	10127115	3	4		PC MSCR PAN PHL 6-32X 5/8	B						
023	01	10126401	8	5		PC WSHR NO.6 EXT TOOTH LK TYP A	B						
024	01	10127102	1	2		PC MSCR PAN PHL 4-40X.250	B						
024	02	92745081	7	2		PC MSCR PAN HD 4-40 7/32	B		12559	12559		7804	7804
025	01	10126400	0	2		PC WSHR NO.4 EXT TOOTH LK TYP A	B						
026	01	10125105	6	1		PC NUT HEX MCH 6-32 STL CP OR ZP	B						
027	01	10127113	8	1		PC MSCR PAN PHL 6-32X 3/8	B						
028	01	62200812	6	REF		PC SCH DIAG REGULATOR ASSY +15V	D						
029	01	51785402	2	1		PC FUSE BLOCK 125VAC 10A 3AG	P						
030	01	24512922	6	1		PC FUSE, TUBE 250V 1.5A FAST/ACT	P						
031	01	94277400	1	1		PC STRAP CABLE TIE TYPE 1	B						
032	01	95643212	4	2		PC CONN QUICK 22-18 AWG FIG 2	P						
033	01	24563704	6	100		FT INS SLVNG HI TEMP 18AWG	B		12559			7804	
						0034 TOTAL LINES							





DWN	R Trautman	7/76	CONTROL DATA	TITLE	CRT SOCKET ASSY	PREFIX	DOCUMENT NO.	REV.
CHKD	<i>[Signature]</i>	7/76				A	61407540	B
ENG	<i>[Signature]</i>	9/4/76		FIRST USED ON		NHA		
MFG	<i>[Signature]</i>	9/1/76				61370903	SHEET	1 of 3
APPR	<i>[Signature]</i>	8-6-76	CODE IDENT		CC6140			
			15920					

SHEET REVISION STATUS					REVISION RECORD				
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP	
			A	A	Released Class A	—	9/6/76	R/T	
			D	B	CD 11933 DELETED P/N 4	☑	12-27-76	GR	

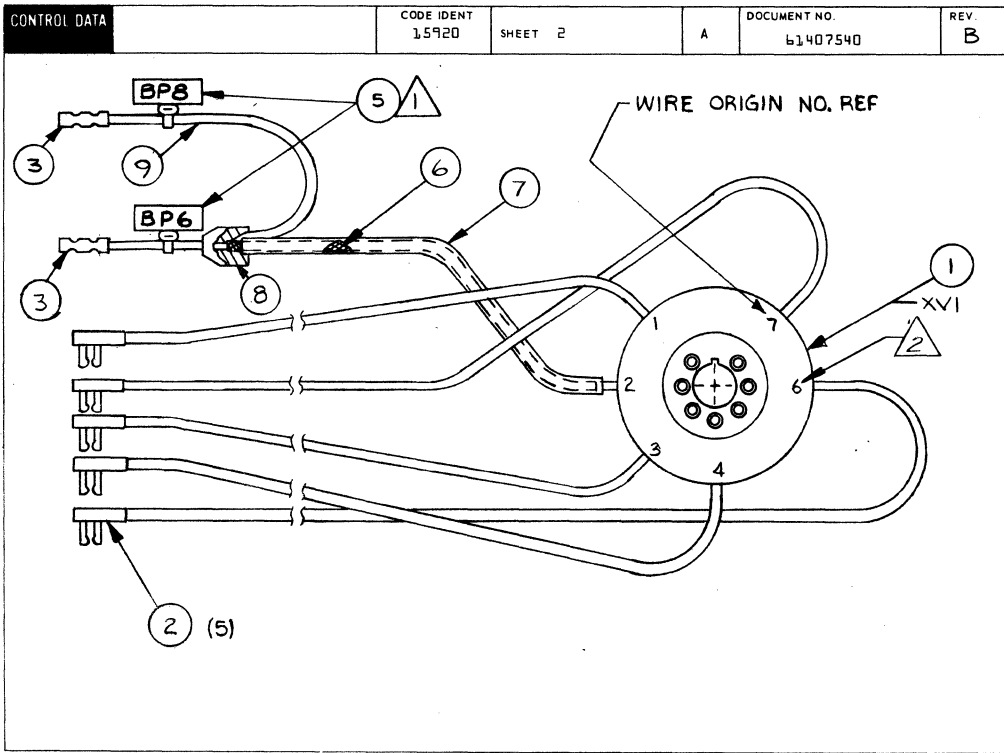
NOTES:

1. Apply label to cable per drawing 82191061, method b. Mark as shown.
2. Shown for reference only and may not appear on part.
3. Bulk identify with CDC part number.
4. Length indicated is  $\pm .5$  and is measured from where lead exits the cap.

APL 61407540
DETACHED LISTS

AA3180 REV. 8-71

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DWN	R. Trautman	9-22-77	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO	REV
CHKD	<i>[Signature]</i>	10/11/77		CRT SOCKET ASSY	A	6140785b	B
ENG	<i>[Signature]</i>	10/11/77		FIRST USED ON	NHA		
MFG	<i>[Signature]</i>	10/11/77		CC5B1	61370905	SHEET	1 of 3
APPR	E. H. No. 2	10-7-77	CODE IDENT				
			15920				

SHEET REVISION STATUS				REVISION RECORD						
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP		
A	A	A	A	12402-12	RELEASED Class A	/	10-14-77	R.Y.		
A	B	B	B	CD12620	REVISED PER ECO	JM	11/23/77	[Signature]		

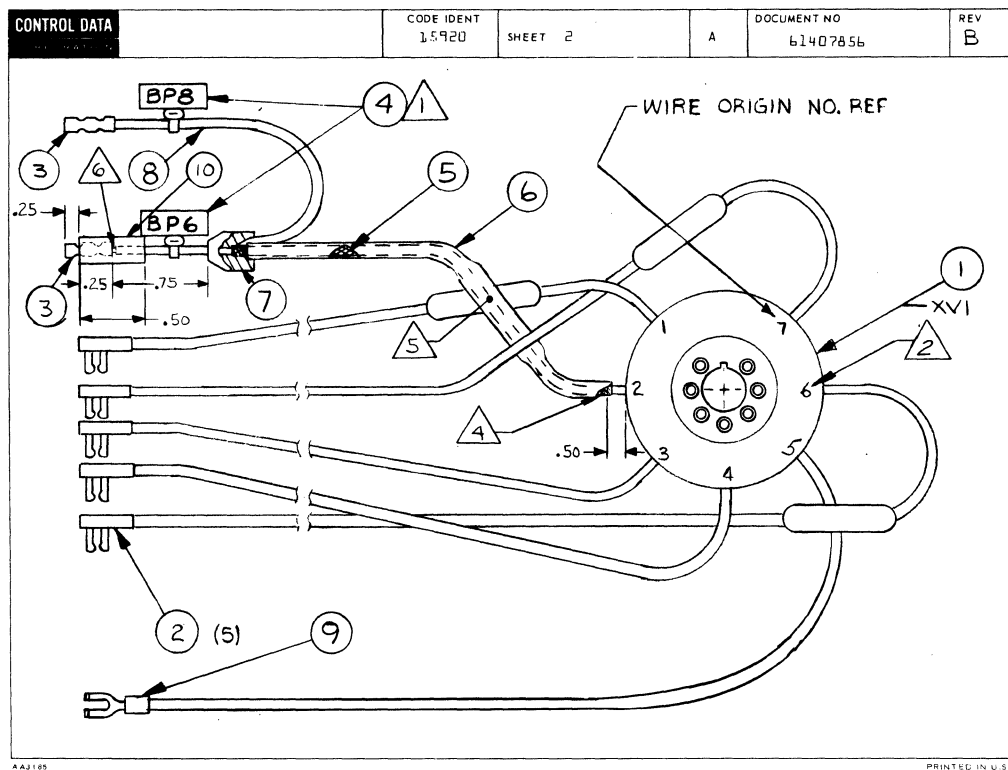
  

NOTES:

- Apply label to cable per drawing 821910b1, method b. Mark as shown. Shown for reference only and may not appear on part.
- Bulk identify with CDC part number
- Length indicated is  $\pm .5$  and is measured from where lead exits the cap.
- Remove plastic cover and resistor, solder ends of lead together, heat shrink insulating sleeve .87 long (find No. 6) over solder joint.
- Do not crimp insulation.

APL 6140785b  
DETACHED LISTS

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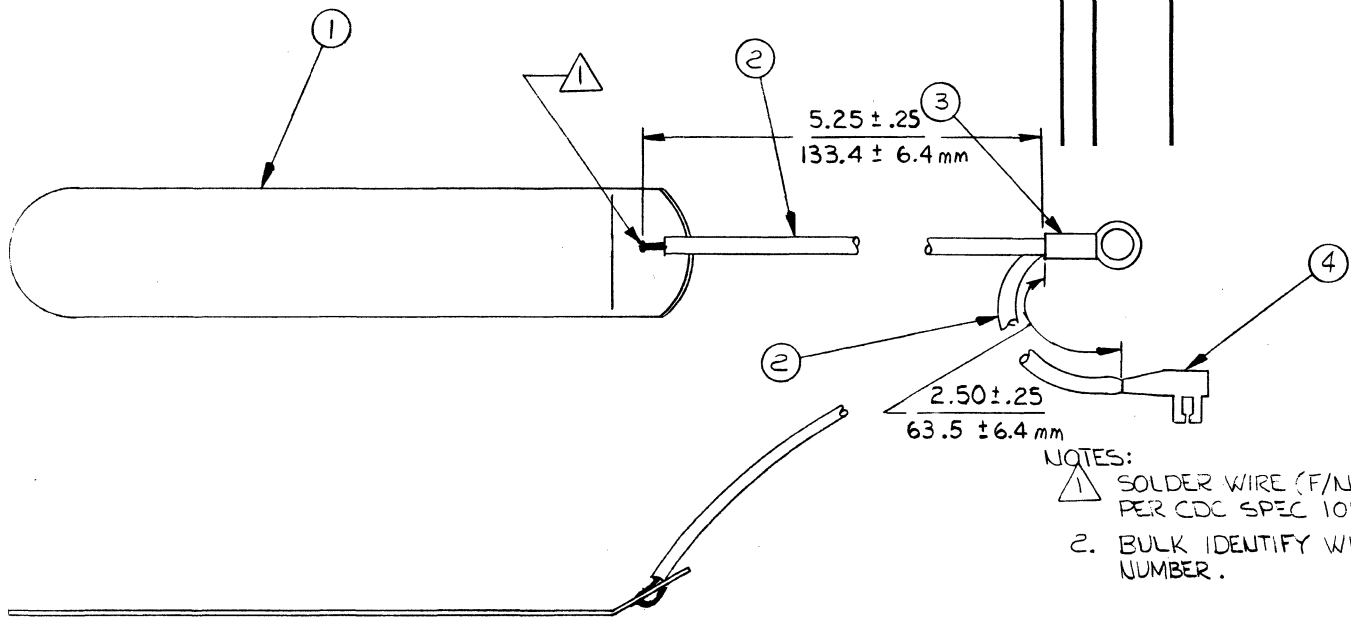




7-92.2

62962300 F

SHEET REVISION STATUS				REVISION RECORD				
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP		
A	10653-67	RELEASED CLASS A	/	10/19/76	/	PCT		
B	0011953	CHG LENGHT OF F/N 2	WML	1-18-77	WML	WML		



NOTES:  
 1. SOLDER WIRE (F/N 2) TO F/N 1 PER CDC SPEC 10120300.  
 2. BULK IDENTIFY WITH CDC PART NUMBER.

APL 71492174	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES/mm TOLERANCES			CONTROL DATA		TITLE	
	3 PLACE ± / ± / ±	2 PLACE ± / ±	ANGLES ± / ±	FIRST USED ON	CC5B1A		CRT GROUND CLIP ASSY
	DO NOT SCALE DRAWING			DWN	J. G. ...	7/30/76	
	MATERIAL			CHKD	E. ...	10/6/76	CODE IDENT 15920
FINISH			ENGR	W. ...	1/14/76	DRAWING NO C 71492174	
			MFG	S. ...	10/14/76		
			APPR	E. N. ...	10-18-76	SCALE 4/1	
						NHA61370902 SHEET / of /	

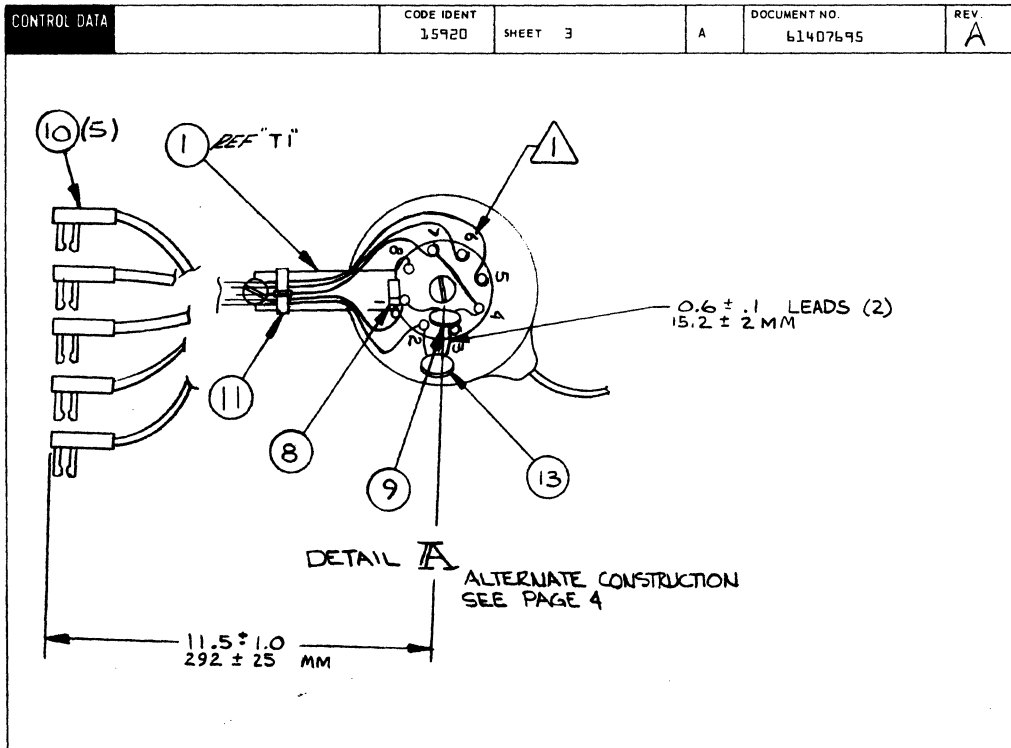
71492174

BUILD ARC 104

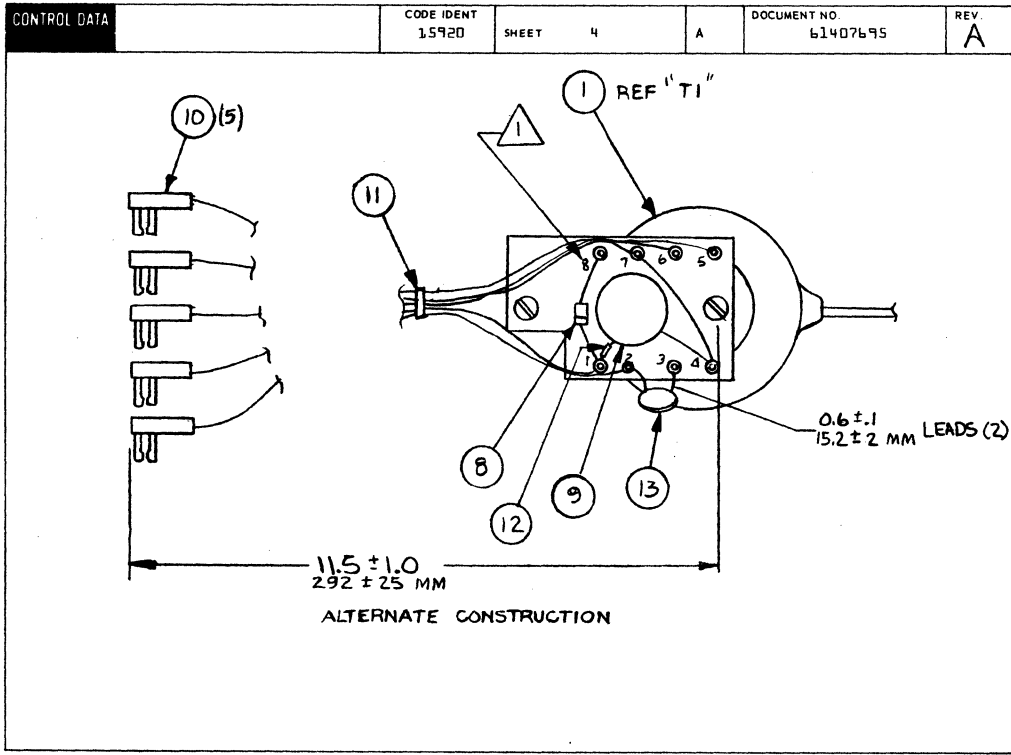
**ASSEMBLY PARTS LIST**

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	PRINT DATE	PAGE	FILE CHANGE NO.		
0860		71492174		9	R	A	GROUND CLIP CRT		A	REL	01-17-77	1	00011953		
TYPE NO	LI	PART NUMBER	CD	IN	QUANTITY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	71492216	8		1		PC CLIP, CRT GROUND (COPPER)		P						
002	01	93462555	9		750	FT	WIR 20GA STRD GRN 300V UL PVC W								
003	01	51797236	0		1		PC LUG, CRMP R TERM 16-140A 1055		B						
004	01	94219903	5		1		PC CONTACT, FLAS 22-18AWG STRIP		P						
0004 TOTAL LINES															







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AA3185 PRINTED IN U.S.A.

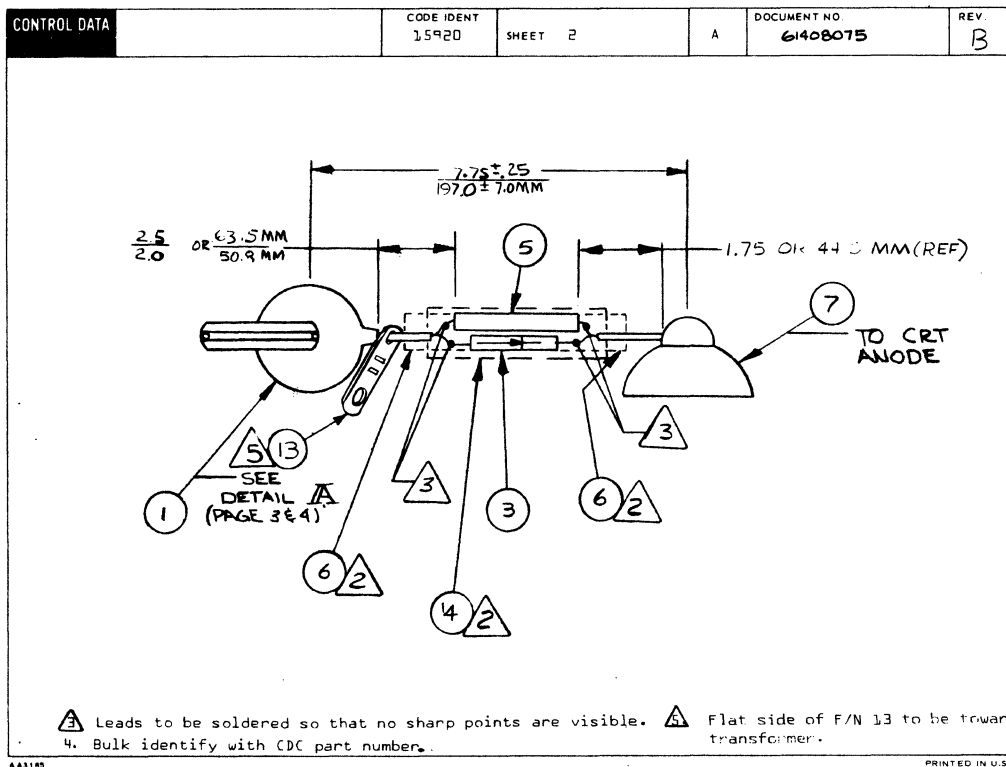




DWN	R. Tautman / 3/78	CONTROL DATA	TITLE	HIGH VOLTAGE TRANSFORMER ASSEMBLY	PREFIX	DOCUMENT NO.	REV							
CHKD	R. Tautman / 3/78				A	61408075	B							
ENG	R. Tautman / 3-78		FIRST USED ON		NHA									
MFG	R. Tautman / 3-78				61407659	SHEET 1 of 5								
APPR	R. Tautman / 3-10-78	CODE IDENT	CC617A/B/C											
		15920												
SHEET REVISION STATUS				REVISION RECORD										
				5	4	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
				A	A	A	A	A	A	12402-37	Released Class A	/	3-13-78	mt
				A	A	B	B	B	B	13037	REVISED PFR. FID	WJG	8-19-78	WJ
NOTES:  Shown for reference only and may not appear on part.  Slip 1.0 inch of .375 tubing, F/N 6, over each end of the soldered resistor-diode junctions. At each end the tubing should extend up to the resistor body and over the wire insulation. Shrink tubing. Next slip 3 inches of .50 dia tubing, F/N 4, over resistor-diode and center over this assembly. Shrink tubing.														
												APL 61408075		
												DETACHED LISTS		

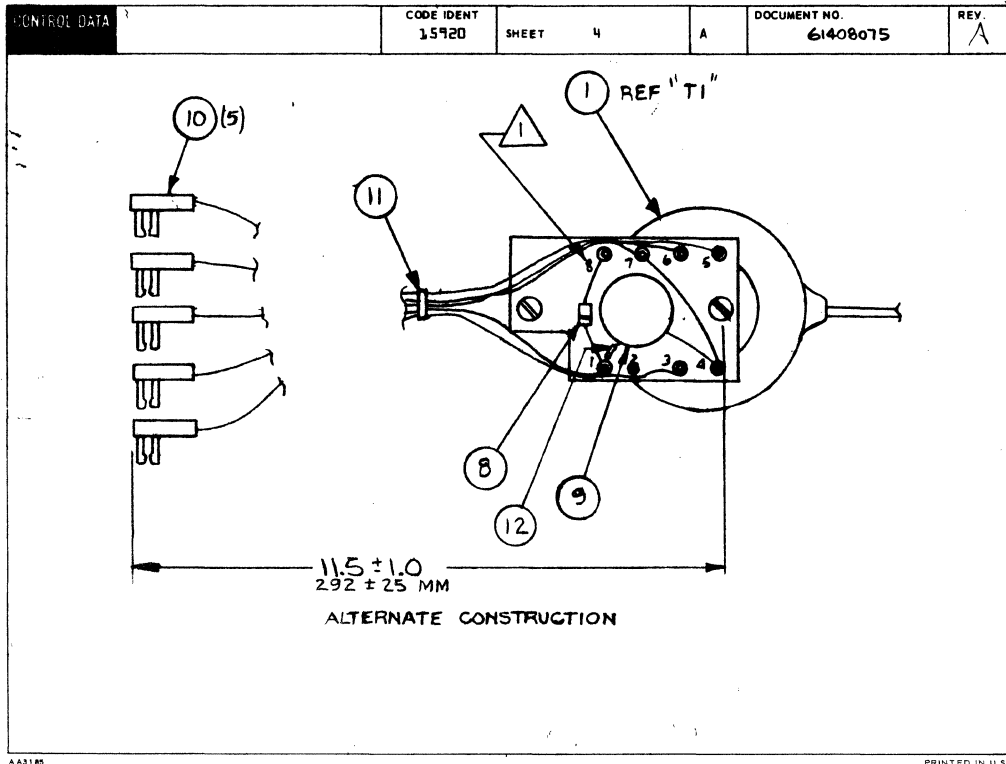
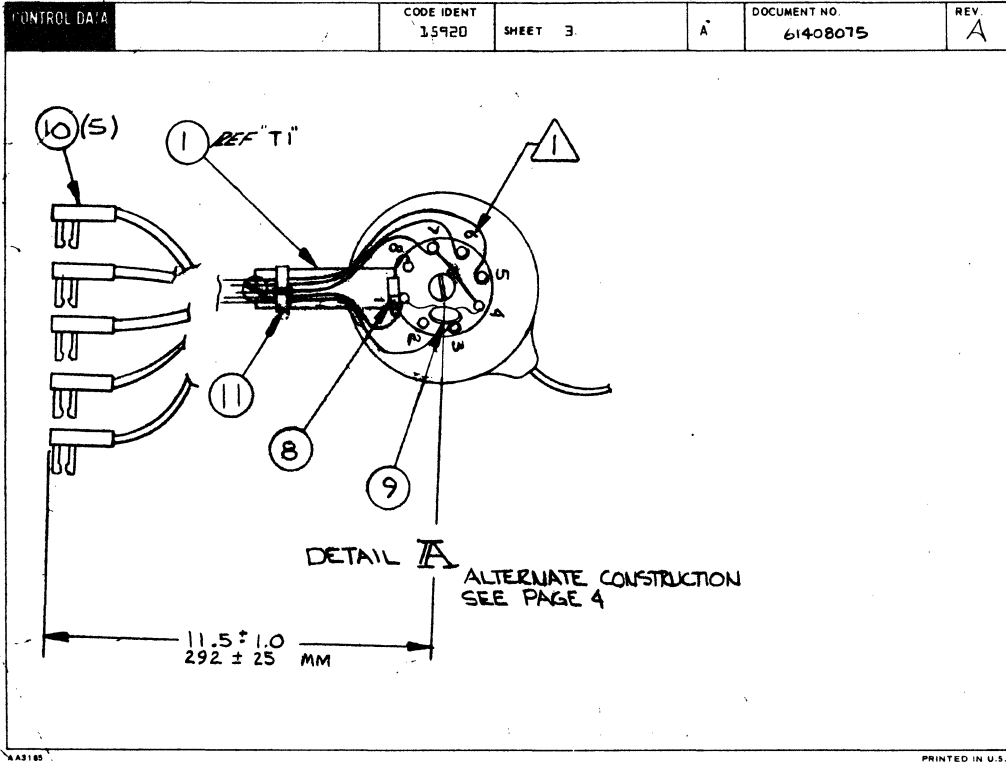
AA3180 REV. B 71

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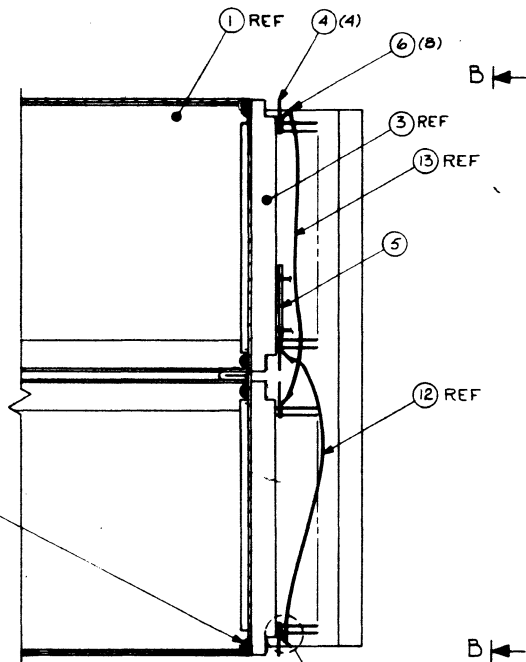
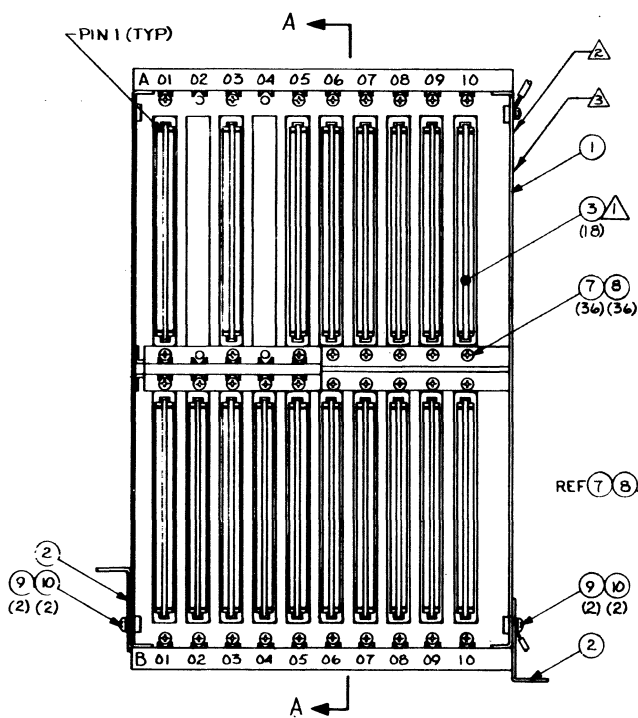
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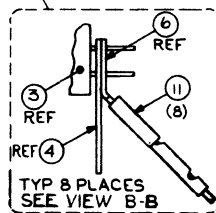




SHEET REVISION STATUS		REVISION RECORD						
REV	NO	DESCRIPTION	DEPT	DATE	CHKD	APP		
	21	RELEASED CLASS		11/75				
D1	01	REVISED PER ECO		11/75				
X1	02	ADDED END WARE CRST. SHY 2 ZONE B1		1-6-75				
X1	03	ADD DIMENSIONS LINE FROM SHY 2 ZONE B.A.		1-7-75				
X1	04	REMOVED DIMENSIONS FROM P.L.E. DIM.		1-6-75				
X1	05	ADDED DIM. NO 20		1-6-75				
AA	A	RELEASED CLASS A		3/8/75				
AA	A	ADD INT DIV LABEL		3/8/75				
BB	B	ADD NOTE 4		11/75				



SECTION A-A

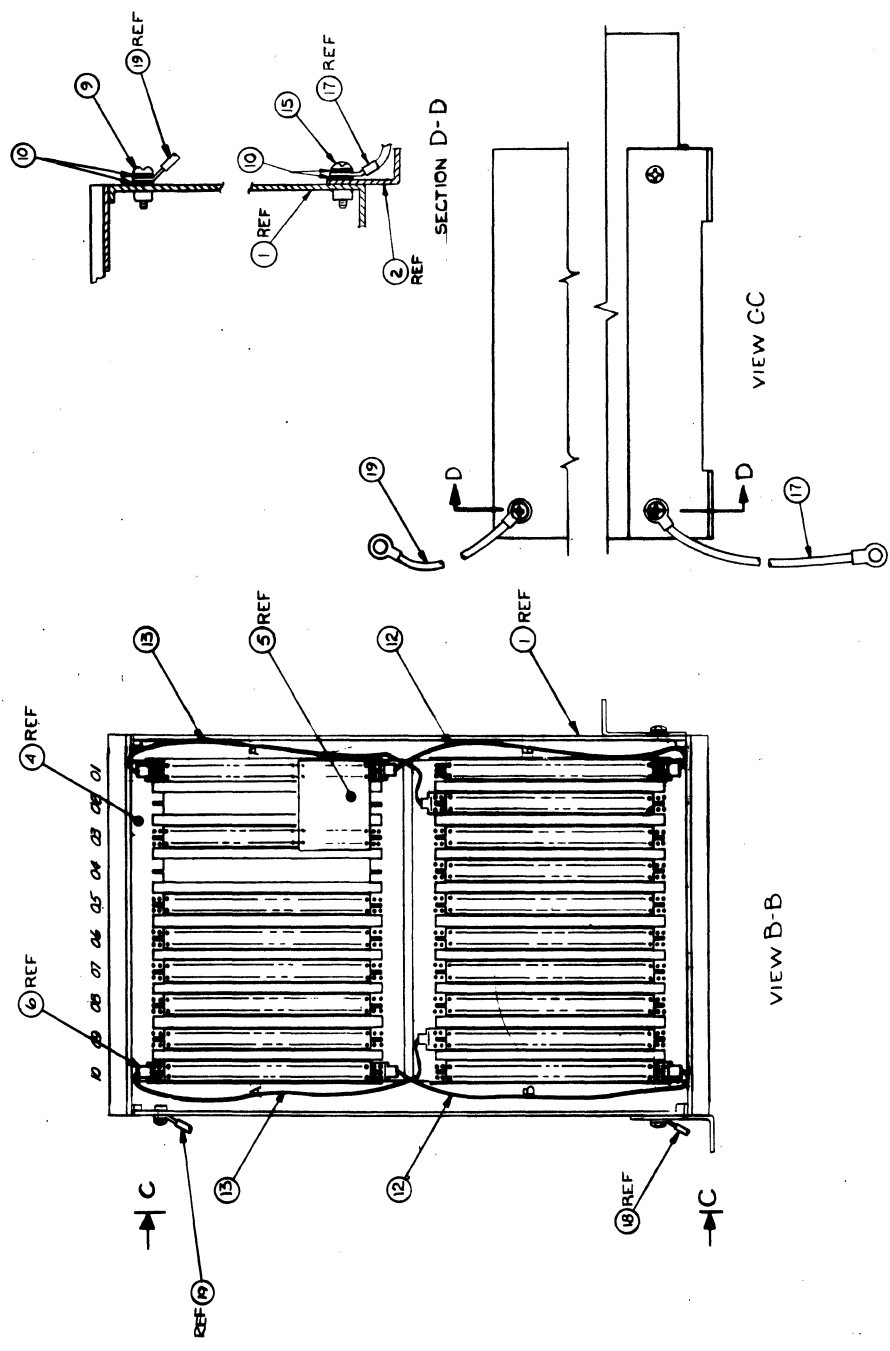


NOTES:

- 1 LOCATE CONNECTORS (F.N.D.N. 3) PER FIXTURE 71456200.
- 2 MARK "ASSY 61371200" IN AREA SHOWN PER CDC SPEC 10121508.
- 3 MARK SERIAL NO. "SN \_\_\_\_\_" IN THIS AREA PER CDC STD 1.01.025 AND CDC SPEC 10121508.
- 4. REFERENCE DESIGNATIONS ARE SHOWN FOR REF ONLY AND MAY NOT APPEAR ON PART.

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. THERE WILL BE NO COPY ONLY OF THE REVISED DOCUMENT.

APL 61371200 ATTACHED LISTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	TOLERANCES	TITLE	
	FINISH	PLACES	LOGIC CHASSIS ASSEMBLY	
DESIGNED BY	CCG14	INSPECTED BY	CODE IDENT	DRAWING NO
DATE	11/75	DATE	15920	D 61371200
APPROVED BY		DATE	SCALE 1/1	NHA 15611400 SHEET 1 OF 2



REV. 1	1992	15920	D	61371200	B
LOGIC CHASSIS ASSEMBLY				SHEET 2	

BUILD ARC 220

### ASSEMBLY PARTS LIST

PRINT DATE 10-29-75 PAGE 1 FILE CHANGE NO. 00010935

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE	
0860		61271200		9	R	A	CHASSIS ASSY (LOGIC)		A	REL	05-09-75	LIAT	10-29-75	
FOUND NO.	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	63363411	2	1		PC CARD CAGE WELDMENT		P						
002	01	73455300	5	2		PC BRACKET-MOUNT CARD CAGE		P						
003	01	53900300	8	18		PC CONN BRD EDGE 40/80 DUAL R/O		P						
004	01	73454003	6	4		PC BUS BAR		P						
005	01	90417100	6	1		PC CD ASSY 4DED (PWR DIST)		G						
006	01	73454100	0	9		PC CONTACT		P						
007	01	10127103	9	36		PC SCR MACH PAN HD 4-40X.312		B						
008	01	10126400	0	36		PC WASHER EXT TOOTH LOCK NO. 4		B						
009	01	10127121	1	4		PC SCREW PAN HD 8-32X.312 LG		B		10935	10935		7543	7543
009	02	10127121	1	5		PC SCREW PAN HD 8-32X.312 LG		B					7543	
010	01	10126402	6	5		PC WASHER EXT. 8		B		10935	10935		7543	7543
010	02	10126402	6	7		PC WASHER EXT. 8		B					7543	
011	01	17973615	2	8		PC TERM CRMP TYPF INSUL 18-14		P						
012	01	92508000	2	AR		FT WIR 14GA STRD BLK 600V UL PVC		W						
013	01	92508222	2	AR		FT WIR 14GA STRD RED 600V UL PVC		W						
014	01	63371300	7	REF		PC L/W LOGIC CHASSIS		D						
015	01	10127122	9	1		PC SCREW MACH 8-32 X 3/8 PAN HD		B						
017	01	51797217	0	1		PC TERM LUG RING CRMP 22-14		10	P					
017	02	61391106	4	1		PC GND WIRE ASSY 9.5 16GA		A		10935	10935		7543	7543
018	01	92462555	9	1		FT WIR 20GA STRD BRN 300V UL PVC		W			10935			7543
019	01	51797212	1	1		PC TERM LUG RING CRMP 22-14		6	P					
019	02	61391104	9	1		PC GND WIRE ASSY 4.5 16GA		A		10935	10935		7543	7543
020	01	16006509	2	300		FT WIR 30GA SLD WHT UL TEFZEL		W						

BUILD ARC 220

### ASSEMBLY PARTS LIST

PRINT DATE 10-29-75 PAGE 2 FILE CHANGE NO. 00010935

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE	
0860		61271200		9	R	A	CHASSIS ASSY (LOGIC)		A	REL	05-09-75	LIAT	10-29-75	
FOUND NO.	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
						0023 TOTAL LINES								





CONTROL DATA			CODE IDENT 15920		SHEET 3		LW		DOCUMENT NO. 61371300		REV. C		
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE		COLOR		
B4/96 CHAR			08-A	34			09-A	34					
OVER CURRENT			01-A	8			03-A	8					
			03-A	7			03-A	8					
DRIVER			01-A	10			03-A	10					
			03-A	9			03-A	10					
CURRENT SHARING			01-A	11			03-A	11					
TEST MODE			08-A	31			09-A	31					
TEST MODE H/L FREQ SW			09-A	31			10-A	48					
			08-A	32			09-A	32					
MEM DATA 24			05-A	18			06-A	18					
MEM DATA 23			05-A	19			06-A	19					
MEM DATA 22			05-A	20			06-A	20					
MEM DATA 21			05-A	30			06-A	30					
MEM DATA 20			05-A	31			06-A	31					
H-COUNT			05-A	46			06-A	46					

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CONTROL DATA			CODE IDENT 15920		SHEET 4		LW		DOCUMENT NO. 61371300		REV. A		
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE		COLOR		
BLK TCD			05-A	47			06-A	47					
H-SYNC			05-A	48			06-A	48					
LN 10			05-A	49			06-A	49					
V-UNBLANK			05-A	50			06-A	50					
MEM 25			05-A	51			06-A	51					
PROTECT P/F			05-A	53			06-A	53					
MR			05-A	54			06-A	54					
DTR			09-A	58			10-A	58					
SIG GND			09-A	59			10-A	59					
SEC C0			09-A	60			10-A	60					
RING IND			09-A	61			10-A	61					
RX DATA			09-A	62			10-A	62					
DSR			09-A	63			10-A	63					
CTS			09-A	64			10-A	64					
C0			09-A	65			10-A	65					
TX DATA			09-A	66			10-A	66					
SEC RTS			09-A	67			10-A	67					
RTS			09-A	68			10-A	68					
GND			09-A	28			10-A	45					
MR SW NO			09-A	29			10-A	46					

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CONTROL DATA		CODE IDENT 15920			SHEET 5		LW		DOCUMENT NO. 61371300		REV. A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
MR SW NC			09-A	30			10-A	47				
DATA BUS 20			01-B	7			02-B	7				
			02-B	7			03-B	7				
			03-B	7			04-B	7				
			04-B	7			05-B	7				
			05-B	7			06-B	7				
			06-B	7			07-B	7				
			07-B	7			08-B	7				
			08-B	7			09-B	7				
DATA BUS 21			01-B	8			02-B	8				
			02-B	8			03-B	8				
			03-B	8			04-B	8				
			04-B	8			05-B	8				
			05-B	8			06-B	8				
			06-B	8			07-B	8				
			07-B	8			08-B	8				
			08-B	8			09-B	8				
DATA BUS 22			01-B	9			02-B	9				
			02-B	9			03-B	9				
DATA BUS 22			03-B	9			04-B	9				

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CONTROL DATA		CODE IDENT 15920			SHEET 6		LW		DOCUMENT NO. 61371300		REV. A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
DATA BUS 23			04-B	9			05-B	9				
			05-B	9			06-B	9				
			06-B	9			07-B	9				
			07-B	9			08-B	9				
			08-B	9			09-B	9				
DATA BUS 23			09-B	9			10-B	9				
			01-B	10			02-B	10				
			02-B	10			03-B	10				
			03-B	10			04-B	10				
			04-B	10			05-B	10				
			05-B	10			06-B	10				
			06-B	10			07-B	10				
			07-B	10			08-B	10				
DATA BUS 24			09-B	10			10-B	10				
			01-B	11			02-B	11				
			02-B	11			03-B	11				
			03-B	11			04-B	11				
			04-B	11			05-B	11				
			05-B	11			06-B	11				
			06-B	11			07-B	11				
			07-B	11			08-B	11				

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CONTROL DATA			CODE IDENT 15920		SHEET 7		LW		DOCUMENT NO. 61371300		REV. A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
DATA BUS 24			08-B	11			09-B	11				
			09-B	11			10-B	11				
DATA BUS 25			01-B	12			02-B	12				
			02-B	12			03-B	12				
			03-B	12			04-B	12				
			04-B	12			05-B	12				
			05-B	12			06-B	12				
			06-B	12			07-B	12				
			07-B	12			08-B	12				
			08-B	12			09-B	12				
			09-B	12			10-B	12				
DATA BUS 26			01-B	13			02-B	13				
			02-B	13			03-B	13				
			03-B	13			04-B	13				
			04-B	13			05-B	13				
			05-B	13			06-B	13				
			06-B	13			07-B	13				
			07-B	13			08-B	13				
			08-B	13			09-B	13				
			09-B	13			10-B	13				
DATA BUS 27			01-B	14			02-B	14				
DATA BUS 28			02-B	14			03-B	14				
			03-B	14			04-B	14				

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CONTROL DATA			CODE IDENT 15920		SHEET 8		LW		DOCUMENT NO. 61371300		REV. A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
DATA BUS 27			04-B	14			05-B	14				
			05-B	14			06-B	14				
			06-B	14			07-B	14				
			07-B	14			08-B	14				
			08-B	14			09-B	14				
			09-B	14			10-B	14				
MEM ADD BUS 20			01-B	15			02-B	15				
			02-B	15			03-B	15				
			03-B	15			04-B	15				
			04-B	15			05-B	15				
			05-B	15			06-B	15				
			06-B	15			07-B	15				
			07-B	15			08-B	15				
			08-B	15			09-B	15				
			09-B	15			10-B	15				
MEM ADD BUS 21			01-B	16			02-B	16				
			02-B	16			03-B	16				
			03-B	16			04-B	16				
			04-B	16			05-B	16				
			05-B	16			06-B	16				
			06-B	16			07-B	16				
MEM ADD BUS 22			07-B	16			08-B	16				

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CONTROL DATA		CODE IDENT 15920			SHEET 9		LW		DOCUMENT NO. 61371300		REV. A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
MEM ADD BUS 21			08-B	16			09-B	16				
			09-B	16			10-B	16				
MEM ADD BUS 22			<del>01-B</del>	<del>17</del>			<del>02-B</del>	<del>17</del>				
			<del>02-B</del>	<del>17</del>			<del>03-B</del>	<del>17</del>				
			03-B	17			04-B	17				
			04-B	17			05-B	17				
			05-B	17			06-B	17				
			06-B	17			07-B	17				
			07-B	17			08-B	17				
			08-B	17			09-B	17				
			09-B	17			10-B	17				
MEM ADD BUS 23			<del>01-B</del>	<del>18</del>			<del>02-B</del>	<del>18</del>				
			<del>02-B</del>	<del>18</del>			<del>03-B</del>	<del>18</del>				
			03-B	18			04-B	18				
			04-B	18			05-B	18				
			05-B	18			06-B	18				
			06-B	18			07-B	18				
			07-B	18			08-B	18				
			08-B	18			09-B	18				
			09-B	18			10-B	18				
MEM ADD BUS 24			<del>01-B</del>	<del>19</del>			<del>02-B</del>	<del>19</del>				
			<del>02-B</del>	<del>19</del>			<del>03-B</del>	<del>19</del>				
MEM ADD BUS 24			03-B	19			04-B	19				

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CONTROL DATA		CODE IDENT 15920			SHEET 10		LW		DOCUMENT NO. 61371300		REV. A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
MEM ADD BUS 24			04-B	19			05-B	19				
			05-B	19			06-B	19				
			06-B	19			07-B	19				
			07-B	19			08-B	19				
			08-B	19			09-B	19				
			09-B	19			10-B	19				
MEM ADD BUS 25			<del>01-B</del>	<del>20</del>			<del>02-B</del>	<del>20</del>				
			<del>02-B</del>	<del>20</del>			<del>03-B</del>	<del>20</del>				
			03-B	20			04-B	20				
			04-B	20			05-B	20				
			05-B	20			06-B	20				
			06-B	20			07-B	20				
			07-B	20			08-B	20				
			08-B	20			09-B	20				
			09-B	20			10-B	20				
MEM ADD BUS 26			<del>01-B</del>	<del>21</del>			<del>02-B</del>	<del>21</del>				
			<del>02-B</del>	<del>21</del>			<del>03-B</del>	<del>21</del>				
			03-B	21			04-B	21				
			04-B	21			05-B	21				
			05-B	21			06-B	21				
			06-B	21			07-B	21				
MEM ADD BUS 26			07-B	21			08-B	21				

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N° 1614			CODE IDENT 15920		SHEET 11		LW		DOCUMENT NO. 61371300		REV. A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
MEM ADD BUS 26			08-B	21			09-B	21				
			09-B	21			10-B	21				
MEM ADD BUS 27			<del>01-B</del>	<del>22</del>			<del>02-B</del>	<del>22</del>				
			<del>02-B</del>	<del>22</del>			<del>03-B</del>	<del>22</del>				
			03-B	22			04-B	22				
			04-B	22			05-B	22				
			05-B	22			06-B	22				
			06-B	22			07-B	22				
			07-B	22			08-B	22				
			08-B	22			09-B	22				
			09-B	22			10-B	22				
MEM ADD BUS 28			<del>01-B</del>	<del>23</del>			<del>02-B</del>	<del>23</del>				
			<del>02-B</del>	<del>23</del>			<del>03-B</del>	<del>23</del>				
			03-B	23			04-B	23				
			04-B	23			05-B	23				
			05-B	23			06-B	23				
			06-B	23			07-B	23				
			07-B	23			08-B	23				
			08-B	23			09-B	23				
			09-B	23			10-B	23				
MEM ADD BUS 29			<del>01-B</del>	<del>24</del>			<del>02-B</del>	<del>24</del>				
			<del>02-B</del>	<del>24</del>			<del>03-B</del>	<del>24</del>				
MEM ADD BUS 29			03-B	24			04-B	24				

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N° 1614			CODE IDENT 15920		SHEET 12		LW		DOCUMENT NO. 61371300		REV. A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
MEM ADD BUS 24			04-B	24			05-B	24				
			05-B	24			06-B	24				
			06-B	24			07-B	24				
			07-B	24			08-B	24				
			08-B	24			09-B	24				
			09-B	24			10-B	24				
MEM ADD BUS 210			<del>01-B</del>	<del>25</del>			<del>02-B</del>	<del>25</del>				
			<del>02-B</del>	<del>25</del>			<del>03-B</del>	<del>25</del>				
			03-B	25			04-B	25				
			04-B	25			05-B	25				
			05-B	25			06-B	25				
			06-B	25			07-B	25				
			07-B	25			08-B	25				
			08-B	25			09-B	25				
			09-B	25			10-B	25				
MEM ADD BUS 211			<del>01-B</del>	<del>26</del>			<del>02-B</del>	<del>26</del>				
			<del>02-B</del>	<del>26</del>			<del>03-B</del>	<del>26</del>				
			03-B	26			04-B	26				
			04-B	26			05-B	26				
			05-B	26			06-B	26				
			06-B	26			07-B	26				
MEM ADD BUS 211			07-B	26			08-B	26				

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CONTROL DATA		CODE IDENT 15920			SHEET 13		LW		DOCUMENT NO. 61371300		REV. A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
MEM ADD BUS 211			08-B	26		09-B	26					
			09-B	26		10-B	26					
MEM ADD BUS 212			01-B	27		02-B	27					
			<del>02-B</del>	<del>27</del>		<del>03-B</del>	<del>27</del>					
			03-B	27		04-B	27					
			04-B	27		05-B	27					
			05-B	27		06-B	27					
			06-B	27		07-B	27					
			07-B	27		08-B	27					
			08-B	27		09-B	27					
			09-B	27		10-B	27					
MEM ADD BUS 213			01-B	28		02-B	28					
			<del>02-B</del>	<del>28</del>		<del>03-B</del>	<del>28</del>					
			03-B	28		04-B	28					
			04-B	28		05-B	28					
			05-B	28		06-B	28					
			06-B	28		07-B	28					
			07-B	28		08-B	28					
			08-B	28		09-B	28					
			09-B	28		10-B	28					
MEM ADD BUS 214			01-B	29		02-B	29					
			<del>02-B</del>	<del>29</del>		<del>03-B</del>	<del>29</del>					
MEM ADD BUS 214			03-B	29		04-B	29					

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CONTROL DATA		CODE IDENT 15920			SHEET 14		LW		DOCUMENT NO. 61371300		REV. A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
MEM ADD BUS 214			04-B	29		05-B	29					
			05-B	29		06-B	29					
			06-B	29		07-B	29					
			07-B	29		08-B	29					
			08-B	29		09-B	29					
			09-B	29		10-B	29					
MEM ADD BUS 215			01-B	30		02-B	30					
			<del>02-B</del>	<del>30</del>		<del>03-B</del>	<del>30</del>					
			03-B	30		04-B	30					
			04-B	30		05-B	30					
			05-B	30		06-B	30					
			06-B	30		07-B	30					
			07-B	30		08-B	30					
			08-B	30		09-B	30					
			09-B	30		10-B	30					
MR			01-B	31		02-B	31					
			<del>02-B</del>	<del>31</del>		<del>03-B</del>	<del>31</del>					
			03-B	31		04-B	31					
			04-B	31		05-B	31					
			05-B	31		06-B	31					
			06-B	31		07-B	31					
MR			07-B	31		08-B	31					

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CONTROL DATA				CODE IDENT 15920	SHEET 15	LW	DOCUMENT NO. 61371300	REV. A				
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
MR			08-B	31			09-B	31				
			09-B	31			10-B	31				
READY			01-B	32			02-B	32				
			02-B	32			03-B	32				
			03-B	32			04-B	32				
			04-B	32			05-B	32				
			05-B	32			06-B	32				
			06-B	32			07-B	32				
			07-B	32			08-B	32				
			08-B	32			09-B	32				
			09-B	32			10-B	32				
CPU MEM READ			01-B	33			02-B	33				
			02-B	33			03-B	33				
			03-B	33			04-B	33				
			04-B	33			05-B	33				
			05-B	33			06-B	33				
			06-B	33			07-B	33				
			07-B	33			08-B	33				
			08-B	33			09-B	33				
			09-B	33			10-B	33				
CPU MEM WRITE			01-B	34			02-B	34				
			02-B	34			03-B	34				
CPU MEM WRITE			03-B	34			04-B	34				

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CONTROL DATA				CODE IDENT 15920	SHEET 16	LW	DOCUMENT NO. 61371300	REV. A				
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
CPU MEM WRITE			04-B	34			05-B	34				
			05-B	34			06-B	34				
			06-B	34			07-B	34				
			07-B	34			08-B	34				
			08-B	34			09-B	34				
			09-B	34			10-B	34				
MEM READ			01-B	35			02-B	35				
			02-B	35			03-B	35				
			03-B	35			04-B	35				
			04-B	35			05-B	35				
			05-B	35			06-B	35				
			06-B	35			07-B	35				
			07-B	35			08-B	35				
			08-B	35			09-B	35				
			09-B	35			10-B	35				
MEM WRITE			01-B	36			02-B	36				
			02-B	36			03-B	36				
			03-B	36			04-B	36				
			04-B	36			05-B	36				
			05-B	36			06-B	36				
			06-B	36			07-B	36				
MEM WRITE			07-B	36			08-B	36				

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CONTROL DATA				CODE IDENT	SHEET	LW	DOCUMENT NO.	REV				
				15920	17		61371300	A				
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
HEAT WASTE			08-B	36			09-B	36				
			09-B	36			10-B	36				
OUTPUT STROBE			01-B	37			02-B	37				
			02-B	37			03-B	37				
			03-B	37			04-B	37				
			04-B	37			05-B	37				
			05-B	37			06-B	37				
			06-B	37			07-B	37				
			07-B	37			08-B	37				
			08-B	37			09-B	37				
			09-B	37			10-B	37				
INPUT STROBE			01-B	38			02-B	38				
			02-B	38			03-B	38				
			03-B	38			04-B	38				
			04-B	38			05-B	38				
			05-B	38			06-B	38				
			06-B	38			07-B	38				
			07-B	38			08-B	38				
			08-B	38			09-B	38				
			09-B	38			10-B	38				
02			01-B	39			02-B	39				
			02-B	39			03-B	39				
02			03-B	39			04-B	39				

AA314 REV. 8/71

PRINTED IN U.S.A.

CONTROL DATA				CODE IDENT	SHEET	LW	DOCUMENT NO.	REV				
				15920	18		61371300	A				
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
02			04-B	39			05-B	39				
			05-B	39			06-B	39				
			06-B	39			07-B	39				
			07-B	39			08-B	39				
			08-B	39			09-B	39				
			09-B	39			10-B	39				
02			01-B	40			02-B	40				
			02-B	40			03-B	40				
			03-B	40			04-B	40				
			04-B	40			05-B	40				
			05-B	40			06-B	40				
			06-B	40			07-B	40				
			07-B	40			08-B	40				
			08-B	40			09-B	40				
			09-B	40			10-B	40				
01			01-B	41			02-B	41				
			02-B	41			03-B	41				
			03-B	41			04-B	41				
			04-B	41			05-B	41				
			05-B	41			06-B	41				
			06-B	41			07-B	41				
01			07-B	41			08-B	41				

AA314 REV. 8/71

PRINTED IN U.S.A.



N. NO. DATA		CODE IDENT 15920		SHEET 19		LW		DOCUMENT NO. 61371300		REV. A			
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR			
01			08-B	41			09-B	41					
			09-B	41			10-B	41					
01			01-B	42			02-B	42					
			02-B	42			03-B	42					
			03-B	42			04-B	42					
			04-B	42			05-B	42					
			05-B	42			06-B	42					
			06-B	42			07-B	42					
			07-B	42			08-B	42					
			08-B	42			09-B	42					
			09-B	42			10-B	42					
			01-B	43			02-B	43					
04			02-B	43			03-B	43					
			03-B	43			04-B	43					
			04-B	43			05-B	43					
			05-B	43			06-B	43					
			06-B	43			07-B	43					
			07-B	43			08-B	43					
			08-B	43			09-B	43					
			09-B	43			10-B	43					
HOLD			06-B	44			07-B	44					
			07-B	44			09-B	44					
HOLD			09-B	44			10-B	44					

A4314 REV. 8/71

PRINTED IN U.S.A.

N. NO. DATA		CODE IDENT 15920		SHEET 20		LW		DOCUMENT NO. 61371300		REV. A			
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR			
HOLD ACK			06-B	45			07-B	45					
			07-B	45			09-B	45					
			09-B	45			10-B	45					
60 HZ			06-B	53			08-B	53					
1920 CHAR			05-B	54			06-B	54					
			06-B	54			08-B	54					
REF READ CLK			05-B	59			06-B	59					
REF WRITE CLK			05-B	60			06-B	60					
REC LB 1			05-B	61			06-B	61					
REC LB 2			05-B	62			06-B	62					
LB 2 2 <sup>7</sup>			05-B	63			06-B	63					
LB 2 2 <sup>6</sup>			05-B	64			06-B	64					
LB 2 2 <sup>5</sup>			05-B	65			06-B	65					
LB 2 2 <sup>4</sup>			05-B	66			06-B	66					
LB 2 2 <sup>3</sup>			05-B	67			06-B	67					
LB 2 2 <sup>2</sup>			05-B	68			06-B	68					
LB 2 2 <sup>1</sup>			05-B	69			06-B	69					
LB 2 2 <sup>0</sup>			05-B	70			06-B	70					
ANSWER BACK			03-B	46			08-B	46					
SYNC			09-B	46			10-B	46					
MAINT MODE			03-B	47			08-B	47					

A4314 REV. 8/71

PRINTED IN U.S.A.

CONTROL DATA				CODE IDENT 15920	SHEET 21	LW	DOCUMENT NO. 61371300	REV. A					
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR			
CPU INPUT			09-B	47			10-B	47					
PRT CO			04-B	48			07-B	48					
PRT SIG GND			04-B	49			07-B	49					
PRT DSR			04-B	50			07-B	50					
PRT DATA			04-B	51			07-B	51					
DISABLE RTY			09-B	48			10-B	48					
GET UPPER ADD			09-B	49			10-B	49					
EXT INT			09-B	50			10-B	50					
PRT CHAR REF			04-B	53			09-B	53					
PRT DATA			04-B	56			09-B	56					
PRT BUFF 3/4 FULL			07-B	57			09-B	57					
PRT RDY			07-B	58			09-B	58					
PRINTER AUTO LOCAL TO CASS			04-B	59			08-B	59					
ACM			01-A	49			06-A	9					
ACH			01-A	51			06-A	7					
-9V			01-A	59			05-A	5					
			05-A	5			06-A	5					
-9V			06-A	5			07-A	5					

AA3184 REV. 8/71

PRINTED IN U.S.A.

CONTROL DATA				CODE IDENT 15920	SHEET 22	LW	DOCUMENT NO. 61371300	REV. A					
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR			
-9V			07-A	5			08-A	5					
			08-A	5			09-A	5					
			09-A	5			10-A	5					
-9V			01-A	59			01-B	73					
			01-B	73			02-B	73					
			02-B	73			03-B	73					
			03-B	73			04-B	73					
			04-B	73			05-B	73					
			05-B	73			06-B	73					
			06-B	73			07-B	73					
			07-B	73			08-B	73					
			08-B	73			09-B	73					
			09-B	73			10-B	73					
-9V			01-A	60			05-A	6					
			05-A	6			06-A	6					
			06-A	6			07-A	6					
			07-A	6			08-A	6					
			08-A	6			09-A	6					
			09-A	6			10-A	6					
-9V			01-A	60			01-B	74					

AA3184 REV. 8/71

PRINTED IN U.S.A.

CONTROL DATA			CODE IDENT 15920		SHEET 23		LW		DOCUMENT NO. 61371300		REV. B	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
-9V			01-B	74			02-B	74				
			02-B	74			03-B	74				
			03-B	74			04-B	74				
			04-B	74			05-B	74				
			05-B	74			06-B	74				
			06-B	74			07-B	74				
			07-B	74			08-B	74				
			08-B	74			09-B	74				
			09-B	74			10-B	74				
+12V			01-A	69			05-A	69				
			05-A	69			06-A	69				
			06-A	69			07-A	69				
			07-A	69			08-A	69				
			08-A	69			09-A	69				
			09-A	69			10-A	69				
+12V			01-A	70			05-A	70				
			05-A	70			06-A	70				
			06-A	70			07-A	70				
			07-A	70			08-A	70				
			08-A	70			09-A	70				
+20V			09-A	70			10-A	70				
			10-A	70			05-A	71				
			03-A	69			05-A	71				

AA3184 REV. 8/71

PRINTED IN U.S.A.

CONTROL DATA			CODE IDENT 15920		SHEET 24		LW		DOCUMENT NO. 61371300		REV. A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
+20V			05-A	71			06-A	71				
			06-A	71			07-A	71				
			07-A	71			08-A	71				
			08-A	71			09-A	71				
			09-A	71			10-A	71				
+20V			03-A	70			05-A	72				
			05-A	72			06-A	72				
			06-A	72			07-A	72				
			07-A	72			08-A	72				
			08-A	72			09-A	72				
			09-A	72			10-A	72				
-12V			01-A	73			05-A	73				
			05-A	73			06-A	73				
			06-A	73			07-A	73				
			07-A	73			08-A	73				
			08-A	73			09-A	73				
			09-A	73			10-A	73				
-12V			01-A	74			05-A	74				
			05-A	74			06-A	74				
			06-A	74			07-A	74				
-12V			07-A	74			08-A	74				
			08-A	74			09-A	74				

AA3184 REV. 8/71

PRINTED IN U.S.A.

CONTROL DATA				CODE IDENT	SHEET	LW	DOCUMENT NO.	REV.					
				15920	25		61371300	B					
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR			
-12V			09-A	74			10-A	74					
-20V			10-A	74			10-A	75					
			03-A	75			05-A	75					
			05-A	75			06-A	75					
			06-A	75			07-A	75					
			07-A	75			08-A	75					
			08-A	75			09-A	75					
			09-A	75			10-A	75					
-20V			03-A	76			05-A	76					
			05-A	76			06-A	76					
			06-A	76			07-A	76					
			07-A	76			08-A	76					
			08-A	76			09-A	76					
			09-A	76			10-A	76					
-5V			01-B	5			02-B	5					
			02-B	5			03-B	5					
			03-B	5			04-B	5					
			04-B	5			05-B	5					
			05-B	5			06-B	5					
			06-B	5			07-B	5					
-5V			07-B	5			08-B	5					

AA3184 REV. 8/71

PRINTED IN U.S.A.

CONTROL DATA				CODE IDENT	SHEET	LW	DOCUMENT NO.	REV.					
				15920	26		61371300	A					
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR			
			08-B	5			09-B	5					
			09-B	5			10-B	5					
-5V			01-B	6			02-B	6					
			02-B	6			03-B	6					
			03-B	6			04-B	6					
			04-B	6			05-B	6					
			05-B	6			06-B	6					
			06-B	6			07-B	6					
			07-B	6			08-B	6					
			08-B	6			09-B	6					
			09-B	6			10-B	6					
+12V			01-B	71			01-B	71					
			02-B	71			02-B	71					
			02-B	71			03-B	71					
			03-B	71			04-B	71					
			04-B	71			05-B	71					
			05-B	71			06-B	71					
			06-B	71			07-B	71					
			07-B	71			08-B	71					
			08-B	71			09-B	71					
+12V			09-B	71			10-B	71					

AA3184 REV. 8/71

PRINTED IN U.S.A.

CONTROL DATA			CODE IDENT		SHEET		LW		DOCUMENT NO.		REV.	
			15920		27				61371300		A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
+12V			<del>01-A</del>	<del>62</del>		<del>01-B</del>	<del>72</del>					
			<del>01-B</del>	<del>72</del>		<del>02-B</del>	<del>72</del>					
				02-B	72		03-B	72				
				03-B	72		04-B	72				
				04-B	72		05-B	72				
				05-B	72		06-B	72				
				06-B	72		07-B	72				
				07-B	72		08-B	72				
				08-B	72		09-B	72				
				09-B	72		10-B	72				
-12V			<del>01-A</del>	<del>75</del>		<del>01-B</del>	<del>75</del>					
			<del>01-B</del>	<del>75</del>		<del>02-B</del>	<del>75</del>					
				02-B	75		03-B	75				
				03-B	75		04-B	75				
				04-B	75		05-B	75				
				05-B	75		06-B	75				
				06-B	75		07-B	75				
				07-B	75		08-B	75				
				08-B	75		09-B	75				
				09-B	75		10-B	75				
-12V			<del>01-A</del>	<del>76</del>		<del>01-B</del>	<del>76</del>					
			<del>01-B</del>	<del>76</del>		<del>02-B</del>	<del>76</del>					
-12V			02-B	76		03-B	76					

AA3184 REV. 8/71

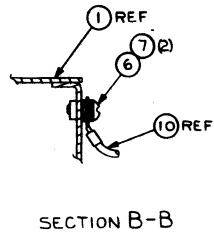
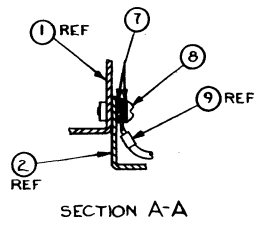
PRINTED IN U.S.A.

CONTROL DATA			CODE IDENT		SHEET		LW		DOCUMENT NO.		REV.	
			15920		28				61371300		A	
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
-12V			03-B	76		04-B	76					
			04-B	76		05-B	76					
			05-B	76		06-B	76					
			06-B	76		07-B	76					
			07-B	76		08-B	76					
			08-B	76		09-B	76					
-12V			09-B	76		10-B	76					
MULTIDROP			03-B	52		08-B	52					
6.745MHZ			04-B	52		07-B	52					
6.745MHZ			07-B	52		09-B	52					
6.745MHZ			09-B	52		09-B	51					
PRINTER OPTION			04-B	55		08-B	55					
GND			A09A	37		A09A	77					
GND			A09A	38		A09A	78					
GND			A09A	39		A09A	79					
GND			A09A	55		A09A	80					
SEARCH MEMORY OPTION			A02B	56		A08B	56					
DATA PROTECT OPTION			A05A	33		A09A	33					

AA3184 REV. 8/71

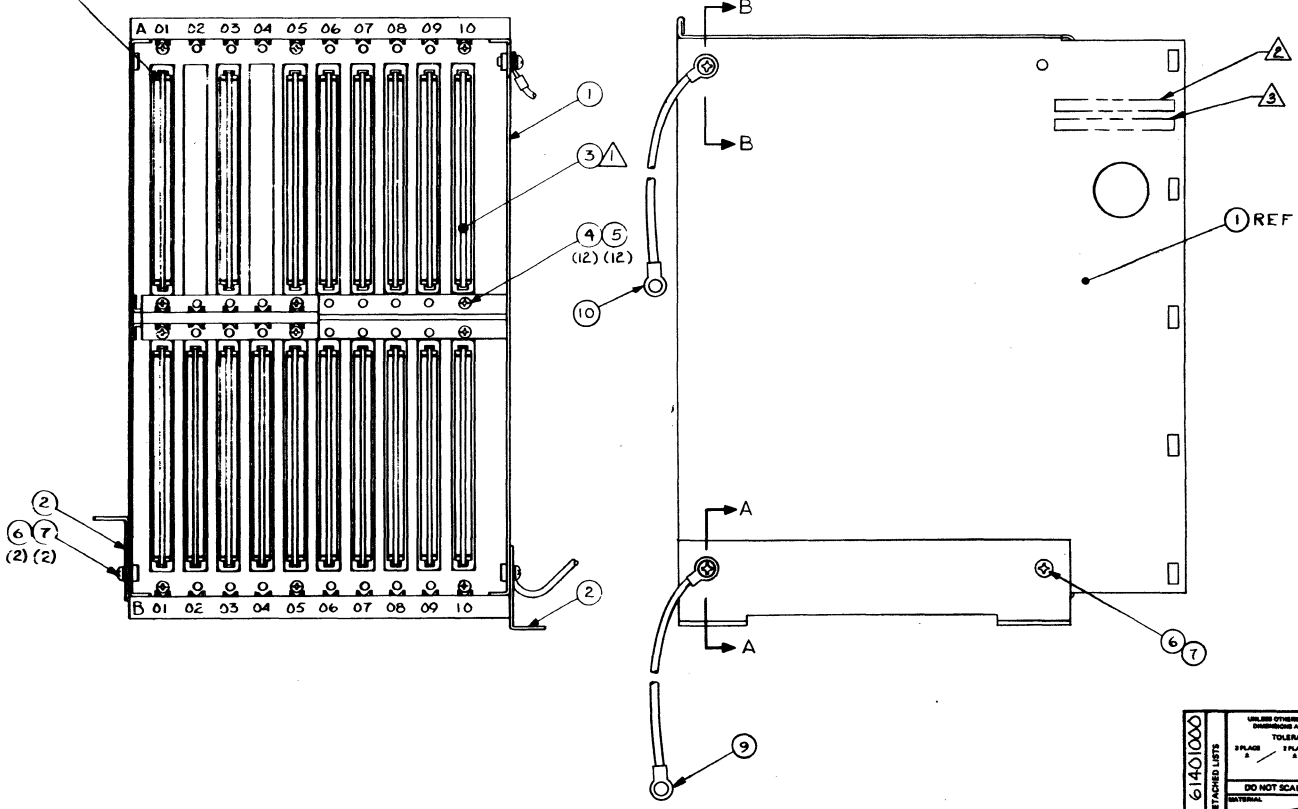
PRINTED IN U.S.A.

7-114



SHEET REVISION STATUS		REVISION RECORD				
REV	ECO	DESCRIPTION	DATE	CHKD	APP	
		RELEASED CLASS C	7/29/55			
A	1153	RELEASED CLASS A	8/2/55			
B	11023	REVISED PER ECO	8/10/55			
C	11150	REVISED PER ECO	8/11/55			

PIN 1 (TYP)



- NOTES:
- 1 LOCATE BACK PANEL ASSY (F/N 3) PER FIXTURE 71456200.
  - 2 MARK "ASSY 614 01000" IN AREA SHOWN PER CDC SPEC 10121508.
  - 3 MARK SERIAL NO. "S/N" IN AREA SHOWN PER CDC STD. 1.01.025 AND CDC SPEC 10121508.

62962300 B

APL 61401000 DETACHED LEADS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		TITLE	
	TOLERANCES		CC 614	
	± FRACTION	± DECIMAL	DESIGNED BY	DATE
	± FRACTION	± DECIMAL	CHECKED BY	DATE
DO NOT SCALE DRAWING		DESIGNED BY	DATE	CODE IDENT
MATERIAL		DESIGNED BY	DATE	15920 D 614 01000
FINISH		APPROVED	DATE	DRAWING NO
		APPROVED	DATE	15920 D 614 01000
				SCALE 1/1
				NNA 15611400 SHEET 1 of 1

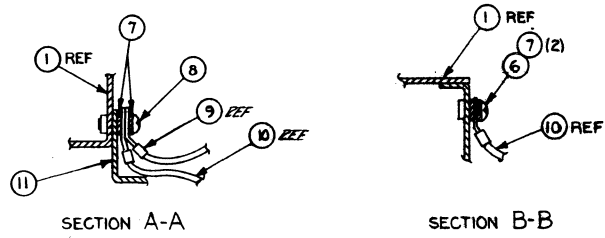
BUILD ARC 230

**ASSEMBLY PARTS LIST**

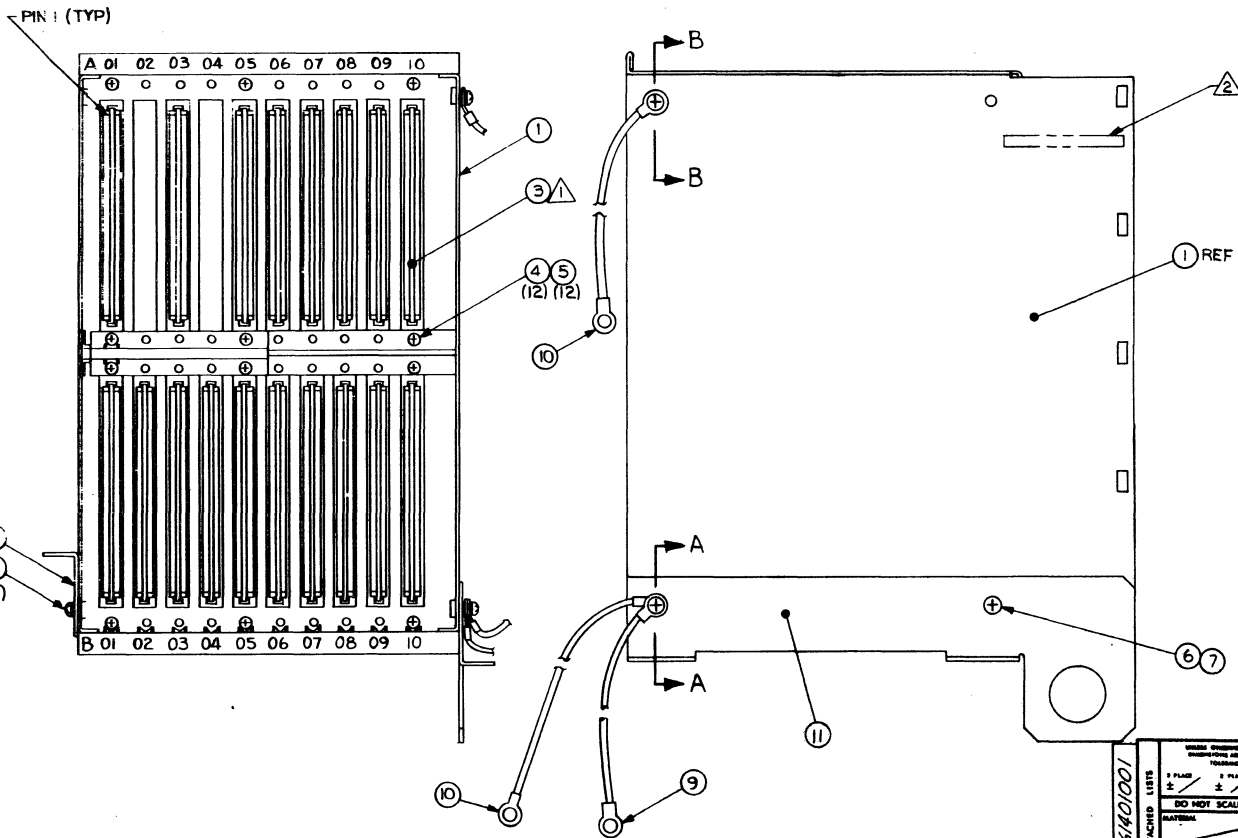
DIV.		ASSEMBLY NUMBER		REV.	DWG.	DESCRIPTION		MC	STATUS	PRINT DATE	PAGE	FILE CHANGE NO.	
0860		61401000		7	C D	CHASSIS ASSY LOGIC		A	REL	11-19-75	1	0001150	
ITEM NO.	LT	PART NUMBER	CO	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	61363411	2	1		PC CARD CAGE WELDMENT	P						
002	01	71455300	5	2		PC BRACKET-MOUNT CARD CASE	P						
003	01	90432200	5	1		PC CD ASSY 5800-n BACK PANEL	N						
004	01	10127103	9	12		PC SCR MACH PAN HD 4-40X.312	B						
005	01	10126400	0	12		PC WASHER EXT TOOTH LOCK NO. 4	B						
006	01	10127121	1	3		PC SCREW PAN HD R-32X.312 LG	B		11023	11023		7541	
006	02	10127121	1	4		PC SCREW PAN HD R-32X.312 LG	B					7541	
007	01	10126402	6	5		PC WASHER EXT. 8	B		11023	11023		7541	7541
007	02	10126402	6	7		PC WASHER EXT. 8	B					7541	
008	01	10127122	9	1		PC SCREW MACH 8-32 X 3/8 PAN HD	B						
009	01	51797217	0	1		PC TERM LUG RING CRMP 22-1A 1n	P						7541
009	02	61391106	4	1		PC GND WIRE ASSY 9.5 160A	0		11023	11023		7541	
010	01	93462555	9	1		FT WIR 20GA STRD GRN 300V UL PVC	W		11023	11023		7541	7541
010	02	61391104	9	1		PC GND WIRE ASSY 4.5 160A	G					7541	
011	01	51797212	1	1		PC TERM LUG RING CRMP 22-1A 6	P			11023			7541
0015 TOTAL LINES													

7-116

62962300 B



SHEET REVISION LIST		REVISION RECORD			
REV	NO	DESCRIPTION	BY	DATE	APP
A	1	ISSUED PER PLAN A		10/76	



NOTES:

- △ LOCATE BACK PANEL ASSY (F/N 3) PER FIXTURE 71456200.
- △ MARK "ASSY 61401001" IN AREA SHOWN PER CDC SPEC 10121508.

APL 61401001		DETACHED LISTS		1 FLAG ± 1 FLAG ± 1 FLAG ± 2 FLAG ± 2 FLAG ± 2 FLAG ± 3 FLAG ± 3 FLAG ± 3 FLAG ±		TITLE <b>LOGIC CHASSIS ASSEMBLY</b>	
PART USED ON <b>CC6B1</b>		DWG <b>DWELLS</b>		E-D-76		CODE BENT <b>15P20</b>	
DO NOT SCALE DRAWING		CHIB <b>DWELLS</b>		DRAWING NO <b>61401001</b>		SCALE <b>1:1</b>	
APPROVED <b>[Signature]</b>		DATE <b>10/76</b>		DRAWN <b>[Signature]</b>		CHECKED <b>[Signature]</b>	
APPR <b>[Signature]</b>		DATE <b>10/76</b>		DRAWN <b>[Signature]</b>		CHECKED <b>[Signature]</b>	



BUILD ARC 230

### ASSEMBLY PARTS LIST

PRINT DATE	PAGE	FILE CHANGE NO.
02-17-76	1	10653-33

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE
0860		61401001		5	A	0	LOGIC CHASSIS ASSY		A	REL	02-13-76	CC681A	02-17-76
FOUND NO	LT	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	61363411	2	1		PC CARD CAGE WELDMNT	P						
002	01	71455300	5	1		PC BRACKET-MOUNT CARD CAGE	P						
003	01	90432200	5	1		PC CD ASSY 5800-n BACK PANFL	N						
004	01	10127103	9	12		PC SCR MACH PAN HD 4-40X.312	B						
005	01	10126400	0	12		PC WSHR NO.4 EXT TOOTH LK TYP A	B						
006	01	10127121	1	4		PC SCRFW PAN HD P-32X.312 1G	B						
007	01	10126402	6	7		PC WASHER EXT. 8	B						
008	01	10127122	9	1		PC SCREW MACH P-32 X 3/8 PAN HD	B						
009	01	61391106	4	1		PC GND WIRE ASSY 9.5 16GA	G						
010	01	61391104	9	2		PC GND WIRE ASSY 4.5 16GA	G						
011	01	71491831	5	1		PC BRACKET MOUNT CARD CAGE	P						
						0011 TOTAL LINES							



BUILD ARC 440

### ASSEMBLY PARTS LIST

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	PRINT DATE	PAGE	FILE CHANGE NO.	
0860		61375300		3	E	D	KEYBOARD ASSY 95 KEY		N	REL	02-08-78	1	00012687	
ITEM NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	71453200	9	1		PC BASE, KEYBOARD (GOLD FINISH)		P						
002	01	71453400	5	1		PC REPLACED BY 71492468 12687		P			12687			7806
002	02	71492468	5	1		PC COVER-KYBD		P		12687			7806	7806
003	01	51907402	5	1		PC KYBD, 95 KEY ENCODED (ASCII)		P			12351			7748
003	03	51907405	8	1		PC KYBD, 95 KEY ENCODED (ASCII)		P		12351	12714		7748	7806
003	04	51907402	5	1		PC KYBD, 95 KEY ENCODED (ASCII)		P		12714	12687		7806	7806
003	05	51907405	8	1		PC KYBD, 95 KEY ENCODED (ASCII)		P		12687			7806	7806
004	01	00860303	7	6		PC MSCR SLF-LKG HEX 6-32X3/8		B						
005	01	10125615	5	10		PC WSHR NO. 5 TYP A PLAIN STL CP		B						
007	01	00860304	5	4		PC MSCR SLF-LKG HEX 6-32X1/2		B						
008	01	61370500	3	1		PC CABLE ASSY (KEYBOARD-EXTERNAL)		A						
009	02	24565003	1	1		PC CLAMP, 5/16 DIA CABLE BLK NYLO		B		10841			7531	
010	01	18607908	3	1		PC SCR, TPO IND/HEX 8-18X1/2 SIL		B						
011	01	51805801	1	4		PC BUMPER, RUBBER .300H SLF-STKG		B						
0014 TOTAL LINES														

DWN	D. Wells	10/1/74	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO.	REV
CHKD	F. Jones	11/1/74		CABLE ASSY KEYBOARD EXTERNAL	A	61370500/01	G
ENG	H. Jones	10/1/74		FIRST USED ON	NHA	61370100	SHEET 1 of 4
MFG	V. Jones	11/23/74		CC 614 / CC 681			
APPR	C. Jones	11-23-74	CODE IDENT				
			15920				

SHEET REVISION STATUS					REVISION RECORD					
1A	4	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
							RELEASED CLASS "C"		10-11-74	J.J.
						C039	REVISED CANN VIEW ADDED COND IDENT NO. 18	RP	11-8-74	D.W.
						C221	ADDED COND IDENT 19 IN 22 ADDED F/N 11 & 12 SET 2	RP	3-27-75	D.W.
						10653-1	RELEASED CLASS A		11-4-75	K.T.
						10908	REVISED PER ECO	RP	8/9/75	K.T.
						CD10752	ADDED DIM 5.00±.25	RP	9/3/75	J.M.
						7401-15	ADD INT DIV LABEL		11/14/75	K.T.
						7401-16	ADD INT DIV LABEL AA5722		11/13/75	K.T.
						CD 11438	REVISED PER ECO	RP	1-2-76	CD
						CD11547	Revised per ECO	rt	6/1/76	
						CD 11616	REVISED PER ECO	J.M.	8-19-76	
						CD 11945	ADDED TAB 01	RP	1/3/77	J.M.

NOTES:

- Bulk identify with CDC Part Number.
- Put extra wires in F/N 12 and mount under cable tie as shown.
- Tie wraps and screws included with connector hood.

ARL 61370500  
DETACHED LISTS

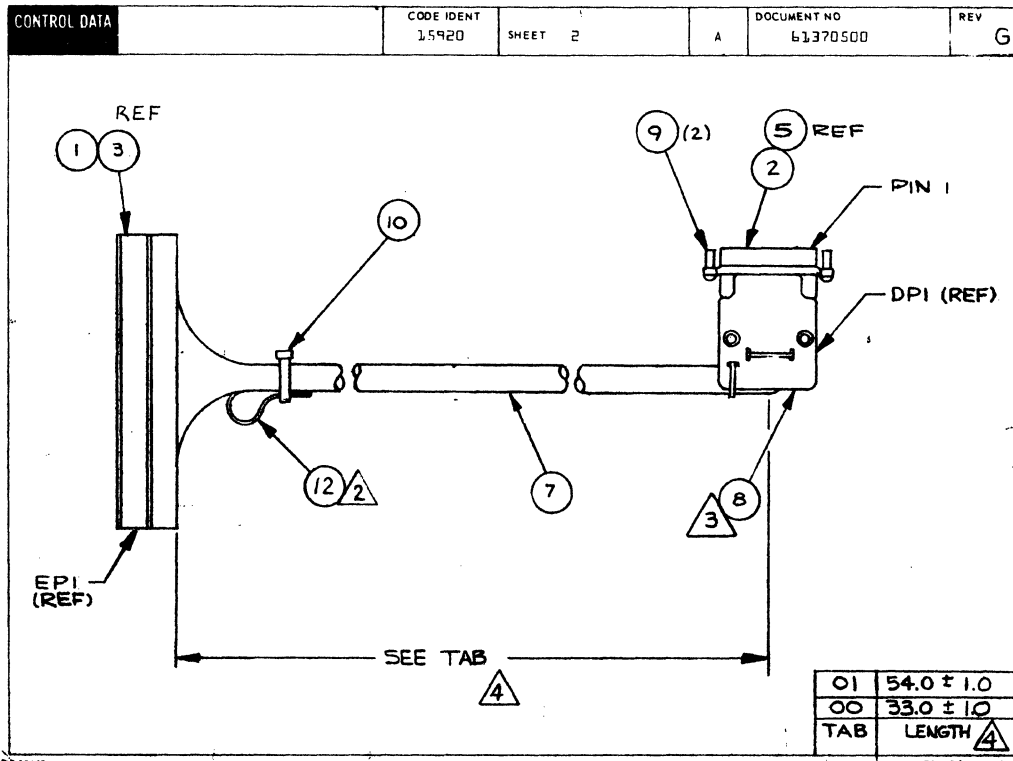
AA3180 REV. 8/71  
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CONTROL DATA	CODE IDENT	SHEET	PREFIX	DOCUMENT NO.	REV
	15920	1A	A	61370500	G

See tabulation on Sht 2 for length.

AA3180  
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<b>CONTROL DATA</b>				CODE IDENT 15920	SHEET 3	WL	DOCUMENT NO 61370500	REV G	
CONDUCTOR IDENT	FIND NO	GAUGE (REF)	COLOR (REF)	LENGTH (APPROX)	ORIGIN	ACCESS FIND NO	DESTINATION	ACCESS FIND NO	REMARKS
1	7	26	90	$\triangle$	DP1	1	5	3	Control Key
2			91			2			Kybd Data <sup>27</sup>
3			92			3			Kybd Data <sup>26</sup>
4			93			4			Kybd Data <sup>25</sup>
5			94			5			Kybd Data <sup>24</sup>
6			95			6			Kybd Data <sup>23</sup>
7			96			7			Kybd Data <sup>22</sup>
8			97			8			Kybd Data <sup>21</sup>
9			98			9			Kybd Data <sup>20</sup>
10			900			10			Kybd Rdy
11			901			11			Local To Print
12			902			12			Line To Print
13		26	903			14	5		Lower Case Enable
14		24	2			23	5		+5V
15		24	0			24	5		Gnd
16		24	9			25	5		-12V
17	7	24			DP1	20	5	18	3, 11, Bare Drain Wire
18	7	26	904		DP1	13	5	13	3
19	7	26	912		DP1	15	5	15	3
20	7	26	911	$\triangle$	DP1 +	16	5	16	3

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DWN	D. Wells	10/77	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO.	REV.
CHKD	<i>[Signature]</i>	10-14-74		CABLE ASSEMBLY KEYBOARD (INTERNAL)	A	61370000	C
ENG	<i>[Signature]</i>	10-14-74		FIRST USED ON	NHA		
MFG	<i>[Signature]</i>	1-22-75		CC614/CC6B1	15611400	SHEET 1 of 4	
APPR	<i>[Signature]</i>	4-23-75	CODE IDENT				
			15920				

SHEET REVISION STATUS				REVISION RECORD						
4	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP	
						RELEASED CLASS "C"		10-14-74	<i>[Signature]</i>	
				01	01	C021		10/25/74	<i>[Signature]</i>	
				02	02	C065		12/9/74	<i>[Signature]</i>	
				03	02	03		1-6-75	<i>[Signature]</i>	
				04	02	04		1-9-75	<i>[Signature]</i>	
				04	05	05		2-23-75	<i>[Signature]</i>	
				06	06	06		3-27-75	<i>[Signature]</i>	
				A	A	A		7/24/75	<i>[Signature]</i>	
				B	B	B		8/13/75	<i>[Signature]</i>	
				B	B	B		9/13/75	<i>[Signature]</i>	
				C	C	C			<i>[Signature]</i>	

**REVISION RECORD**

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NOTES:

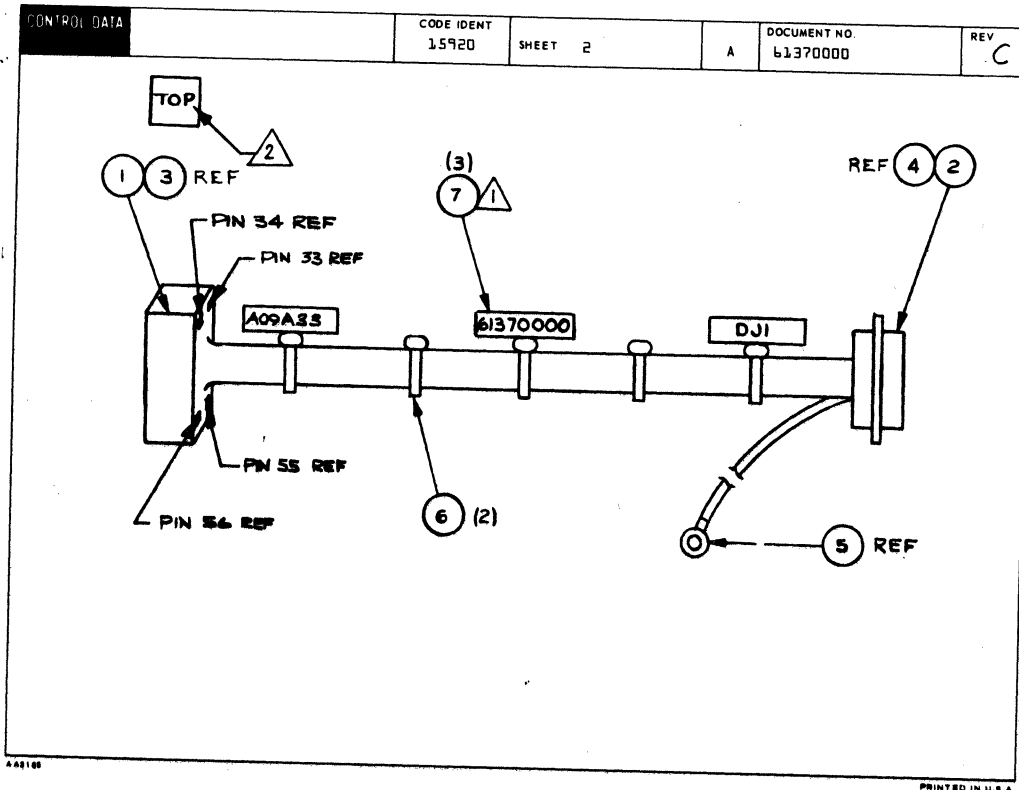
- Apply label to cable per drawing 82191061, Method B. Mark as shown. (3 places)
- Mark per CDC Spec 10121506, .12 High, White and locate approx as shown.

INACTIVE

APL 61370000  
DETACHED LISTS









BUILD ARC 104

**ASSEMBLY PARTS LIST**

PRINT DATE	PAGE	FILE CHANGE NO.
10-29-75	1	00010935

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61270000	4	C	A	REPLACED BY 61402600 10935	A	INA	10-22-75	LIAT	10-29-75			
ITEM NO	LI	PART NUMBER	CO	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/M	WK IN	WK OUT
001	01	52863012	4	1		PC CONN MSG(DBL ROW) 24 CAVITY	P						
002	01	52397914	2	1		PC CONN 25 POSITION PLUG ALONE	P						
003	01	94245602	1	24		PC CONTACT SOC 24-26AWG STRIP	P						
004	01	52397917	5	17		PC CONN STRIP SOC 20-24GA	P						
004	02	52397917	5	21		PC CONN STRIP SOC 20-24GA	P		10880	10880		7529	7529
005	01	52797217	0	1		PC TERM LUG RING CRMP 22-18	10	P					
006	01	94277400	1	2		PC STRAP CARLE TIE TYPE 1	P						
007	01	94277409	2	3		PC STRAP CARLE TIE TYPE 6	P						
008	01	24548310	2	19	500	FT WIR 24GA STRD WHT 300V UL PVC	W						
009	01	24548303	7	1	500	FT WIR 24GA STRD RED 300V UL PVC	W						
010	01	24548301	1	7	500	FT WIR 24GA STRD BLK 300V UL PVC	W						
011	01	24548307	8	1	500	FT WIR 24GA STRD BLU 300V UL PVC	W						
012	01	92462555	9	2	500	FT WIR 20GA STRD GRN 300V UL PVC	W						
0013 TOTAL LINES													



CONTROL DATA					CODE IDENT	SHEET	A	DOCUMENT NO.	REV.
					15920	3	A	61402600	A
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN	ACCESS FIND NO.	DESTINATION	ACCESS FIND NO.	REMARKS
1					A09A	33			Open
2	8	24	9	18.0	↑	34	DJ1	14	64/96 Char
3						35			Open
4						36			Open
5	10	24	0	18.0		37	DJ1	15	Ground
6	10	24	0	18.0		38	DJ1	16	Ground
7	10	24	0	18.0		39	DJ1	17	Ground
8	9	24	2	18.0		40	DJ1	23	+5V
9	8	24	9	18.0		41	↑	01	Control Key
10	↑	↑	↑	↑		42		02	Kybd Data 2 <sup>7</sup>
11						43		03	Kybd Data 2 <sup>6</sup>
12						44		04	Kybd Data 2 <sup>5</sup>
13						45		05	Kybd Data 2 <sup>4</sup>
14						46		06	Kybd Data 2 <sup>3</sup>
15						47		07	Kybd Data 2 <sup>2</sup>
16						48		08	Kybd Data 2 <sup>1</sup>
17						49		09	Kybd Data 2 <sup>0</sup>
18	↓	↓	↓	↓		50		10	Kybd Rdy
19	↓	↓	↓	↓		51	↓	11	Local To Prt
20	8	24	9	18.0	A09A	52	DJ1	12	Ln To Prt

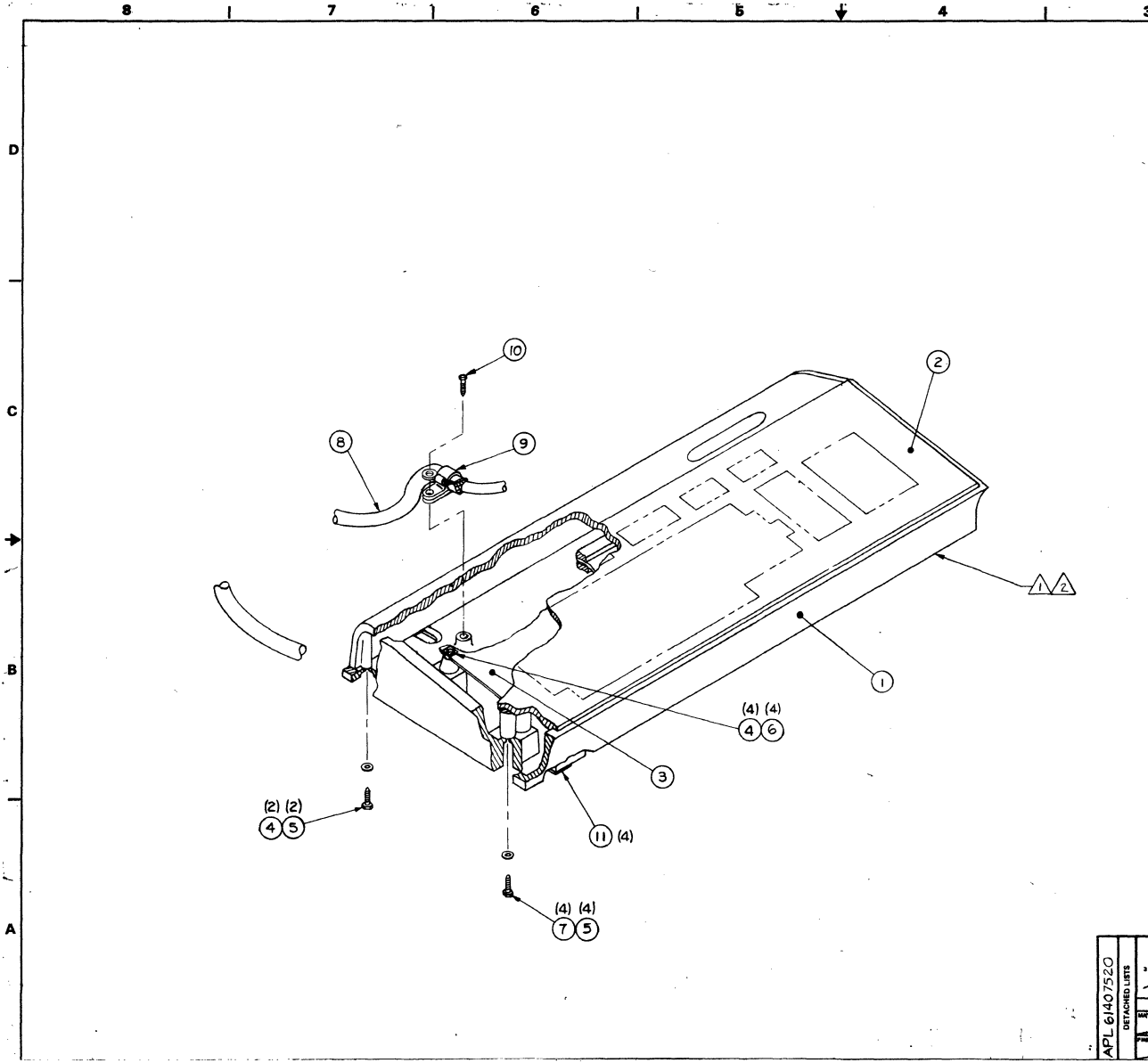
AA3188 REV. 8/71

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CONTROL DATA					CODE IDENT	SHEET	A	DOCUMENT NO.	REV.
					15920	4	A	61402600	A
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN	ACCESS FIND NO.	DESTINATION	ACCESS FIND NO.	REMARKS
21	11	24	6	18.0	A09A	53	DJ1	25	-12V
22					A09A	54			
23	10	24	0	18.0	A09A	55	DJ1	18	Ground
24	10	24	0	18.0	A09A	56	DJ1	24	Gnd
25	12	20	5	2.5	DJ1	20	Term Lug	13	Safety Ground
26	12	20	5	5.0	Term Lug	—	Term Lug	5	Safety Ground

BUILD ARC 104		ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.					
						10-20-75	1	10653-38					
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61402600	3	A	A	CABLE ASSY KEYBOARD INTERNAL	A	REL	10-13-75	CC563A	10-20-75			
FIND NO.	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/M	WK IN	WK OUT
001	01	52863012	4	1		PC CONN H50(OBL ROW) 24 SAIVITY	P						
002	01	53397914	2	1		PC CONN 25 POSITION PLUG ALONE	P						
003	01	94245602	1	24		PC CONTACT SOC 24-26AWG STRIP	P						
004	01	53397917	5	21		PC CONN STRIP SOC 20-24GA	P						
005	01	52797217	0	1		PC TERM LUG RING CRMP 22=18	10	P					
006	01	94277400	1	2		PC STRAP CABLE TIE TYPE 1	P						
007	01	94277409	2	3		PC STRAP CABLE TIE TYPE 6	P						
008	01	24548310	2	19	500	FT WIR 24GA STRD WHT 300V UL PVC	W						
009	01	24548303	7	1	500	FT WIR 24GA STRD RED 300V UL PVC	W						
010	01	24548301	1	7	500	FT WIR 24GA STRD BLK 300V UL PVC	W						
011	01	24548307	8	1	500	FT WIR 24GA STRD BLU 300V UL PVC	W						
012	01	92462555	9		625	FT WIR 20GA STRD GRN 300V UL PVC	W						
013	01	52797204	8	1		PC TERM LUG RING CRMP 22=18	4	B					
						0013 TOTAL LINES							

SHEET REVISION STATUS		REVISION RECORD					
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP	
A	12055-00	RELEASED CLASS A		7-30-76			
B	12495	P/L CHANGE ONLY		WJR 11/27			
C	CD1271A	P/L CHANGE ONLY		JM 1-24-78			
D	12487	P/L CHANGE ONLY		16 2-20-78			



NOTES:  
 ▲ MARK "ASSY 61407520" ON BOTTOM PER CDC SPEC 10121508.  
 ▲ APPLY SERIAL NO. IN THIS AREA PER CDC STD. 1.01.025.

APL 61407520 DETACHED LISTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTROL DATA		TITLE	
	TOLERANCES		PART NUMBER		KEYBOARD ASSEMBLY 95 KEY (SHIELDED)	
	3 PLACE	2 PLACE	ASSEMBLY	CC6 BID	CODE IDENT	DRAWING NO
	3 PLACE	2 PLACE	ASSEMBLY	7-1476	1S920	61407520
DO NOT SCALE DRAWING			CHECKED BY	DATE	APPROVED	
MATERIAL			ENGINEER	DATE	APPROVED	
FINISH			APPROVED	DATE	APPROVED	
SCALE			SCALE	DATE	APPROVED	

BUILD ARC 440

**ASSEMBLY PARTS LIST**

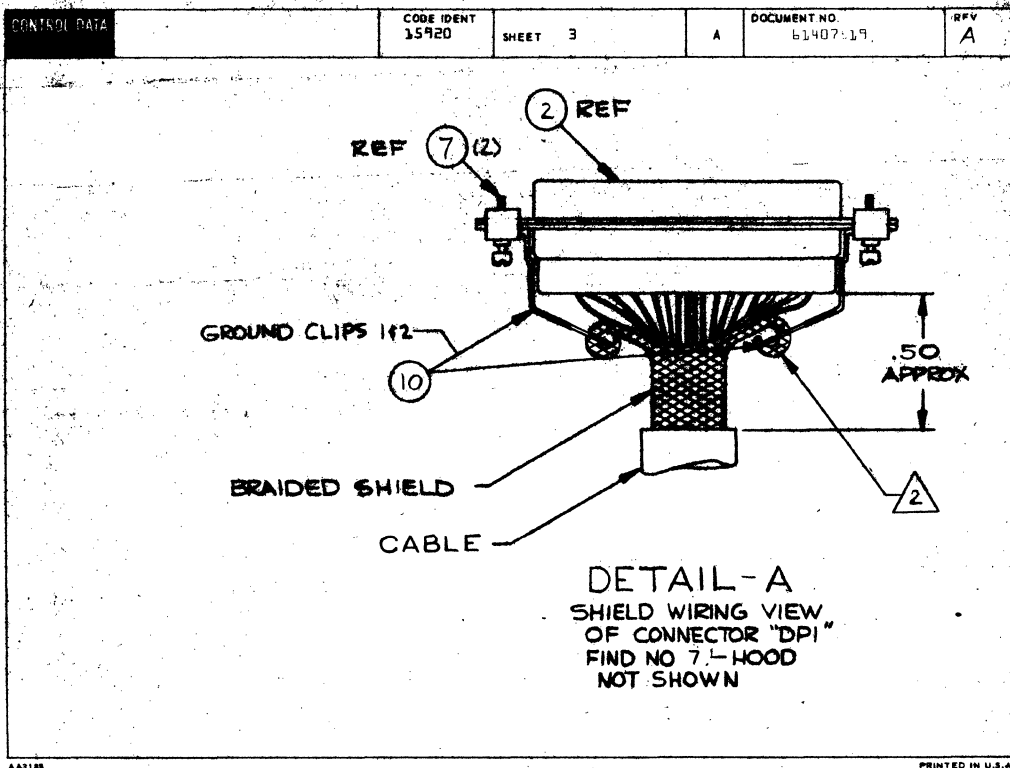
PRINT DATE 02-08-78 PAGE 1 FILE CHANGE NO. 00012687

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.		FILE DATE	
0860		61407520		8	D	D	KEYBOARD ASSY 95 KEY (SHIELDED)		N	REL	07-30-76		CC6810		02-08-78	
TRND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT		
001	01	71491940	4	1		PC BASE, KYBD 2SHIELDED*		P								
002	01	71491941	2	1		PC REPLACED BY NONE 12687		V			12687			7806		
002	02	71492468	5	1		PC COVER-KYBD		P		12687			7806			
003	03	51907402	5	1		PC KYBD, 95 KEY ENCODED (ASCII)		P			12495			7806		
003	04	51907405	8	1		PC KYBD, 95 KEY ENCODED (ASCII)		P		12495	12714		7806	7806		
003	05	51907402	5	1		PC KYBD, 95 KEY ENCODED (ASCII)		P		12714	12687		7806	7806		
003	06	51907405	8	1		PC KYBD, 95 KEY ENCODED (ASCII)		P		12687			7806			
004	01	00860303	7	6		PC MSCR SLF=LKG HEX 6-32X3/8		B								
005	01	10125605	5	6		PC WSHR NO.9 TYP A PLAIN STL CP		B								
006	01	09040202	5	4		PC WASHER LOCK DISHED TOOTH NO.6		B								
007	01	00860304	5	4		PC MSCR SLF=LKG HEX 6-32X1/2		B								
008	01	61407519	U	1		PC CABLE ASSY KEYBOARD EXTERNAL		A								
009	01	51917070	8	1		PC CLAMP, TUBE SIZE 6 (ALUM)		P								
U10	01	18607908	3	1		PC SCR, TPG IND/HEX 8-18X1/2 STL		B								
011	01	51805801	1	4		PC BUMPER, RUBBER .300H SLF-STKG		B								
0015 TOTAL LINES																









CONTROL DATA				CODE IDENT	SHEET	WL	DOCUMENT NO.	REV.		
				15920	4		61407519	A		
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN	ACCESS-FIND NO.	DESTINATION	ACCESS FIND NO	REMARKS	
1	6	26	0	36.0	DP1	1	EP1	1	3	Control Key
2	6	26	91	36.0	DP1	2	EP1	2	3	Kybd Data 2 <sup>7</sup>
3	6	26	92	36.0	DP1	3	EP1	3	3	Kybd Data 2 <sup>6</sup>
4	6	26	93	36.0	DP1	4	EP1	4	3	Kybd Data 2 <sup>5</sup>
5	6	26	94	36.0	DP1	5	EP1	5	3	Kybd Data 2 <sup>4</sup>
6	6	26	95	36.0	DP1	6	EP1	6	3	Kybd Data 2 <sup>3</sup>
7	6	26	96	36.0	DP1	7	EP1	7	3	Kybd Data 2 <sup>2</sup>
8	6	26	97	36.0	DP1	8	EP1	8	3	Kybd Data 2 <sup>1</sup>
9	6	26	98	36.0	DP1	9	EP1	9	3	Kybd Data 2 <sup>0</sup>
10	6	26	910	36.0	DP1	10	EP1	10	3	Kybd Rdy
11	6	26	920	36.0	DP1	11	EP1	11	3	Local to Print
12	6	26	930	36.0	DP1	12	EP1	12	3	Line to Print
13	6	26	940	36.0	DP1	14	EP1	14	3	Lower Case Enable
14	6	24	2	36.0	DP1	23	EP1	20	3	+5V
15	6	24	3	36.0	DP1	24	EP1	21	3	Gnd
16	6	24	4	36.0	DP1	25	EP1	22	3	-12V
17	6	24	1	36.0	DP1	20	EP1	18	3	Safety Gnd
18	6	26	950	36.0	DP1	13	EP1	13	3	Break
19	6	26	960	36.0	DP1	15	EP1	15	3	Gnd
20	6	26	970	36.0	DP1	16	EP1	16	3	Gnd

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DWN	D. Wells	10/27/74	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO.	REV.
CHKD				CABLE ASSY FRONT	A	61370700	D
ENG		10/14/74		FIRST USED ON	NHA	15611400	SHEET 1 of 4
MFG			CODE IDENT	CC614A			
APPR			15920				

SHEET REVISION STATUS				REVISION RECORD						
4	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP	
						RELEASED CLASS "C"		10-14-74	D.S.	
			01	01	CO21	REVISED PER ECO		10/27/74	D.S.	
	02	02	02	02	CO39	F/N 4 WAS 93947001 QTY F/N 5 WAS 7 DELETED COND IDENT 518	R	11-8-74	D.S.	
	02	02	03	03	CO6A	AOBA07 WAS AP2A07	R	12-9-74	D.S.	
	04	04	04	04	CO110	REVISED PER ECO		1-14-75	D.S.	
	04	04	05	05	C175	AOBA07 WAS AP2A07	DR	2-25-75	D.W.	
	06	06	06	06	C243	REVISED PER ECO		4-14-75	D.S.	
	A	A	A	A	10653-5	RELEASED CLASS A		5/1/75	M.C.T.	
	B	B	B	B	10880	REVISED PER ECO		8/19/75	D.S.	
	C	C	C	C	10925	REVISED PER ECO		9/1/75	D.S.	
	C	C	C	C	9401-15	ADD INT DIV LABEL		10/14/75	M.C.T.	
	C	C	C	C	9401-16	ADD INT DIV LABEL AA 5722		11/23/75	M.C.T.	
	D	C	C	D	CD11223	DELETED F/N 26		1/7/76	D.S.	

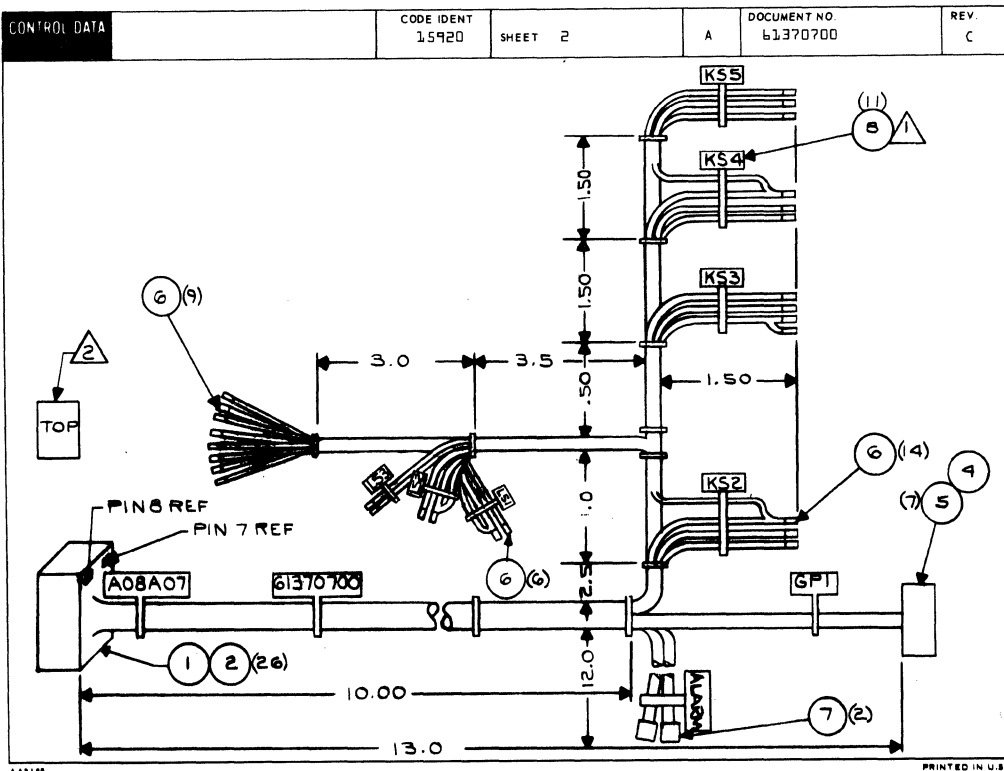
**REVISION RECORD**

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NOTES:

- Apply label to cable per drawing 82191061, Method b. Mark as shown.
- Mark per CDC Spec 10121508, .12 High, White and locate approximately as shown.

APL 61370700  
 DETACHED LISTS







BUILD ARC 104

**ASSEMBLY PARTS LIST**

PRINT DATE 12-29-75 PAGE 1 FILE CHANGE NO. 00011223

DIV.		ASSEMBLY NUMBER		REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		61370700		9	D	A	CABLE ASSY (FRONT)	A	REL	05-07-75		LIAT	12-29-75	
FOUND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	51863012	4	1		PC	CONN HSG (DBL ROW) 24 CAVITY	F			10880	10880		7529
001	02	51863025	6	1		PC	CONN HSG (DBL ROW) 50 CAVITY	F						7529
002	01	94245602	1	24		PC	CONTACT SOC 24-26AWG STRIP	F			10925A	10925A		7541
002	02	94245602	1	26		PC	CONTACT SOC 24-26AWG STRIP	F		10925A			7541	
003	01	93943017	9	1		PC	CONTACT SKT 22 -18 AWG STRIP	F						
004	01	93947006	8	1		PC	CONN 6 SKT HOUSING	F						
005	01	93943015	3	4		PC	CONTACT SKT 30 -22 AWG STRIP	F						
006	01	51654700	7	20		PC	CONTACT RECPT ELEC 24-20 AWG	P			10880	10880		7529
006	02	51654700	7	25		PC	CONTACT RECPT ELEC 24-20 AWG	P		10880	10925A		7529	7541
006	03	51654700	7	28		PC	CONTACT RECPT ELEC 24-20 AWG	P		10925A			7541	
007	01	93747011	0	2		PC	CONTACT, RECP 24-22GA STRIP	F						
008	01	94277409	2	9		PC	STRAP CABLE TIE TYPE 6	P			10880	10880		7529
008	02	94277409	2	11		PC	STRAP CABLE TIE TYPE 6	P		10880			7529	
009	01	94277400	1	11		PC	STRAP CABLE TIE TYPE 1	P						
010	01	24548303	7	4	100	FT	WIR 24GA STRD RED 300V UL PVC	W			10925A	10925A		7541
010	02	24548303	7	4	333	FT	WIR 24GA STRD RED 300V UL PVC	W		10925A			7541	
011	01	18563100	9	2	500	FT	WIRE ELECT 26AWG BLACK CODE 0	W			10880	10880		7529
011	02	18563100	9	4		FT	WIRE ELECT 26AWG BLACK CODE 0	W		10880	10925A		7529	7541
011	03	18563100	9	7	100	FT	WIRE ELECT 26AWG BLACK CODE 0	W		10925A			7541	
012	01	24548310	2	8		FT	WIR 24GA STRD WHT 300V UL PVC	W			10925A	10925A		7541
012	02	24548310	2	8	500	FT	WIR 24GA STRD WHT 300V UL PVC	W		10925A			7541	
013	01	24548302	9	2	200	FT	WIR 24GA STRD BRN 300V UL PVC	W			10925A	10925A		7541
013	02	24548302	9	2		FT	WIR 24GA STRD BRN 300V UL PVC	W		10925A			7541	
014	01	24548304	5	2	200	FT	WIR 24GA STRD ORN 300V UL PVC	W			10925A	10925A		7541
014	02	24548304	5	2		FT	WIR 24GA STRD ORN 300V UL PVC	W		10925A			7541	
015	01	24548305	2	2	200	FT	WIR 24GA STRD YEL 300V UL PVC	W			10925A			7541

BUILD ARC 104

**ASSEMBLY PARTS LIST**

PRINT DATE 12-29-75 PAGE 2 FILE CHANGE NO. 00011223

DIV.		ASSEMBLY NUMBER		REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		61370700		9	D	A	CABLE ASSY (FRONT)	A	REL	05-07-75		LIAT	12-29-75	
FOUND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
015	02	24548305	2	2		FT	WIR 24GA STRD YEL 300V UL PVC	W		10925A			7541	
016	01	24548306	0	2		FT	WIR 24GA STRD GRN 300V UL PVC	W						
017	01	24548307	8	2		FT	WIR 24GA STRD BLU 300V UL PVC	W						
018	01	24548308	6	2		FT	WIR 24GA STRD V10 300V UL PVC	W						
019	01	24548311	0	1	500	FT	WIR 24GA STRD WHT/BLK 300V UL	W			10925A	10925A		7541
019	02	24548311	0	1	300	FT	WIR 24GA STRD WHT/BLK 300V UL	W		10925A			7541	
020	01	24548312	8	1	500	FT	WIR 24GA STRD WHT/BRN 300V UL	W			10925A	10925A		7541
020	02	24548312	8	1	300	FT	WIR 24GA STRD WHT/BRN 300V UL	W		10925A			7541	
021	01	24548314	4	1	500	FT	WIR 24GA STRD WHT/ORN 300V UL	W			10880	10880		7529
021	02	24548314	4	1	800	FT	WIR 24GA STRD WHT/ORN 300V UL	W		10880	10925A		7529	7541
021	03	24548314	4	1	600	FT	WIR 24GA STRD WHT/ORN 300V UL	W		10925A			7541	
022	01	24548315	1	1	800	FT	WIR 24GA STRD WHT/YEL 300V UL	W			10880	10880		7529
022	02	24548315	1	2		FT	WIR 24GA STRD WHT/YEL 300V UL	W		10880	10925A		7529	7541
022	03	24548315	1	1	750	FT	WIR 24GA STRD WHT/YEL 300V UL	W		10925A			7541	
023	01	24548316	9	2	200	FT	WIR 24GA STRD WHT/BRN 300V UL	W			10925A	10925A		7541
023	02	24548316	9	1	800	FT	WIR 24GA STRD WHT/BRN 300V UL	W		10925A			7541	
024	01	24548317	7	1	300	FT	WIR 24GA STRD WHT/BLU 300V UL	W			10880	10880		7529
024	02	24548317	7	1	500	FT	WIR 24GA STRD WHT/BLU 300V UL	W		10880	10925A		7529	7541
024	03	24548317	7	1	400	FT	WIR 24GA STRD WHT/BLU 300V UL	W		10925A			7541	
025	01	24548318	5	1	100	FT	WIR 24GA STRD WHT/V10 300V UL	W			10925A	10925A		7541
025	02	24548318	5	1	400	FT	WIR 24GA STRD WHT/V10 300V UL	W		10925A			7541	
027	01	24548319	3	2	200	FT	WIR 24GA STRD WHT/GRY 300V UL	W		10880	10925A		7529	7541
027	02	24548319	3	2		FT	WIR 24GA STRD WHT/GRY 300V UL	W		10925A			7541	
028	01	24548320	1	1	800	FT	WIR 24GA STRD WHT/BLK/BLK 300	W		10880	10925A		7529	7541
028	02	24548320	1	1	600	FT	WIR 24GA STRD WHT/BLK/BLK 300	W		10925A			7541	
029	01	24548321	9	2	200	FT	WIR 24GA STRD WHT/BRN/BLK 300	W		10880	10925A		7529	7541
029	02	24548321	9	1	700	FT	WIR 24GA STRD WHT/BRN/BLK 300	W		10925A			7541	

BUILD ARC 104

### ASSEMBLY PARTS LIST

PRINT DATE: 12-29-75  
 PAGE: 3  
 FILE CHANGE NO.: 00011223

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		61370700		9	D	A	CABLE ASSY (FRONT)		A	REL	05-07-75		LIAT	12-29-75	
TRND NO	LT	PART NUMBER		CD	QUANTITY	U/M	PART DESCRIPTION		MC	TL	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
030	01	18563108		2	2		PT WIRE ELEC 26AWG GRAY CODE B				10880	10925A		7520	7541
0054 TOTAL LINES															



DWN	Plantenberg	10/21/74	CONTROL DATA	TITLE	CABLE ASSY D.C. POWER	PREFIX	A	DOCUMENT NO	61375400	REV	C
CHKD				FIRST USED ON	CC614/CC6B1	NHA	1.5611400	SHEET	1 of 3		
ENG		10/14/74									
MFG											
APPR											

SHEET REVISION STATUS				REVISION RECORD						
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP		
					RELEASED CLASS "C"		10-14-74	J.J.		
		01	01	01	COND IDENT DEST. WAS CE1	ET	1-5-75	J.C.F.		
		02	02	02	MOVED GND WIRE	W.H.	1-14-75	D.W.		
		03	03	03	ADDED FN'S 16 THRU 22 ADDED DETAILS TO CONN	R	3-27-75	D.W.		
		A	A	A	10653-1 RELEASED CLASS A		7/21/75	P.C.T.		
		B	A	B	CD10800 REVISED SHT 3 PER ECO	J.M.	7/24/75	J.C.F.		
		C	C	C	CD10895 REVISED PER ECO	B.C.	7/25/75	J.C.F.		
		C	C	C	9401-14 ADD INT DIV LABEL		9/1/75	P.C.T.		

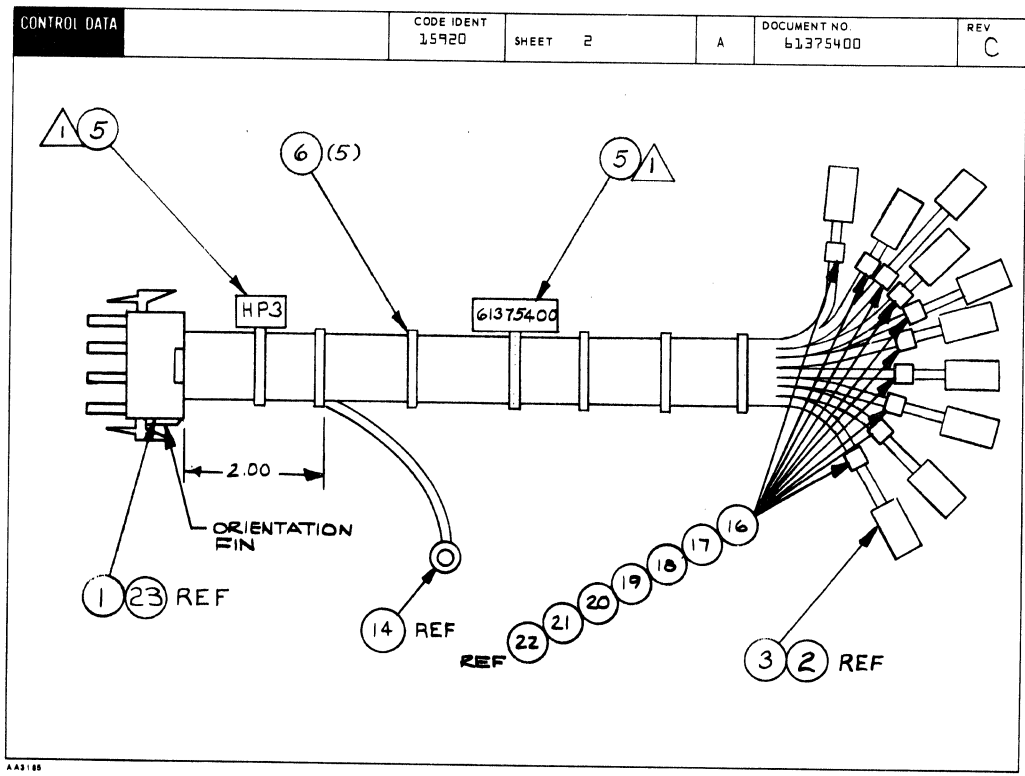
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NOTES:  
1. Apply label to cable per drawing 82191061. Method b. Mark as shown.

APL	61375400
DETACHED LISTS	

AA3180 REV. 8/71

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AA3185

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WL						CODE IDENT 15920	SHEET 3		WL	DOCUMENT NO 61375400	REV. C
CONDUCTOR IDENT.	FIND NO	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN	ACCESS FIND NO	DESTINATION	ACCESS FIND NO	REMARKS		
1	7	16	2	30.0	HP3	3 23	A01A	67 20 <sup>3</sup> 21	+20V		
2	8	16	6	▲	HP3	8 23	A01A	75 21 <sup>3</sup> 19	-20V		
3	9	14	0	↑	HP3	10 4	A01A	71 21 <sup>3</sup> 16	Ground		
4	8	16	6	↓	HP3	2 23	A01A	59 19 <sup>3</sup> 22	-9V		
5	10	16	4		HP3	1 23	A01A	65 20 <sup>3</sup> 19	Over Voltage Signal		
6	11	16	0		HP3	12 23	A01A	73 21 <sup>3</sup> 17	GROUND		
7	11	16	0	▼	HP3	4 23	A01A	51 19 <sup>3</sup> 16	ACH } TWP		
8	12	16	8	30.0	HP3	7 23	A01A	49 16 <sup>3</sup> 22	ACN. }		
9	13	16	0	4.0	HP3	11 23	CE3	14	Safety Ground		
10	15	16	3	30.0	HP3	6 23	A01A	61 20 <sup>3</sup> 16	+12V		
11	10	16	4	30.0	HP3	9 23	A01A	63 20 <sup>3</sup> 17	-12V		

TWP

AA3183 REV. 6-76

PRINTED IN USA

BUILD ARC 104

**ASSEMBLY PARTS LIST**

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	PRINT DATE	PAGE	FILE CHANGE NO.		
0860		61275400		1	C	A	CABLE ASSY (D.C. POWER)		A	REL	09-20-75	1	<del>944-11 00010895</del>		
FIND NO		LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01		51906005	T	1		PC	CONN PLUG 12 PIN	P						
002	01		17973615	Z	10		PC	TERM CRMP TYPE INSUL 18-14	P						
003	01		62020702	T	10		PC	HOUSING RECEPT STRAIGHT STYLE	P						
004	01		51906201	Z	11		PC	SOCKET CONTACTS	P		10895	10895		7545	7545
004	02		51906201	Z	1		PC	SOCKET CONTACTS	P						
005	01		94277409	Z	2		PC	STRAP CABLE TIE TYPE 6	P						
006	01		94277400	I	5		PC	STRAP CABLE TIE TYPE 1	P						
007	01		93464222	A	2	500	FT	WIR 16GA STRD RED 300V UL PVC	W						
008	01		93464666	Z	5		FT	WIR 16GA STRD BLU 300V UL PVC	W						
009	01		93508000	Z	2	500	FT	WIR 14GA STRD BLK 600V UL PVC	W						
010	01		93463444	Z	5		FT	WIR 18GA STRD YEL 300V UL PVC	W						
011	01		93463000	Z	5		FT	WIR 18GA STRD BLK 300V UL PVC	W						
012	01		93463888	Z	2	500	FT	WIR 18GA STRD GRY 300V UL PVC	W						
013	01		93464000	Z	2	500	FT	WIR 16GA STRD BLK 300V UL PVC	W						
014	01		51797236	0	1		PC	TERM LUG RING CRMP 16-14	10	P					
015	01		93463333	0	2	500	FT	WIR 18GA STRD ORN 300V UL PVC	W						
016	01		51809101	Z		200	FT	TAPE-WIRE MARKING CHAR 1	B						
017	01		51809103	0		150	FT	TAPE-WIRE MARKING CHAR 3	B						
018	01		51809104	0		100	FT	TAPE-WIRE MARKING CHAR 4	B						
019	01		51809105	0		250	FT	TAPE-WIRE MARKING CHAR 5	B						
020	01		51809106	0		250	FT	TAPE-WIRE MARKING CHAR 6	B						

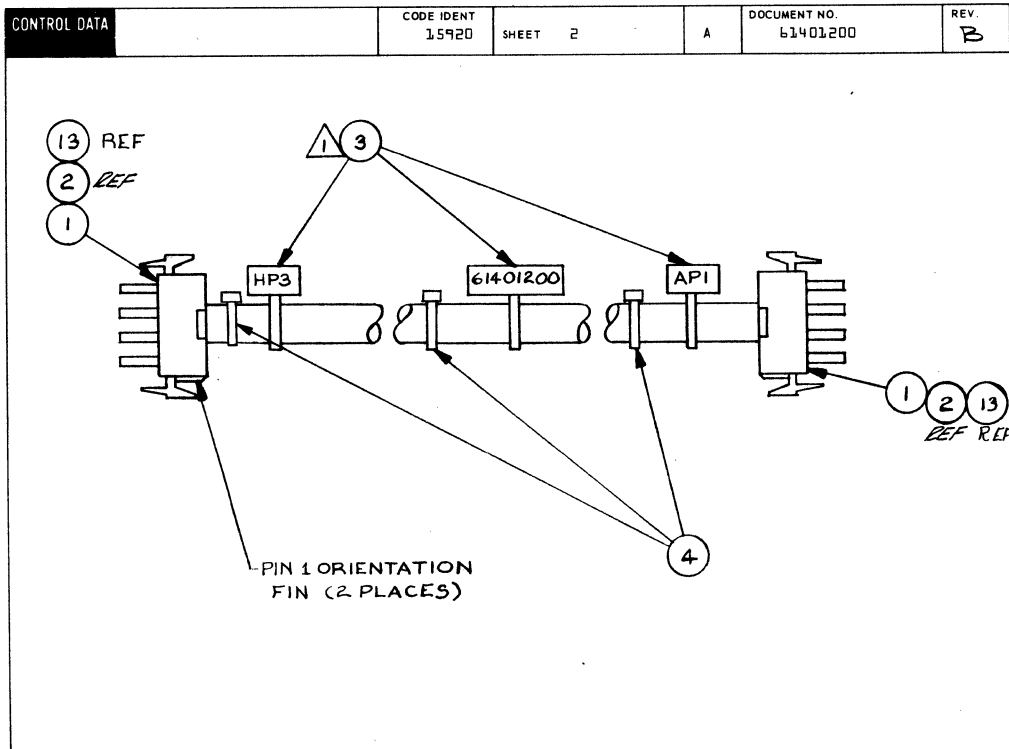
BUILD ARC 104

**ASSEMBLY PARTS LIST**

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	PRINT DATE	PAGE	FILE CHANGE NO.		
0860		61275400		1	C	A	CABLE ASSY (D.C. POWER)		A	REL	09-20-75	2	<del>944-11 00010895</del>		
FIND NO		LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
021	01		51809107	0		250	FT	TAPE-WIRE MARKING CHAR 7	B						
022	01		51809109	0		100	FT	TAPE-WIRE MARKING CHAR 9	B						
023	01		51906200	A	10		PC	SOCKET CONTACTS	P		10895			7545	
														0024 TOTAL LINES	

DWN	Plantenberg	8/2/82	CONTROL DATA	TITLE	CABLE ASSY (D.C. POWER)	PREFIX	A	DOCUMENT NO.	61401200	REV.	B			
CHKD	<i>[Signature]</i>	9/3/82		FIRST USED ON	CC6B1A	NHA	1.5620700	SHEET	1 of 3					
ENG	<i>[Signature]</i>	9-3-82		CODE IDENT	15920									
MFG	<i>[Signature]</i>	9-10-82												
APPR	<i>[Signature]</i>	9-9-82												
SHEET REVISION STATUS						REVISION RECORD								
						3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
						A	A	A	A	10653-13	RELEASED CLASS A		9/17/82	M.C.T.
						B	B	B	B	CD 11946	DELETED ITEM 11		1/1/77	R
NOTES:														
Apply label to cable per dwg 82191061, Method 6. Mark as shown.														
												APL 61401200		
												DETACHED LISTS		

AA3185 REV. 8/71 PRINTED IN U.S.A.



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CONTROL DATA				CODE IDENT	SHEET	DOCUMENT NO.	REV.				
				15820	3	WL 61401200	B				
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN	ACCESS FIND NO.	DESTINATION	ACCESS FIND NO.	REMARKS		
1	5	16	2	30.0	HP3	3	13	AP1	8	13	+20V
2	6	16	6	30.0	HP3	8	13	AP1	12	13	-20V
3	7	14	0	30.0	HP3	10	2	AP1	10	2	Ground
4	6	16	6	30.0	HP3	2	13	AP1	3	13	-9V
5	8	18	4	30.0	HP3	1	13	AP1	9	13	Over Voltage Signal
6	9	18	0	30.0	HP3	12	13	AP1	11	13	Ground
7	9	18	0	30.0	HP3	4	13	AP1	2	13	ACH
8	10	18	8	30.0	HP3	7	13	AP1	1	13	ACN
9											
10	12	18	3	30.0	HP3	6	13	AP1	6	13	+12V
11	8	18	4	30.0	HP3	9	13	AP1	5	13	-12V

AA3183 REV. 8/71 PRINTED IN U.S.A.

**BUILD ARC 104 ASSEMBLY PARTS LIST**

BUILD ARC 104				PRINT DATE		PAGE		FILE CHANGE NO.						
				12-27-76		1		00011996						
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE				
0860	61401200	3	B	A	CABLE ASSY D.C. POWER	A	REL	09-10-75	CC6B1A	12-22-76				
FIND NO.	LI	PART NUMBER	CO	M	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	51906005	7		2		PC CONN PLUG 12 PIN		P					
002	01	51906201	2		3		PC CONTACT, SKT 20-14GA STRIP T		P					
002	02	51906201	2		2		PC CONTACT, SKT 20-14GA STRIP T		P	11946	11946		7701	7701
003	01	94277409	2		3		PC STRAP CABLE TIE TYPE 6		B					
004	01	94277400	1		5		PC STRAP CABLE TIE TYPE 1		B					
005	01	93464222	4		2	500	FT WIR 16GA STRD RED 300V UL PVC		W					
006	01	93464666	2		5		FT WIR 16GA STRD BLU 300V UL PVC		W					
007	01	93508000	2		2	833	FT WIR 14GA STRD BLK 600V UL PVC		W					
007	02	93508000	2		2	500	FT WIR 14GA STRD BLK 600V UL PVC		W	11946	11946		7701	7701
008	01	93463444	5		5		FT WIR 18GA STRD YEL 300V UL PVC		W					
009	01	93463000	5		5		FT WIR 18GA STRD BLK 300V UL PVC		W					
010	01	93463888	3		2	500	FT WIR 18GA STRD GRY 300V UL PVC		W					
012	01	93463333	0		2	500	FT WIR 18GA STRD ORN 300V UL PVC		W					
013	01	51906200	4		18		PC CONTACT, SKT 20-14GA STRIP T		P					
0014 TOTAL LINES														

DWN	Plantenberg	10/1/75	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO.	REV.
CHKD				CABLE ASSY PUR ON	A	61375500	C
ENG		10/1/75		FIRST USED ON	NHA	15611400	SHEET 1 of 3
MFG		10/1/75		CC614 / CC681			
APPR		10-13-75	CODE IDENT				
			15920				

SHEET REVISION STATUS				REVISION RECORD						
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP		
					RELEASED CLASS "C"		10-14-74	JK		
		01	01	01	C039 F/N 6 WAS 9340400 GA WAS 20	B	11-8-74	JK		
		02	02	02	C0110 CHG WIRE LENGTHS	B	1-14-75	JK		
		03	03	03	C220 ADDED FNS 7, 8, 9 ADDED COND IDENT #3	B	3-27-75	JK		
		A	A	A	10653-1 RELEASED CLASS A		12/1/75	P.C.T.		
		B	B	B	CD10849 REVISED PER ECO		10/1/75	JK		
		B	C	C	CD11007 REVISED PER ECO		10/1/75	JK		
		C	C	C	9401-14 ADD INT DIN LABEL		9/3/75	P.C.T.		

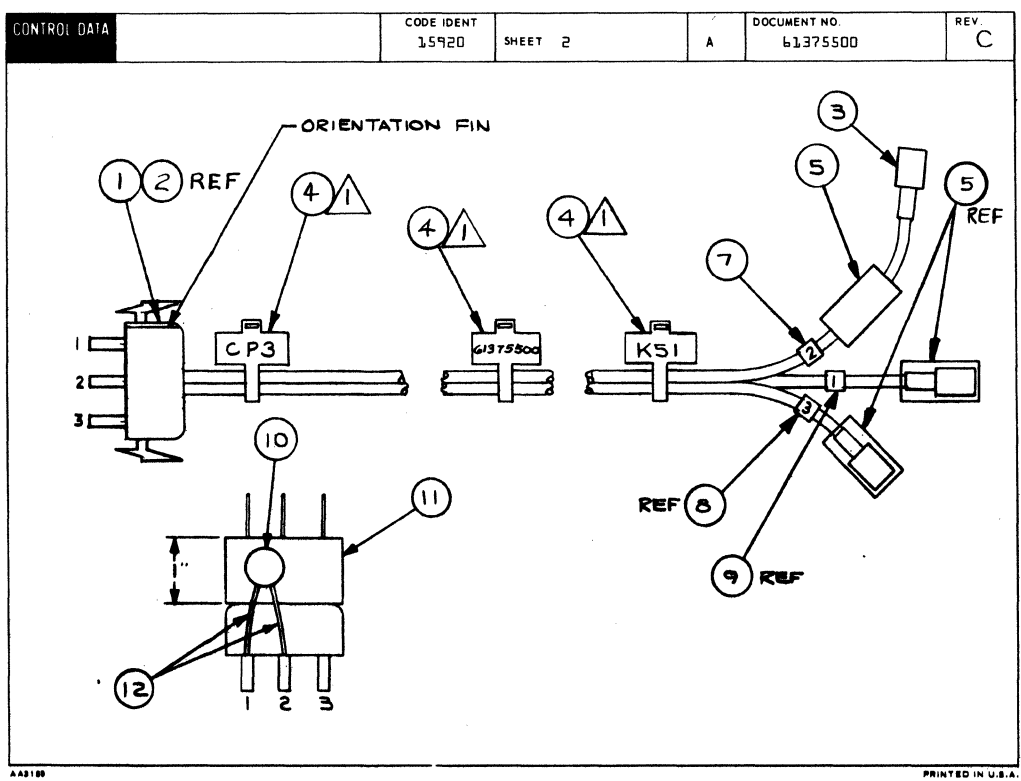
**INTER-OFFICIAL DOCUMENT**  
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NOTES:  
 Apply label to cable per drawing 82191061, Method b. Mark as shown.

APL 61375500
DETACHED LISTS

AA3180 REV. 8/71

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AA3180

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CONTROL DATA				CODE IDENT	SHEET		WL	DOCUMENT NO	REV.
				15920	3			61375500	C
CONDUCTOR IDENT	FIND NO	GAUGE (REF)	COLOR (REF)	LENGTH (APPROX)	ORIGIN	ACCESS FIND NO.	DESTINATION	ACCESS FIND NO.	REMARKS
1	6	20	4	13.0	CP3	1 2-10'	KSL	3 8.3.5	
2	6	20	4	13.0	CP3	2 2-10'	KSL	2 7.3.5	
3	6	20	4	13.0	CP3	3 2	KSL	1 9.3.5	

AA 3183 REV. 8-70

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BUILD ARC 104						<b>ASSEMBLY PARTS LIST</b>			PRINT DATE	PAGE	FILE CHANGE NO.		
									09-05-75	1	00011007		
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE		
0060	61275500	8	C	A	CABLE ASSY (POWER ON)	A	REL	04-24-75		LIAT	09-05-75		
TIP/NO.	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	51906001	6	1		PC CONN PLUG 3 PIN	P						
002	01	51905800	2	3		PC CONTACT PIN 20-14 STRIP	P						
003	01	51654700	7	3		PC CONTACT RECPT ELEC 24#20 AWG	P						
004	01	94277409	2	2		PC STRAP CABLE TIE TYPE 6	P		11007	11007			7541
004	02	94277409	2	2		PC STRAP CABLE TIE TYPE 6	P						
005	01	24534706	7	300	FT	INS SLEEVE 1/R BLACK	B			11007			7541
005	02	24528611	7	300	FT	TUBING INS SZ 12 BLACK	B		11007				7541
006	01	92462444	6	6		FT WIR 20GA STRD YEL 300V UL PVC	W						
007	01	51809102	0	1		FT TAPE-WIRE MARKING CHAR 2	B						
008	01	51809103	8	1		FT TAPE-WIRE MARKING CHAR 3	B						
009	01	51809101	2	1		FT TAPE-WIRE MARKING CHAR 1	B						
010	01	94842184	7	1		PC CAP FXD CER 0.02UF 1KV	P		10849				7529
011	01	51758105	4	083	FT	INS SLV+CLR+PVC,HEAT SHRINK	B		10849				7529
012	01	51797416	8	125	FT	TUBING-INS THIN WALL	B		10849	11007			7529
012	02	24563782	0	125	FT	INS SLVNG HI TEMP 20 AWG	B		11007				7541
						0015 TOTAL LINES							

DWN	R. Trautman	9/27/74	CONTROL DATA	TITLE	CABLE ASSEMBLY CRT	PREFIX	DOCUMENT NO.	REV
CHKD		10/2/74				A	61374900	E
ENG		10-14-74		FIRST USED ON		NHA		
MFG		9-29-74				1.5611400	SHEET 1 of 4	
APPR		4-24-77		CODE IDENT	CC614/CC6B1			

SHEET REVISION STATUS					REVISION RECORD				
4	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
				A	10653-Z	RELEASED CLASS "A"	-	9/27/74	MCT
				A	CD10907	REVISED PER ECO	JM	8/14/75	DWP
				B	9901-14	ADDED INT DIV LABEL	-	9/27/74	MCT
				C	11506	REVISED PER ECO		8/12/76	W
				C	1713	PL CHANGE ONLY		9-9-76	W
				E	CD11747	REMOVED F/N 7	W	12/1/76	W

**INTER-DIVISIONAL DOCUMENT**

This document is subject to change without prior notice. Users will receive copy only of the revised document.

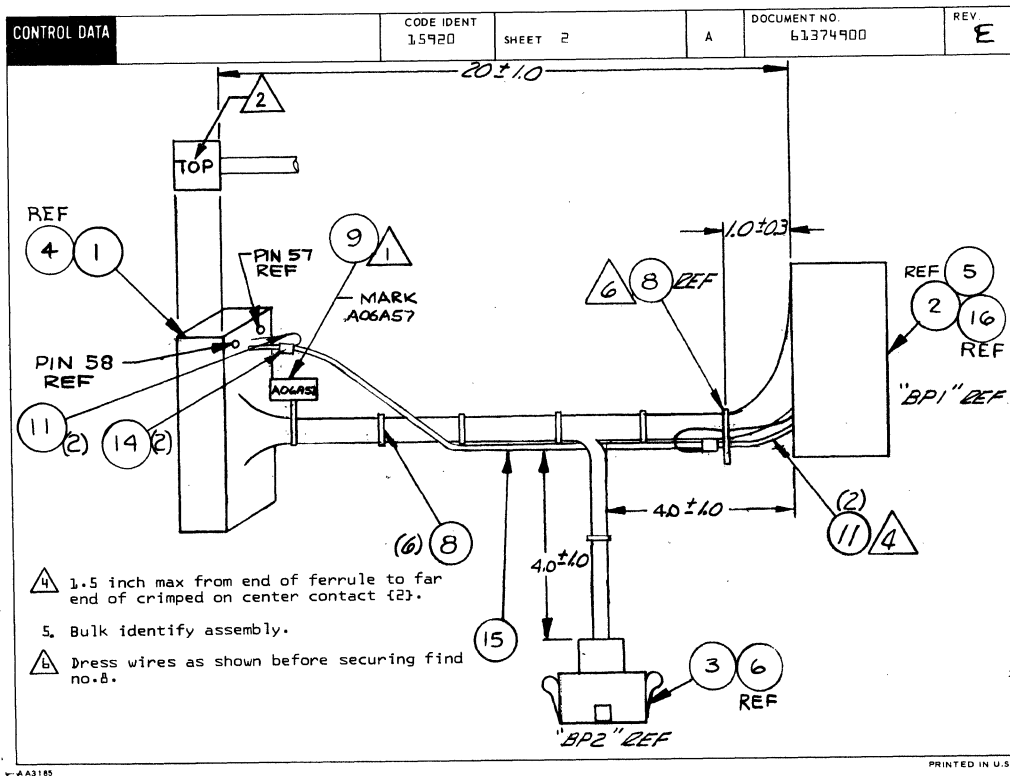
  

**NOTES:**

- 1 Apply Label to Cable per drawing 821910b1, Method B. Mark as indicated.
- 2 Mark per CDC Spec 10121508, .12 High, white and locate approximately as shown.
- 3 Cut wire into two 3" pieces to GND each end of coax.

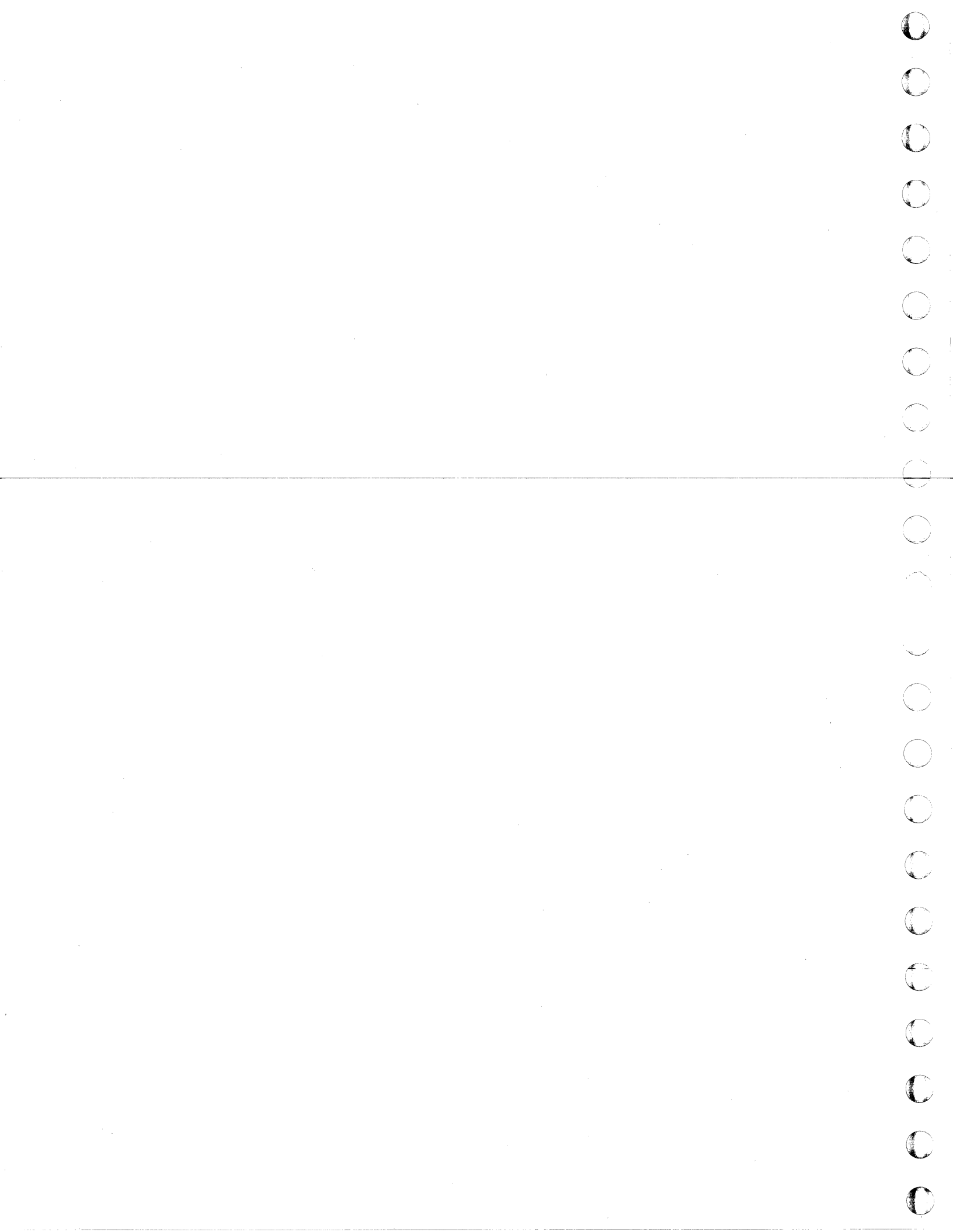
APL 61374900  
 DETACHED LISTS

3180 REV. 8/71 PRINTED IN U.S.A.









BUILD ARC 104

**ASSEMBLY PARTS LIST**

PRINT DATE 11-23-76 PAGE 1 FILE CHANGE NO. 00011747

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		61374900		1	F	A	CARLE ASSY (CRT)		A	REL	04-28-75		LIAT	11-26-76	
ITEM NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT	
001	01	51863012	4	1		PC CONN HSG, 24 CAV DBL ROW BLK		P							
002	01	51652904	7	1		PC CONN, PC EDGE 14 POS 2.340W		P							
003	01	51905900	0	1		PC CONN RECPT 2 CONTACTS		P							
004	01	94245602	1	24		PC CONTACT SOC 24-26AWG STRIP		P							
005	01	94219903	5	8		PC CONTACT, FLAG 22-18AWG STRIP		P		10907	10907		7548	7548	
005	02	94219903	5	1		PC CONTACT, FLAG 22-18AWG STRIP		P							
006	01	51905800	2	2		PC CONT, PIN 20-14GA .130INS STR		P							
007	01	51797217	6	1		PC LUG, CRMP R TFRM #22-18GA 10S		B							
008	01	94277400	1	3		PC STRAP CARLE TIE TYPE 1		B		11506	11506		7628	7628	
008	02	94277400	1	6		PC STRAP CARLE TIE TYPE 1		B							
009	01	94277409	2	4		PC STRAP CARLE TIE TYPE 6		B		11506	11506		7628	7628	
009	02	94277409	2	1		PC STRAP CARLE TIE TYPE 6		B		11506			7628		
010	01	24548303	7	5		FT WIR 24GA STRD RED 300V UL PVC W		W							
011	01	24548301	1	9		FT WIR 24GA STRD 9LK 300V UL PVC W		W		11506	11506		7628	7628	
011	02	24548301	1	9	300	FT WIR 24GA STRD BLK 300V UL PVC W		W							
012	01	93463555	8	500		FT WIR 18GA STRD GRN 300V UL PVC W		W							
013	01	24548310	2	3	500	FT WIR 24GA STRD WHT 300V UL PVC W		W							
014	01	62022602	7	2		PC FERRULE PRE-INSUL BROWN		B		11506	11506		7628	7628	
014	02	93083059	1	2		PC SPLICES ELECT 1 IN		P		11506			7628		
015	01	17649400	3	1	666	FT CABLE R.F. 1 COND COAX STRD		W		11713	11713		7638	7638	
015	02	51003293	1	1	666	FT CABLE RADIO FREQ COAX 93 OHMS		W		11713			7638		
016	01	94219902	7	8		PC CONTACT, FLAG 26-22AWG STRIP		P		10907			7548		

BUILD ARC 104

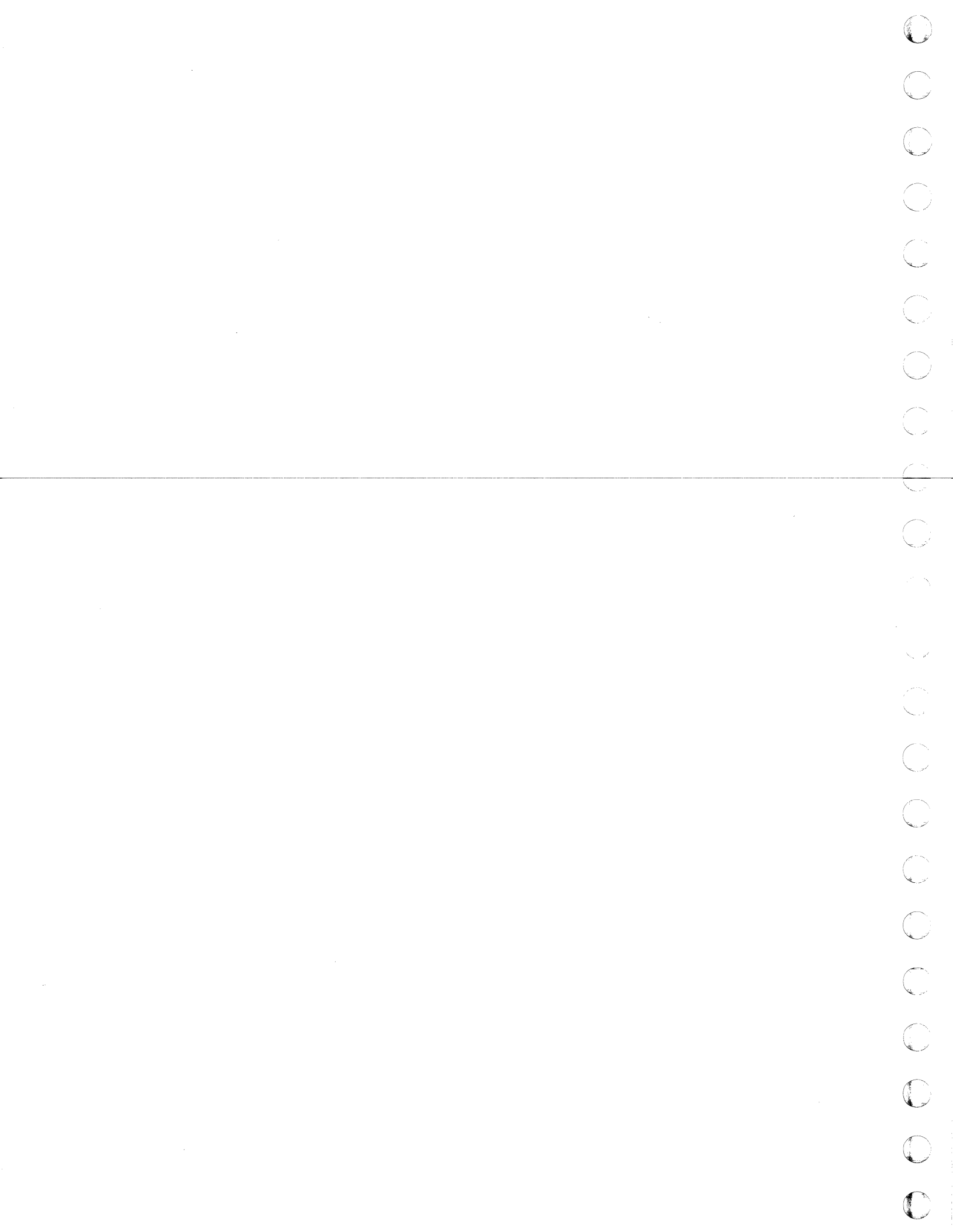
**ASSEMBLY PARTS LIST**

PRINT DATE 11-23-76 PAGE 2 FILE CHANGE NO. 00011747

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		61374900		1	F	A	CARLE ASSY (CRT)		A	REL	04-28-75		LIAT	11-26-76	
ITEM NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT	
						0022 TOTAL LINES									



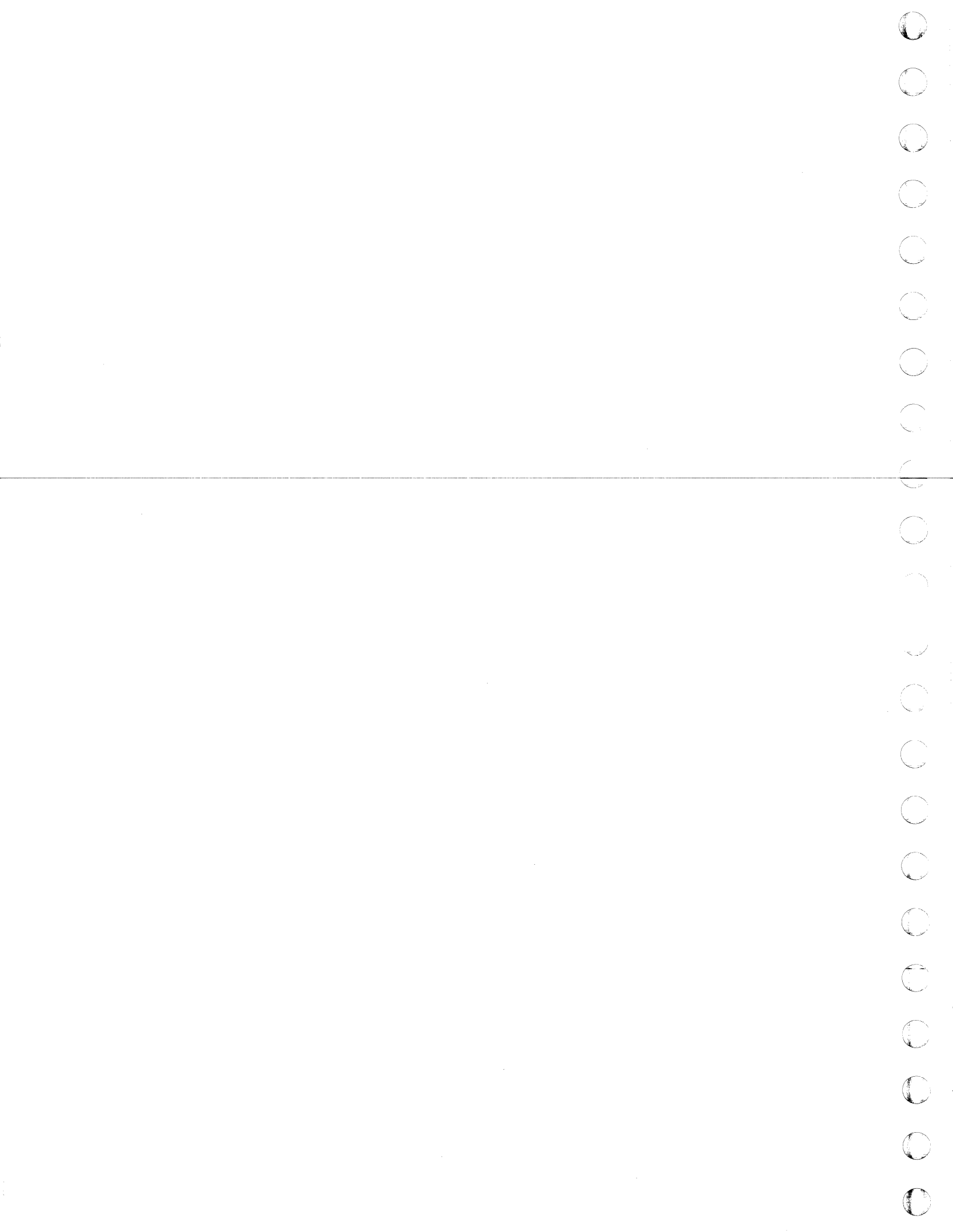




BUILD ARC 104

**ASSEMBLY PARTS LIST**

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	PRINT DATE	PAGE	FILE CHANGE NO.	
0860		61406100		0	A	A	CABLE ASSY DATA SET 10FT 6IN		A	REL	11-21-75	1	10989-36	
TRIND NO	LT	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	53397814	4	2		PC	CONN PLUG MALE 25 POS ALONE							
002	01	51908500	5	10	500	FT	CABLE SHIELDED 25 COND							
003	01	53397817	7	50		PC	CONN STRIP PIN 20-24 6A MALE							
004	01	94288021	2	4		PC	CONN LOCKING DEVICE							
005	01	51908402	4	2		PC	HOOD CONNECTOR							
006	01	10123821	0	2		PC	LABEL CDC 12 RVLOPS							
007	01	94277407	6	1		PC	STRAP CABLE TIE TYPE 4							
008	01	24528606	7		200	FT	TUBING INS SZ 17 BLACK							
009	01	94277400	1	2		PC	STRAP CABLE TIE TYPE 1							
0009 TOTAL LINES														

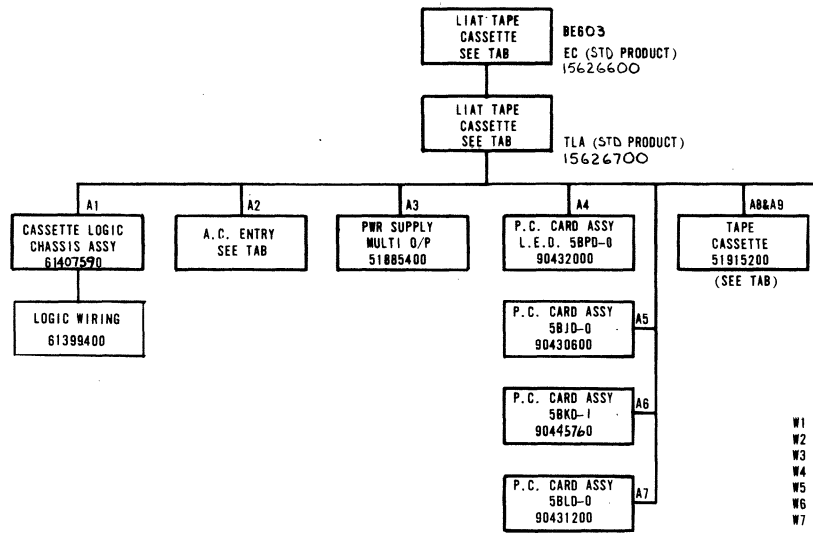




62962300 F

7-157

SHEET REVISION STATUS		REVISION RECORD					
REV	CO	DESCRIPTION	DRAFT	DATE	CHKD	APP	
		RELEASED CLASS C		6/3/76		GH	
A	10653-56	RELEASED CLASS A		7/24/76		GH	
B	CD 11767	REVISED PER ECO	A	10/19/76	GH	GH	
C	CD12018	ADDED BE603 E & F	WLV	4/11/77	DW	GA	
D	CD12624	REVISED PER ECO	MP	1-2-78	MP	MCB	



- W1 61398800 I/O CABLE ASSY
- W2 61399000 POWER SUPPLY AC CABLE ASSY
- W3 61398900 DUAL TAPE DRIVE CABLE ASSY
- W4 61399200 D.C. POWER CABLE
- W5 61399100 DUAL INDICATOR & SWITCH CABLE ASSY
- W6 61399500 SINGLE TAPE DRIVE CABLE ASSY
- W7 61399600 SINGLE INDICATOR & SWITCH CABLE ASSY
- 61391104 GROUND WIRE ASSY

TYPE	E.C.	TLA	A2	A8	A9	W1	W2	W3	W4	W5	W6	W7
BE603A	15626600	15626700	61407956	1	1	1	1	1	1	1	X	X
BE603B	15626601	15626701	61374010	1	1	1	1	1	1	1	X	X
BE603C	15626602	15626702	61407956	1	X	1	1	X	1	X	1	1
BE603D	15626603	15626703	61374010	1	X	1	1	X	1	X	1	1
BE603E	15630755	15626700	61407956	1	1	1	1	1	1	1	X	X
BE603F	15630754	15626702	61407956	1	X	1	1	X	1	X	1	1

REFERENCE DOCUMENTS

- SPARE PARTS LIST 60 HZ 66266100
- SPARE PARTS LIST 50 HZ 66266200
- EQUIPMENT SPEC 16037000
- EC, LIAT CASSETTE OPTION BOARD 15626800
- PRODUCT SPEC LIAT 18033500
- TEST PLAN DESIGN VERIFICATION 66283200
- EXTERNAL I/O CABLE ASSY 61406100

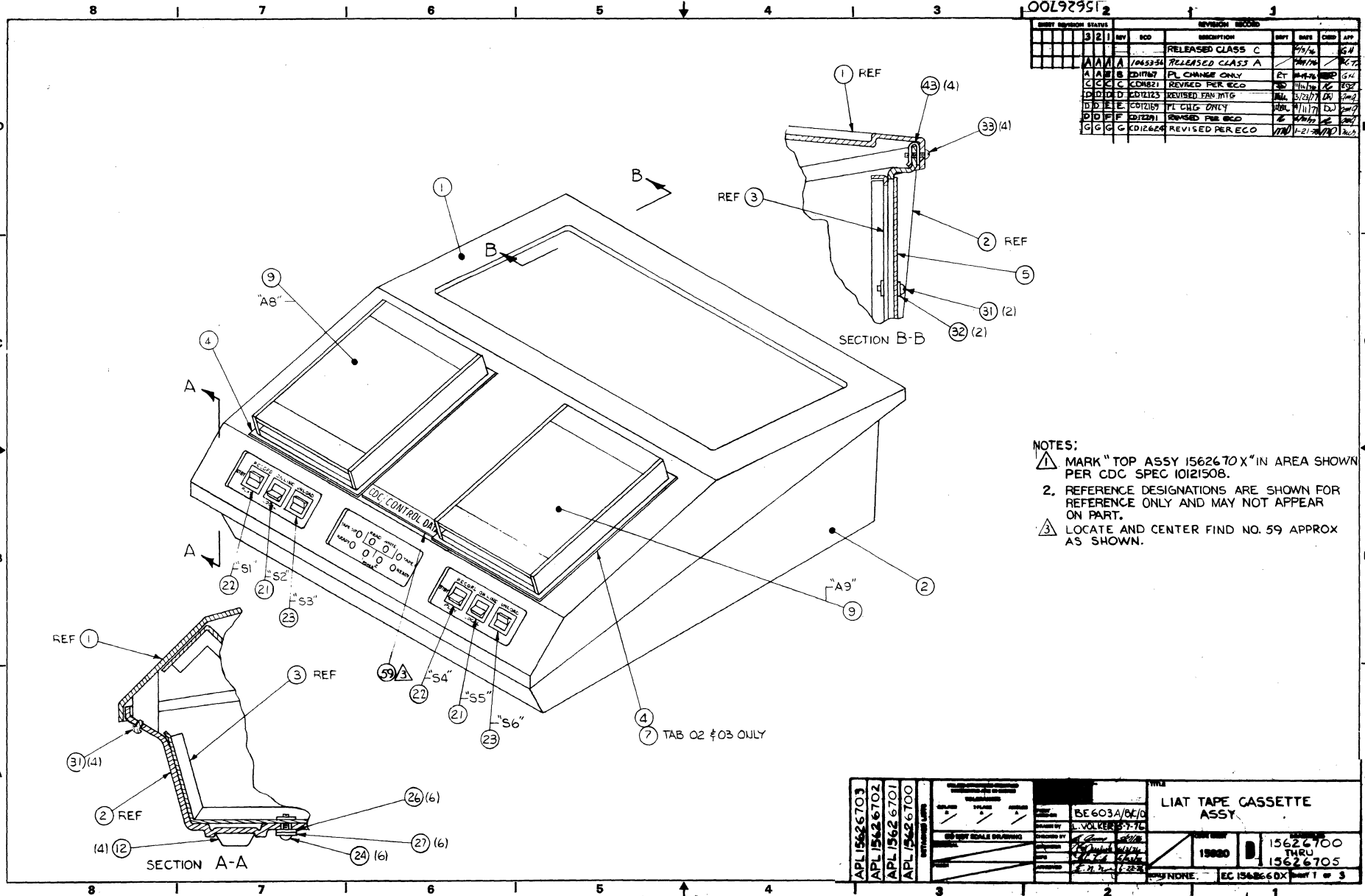
REFERENCE DRAWING			TITLE <b>GENEALOGY CHART</b>	
COMPONENTS, EXCEPT AS NOTED TOLERANCE VALUE RATING			FIRST USED ON <b>BE603</b>	CODE IDENT <b>C</b>
			DWN <b>L. VOLKER</b>	
RES	CHKD <i>[Signature]</i>	ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	DATE <b>6/24/76</b>
CAP	APPR <i>[Signature]</i>	DATE <b>6-24-76</b>	SCALE	CROSS REF. NO

66299240

7-158

62962300 F

00L92951 2



REVISION STATUS		REVISION RECORD						
REV	ECO	DESCRIPTION	DATE	CHKD	APP	REV	ECO	
1		RELEASED CLASS C	7/9/74		GN			
2		RELEASED CLASS A	7/11/74		GN			
3		PL CHANGE ONLY	8/1/74		GN			
4		REVISED PER ECO	8/20/74		GN			
5		REVISED PER ECO	8/20/74		GN			
6		REVISED PER ECO	8/20/74		GN			
7		REVISED PER ECO	8/20/74		GN			
8		REVISED PER ECO	8/20/74		GN			
9		REVISED PER ECO	8/20/74		GN			

- NOTES:
- 1. MARK "TOP ASSY 1562670 X" IN AREA SHOWN PER CDC SPEC 1012150B.
  - 2. REFERENCE DESIGNATIONS ARE SHOWN FOR REFERENCE ONLY AND MAY NOT APPEAR ON PART.
  - 3. LOCATE AND CENTER FIND NO. 59 APPROX AS SHOWN.

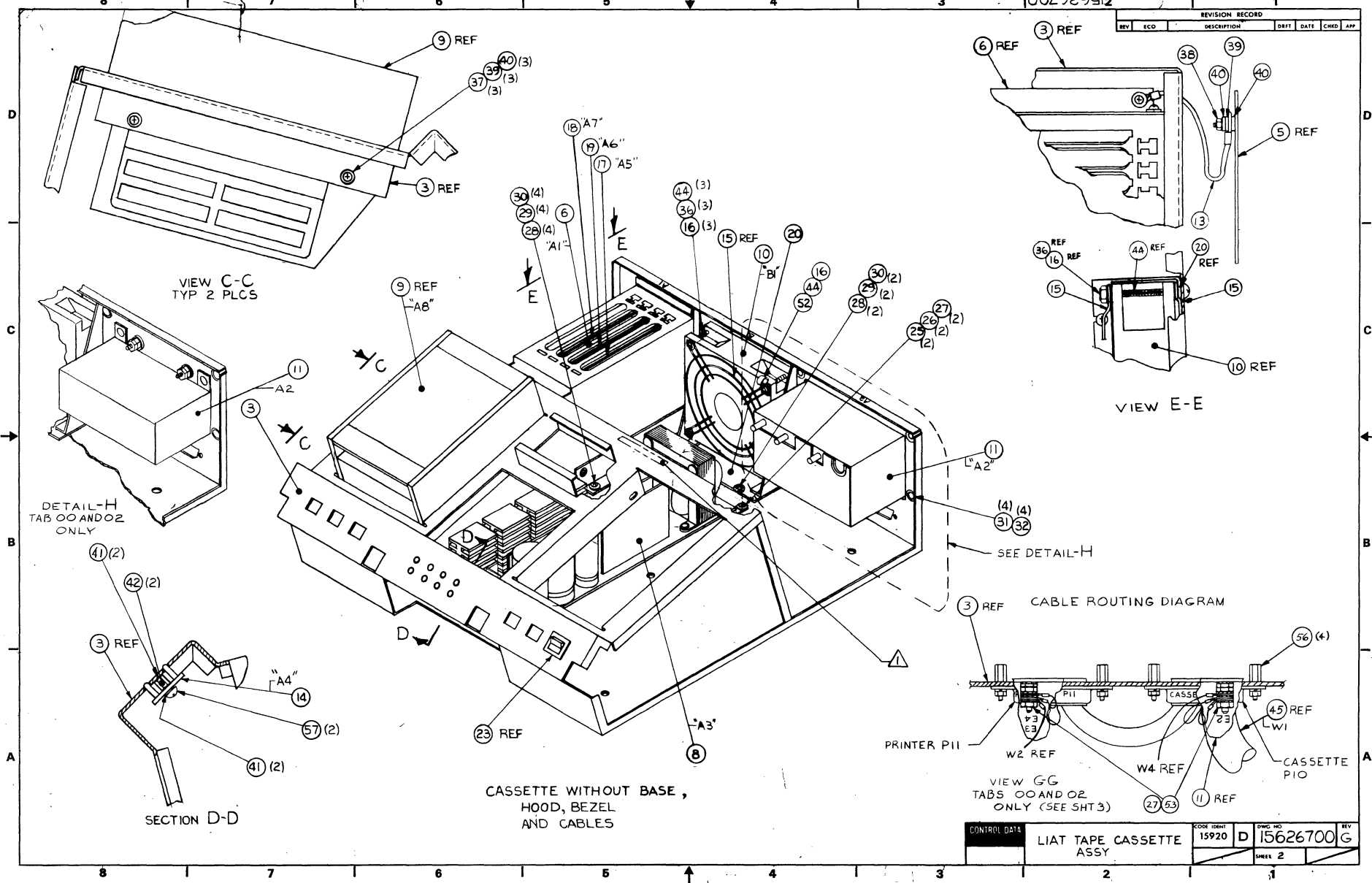
APL 15626703 APL 15626702 APL 15626701 APL 15626700 REFERENCE PARTS	156603A/8E/D 1 VOLTERS 7-7C	LIAT TAPE CASSETTE ASSY
	15626700 THRU 15626705	19880

62962300 F

7-159

100L929512

REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	CHKD	APP
39						
40						



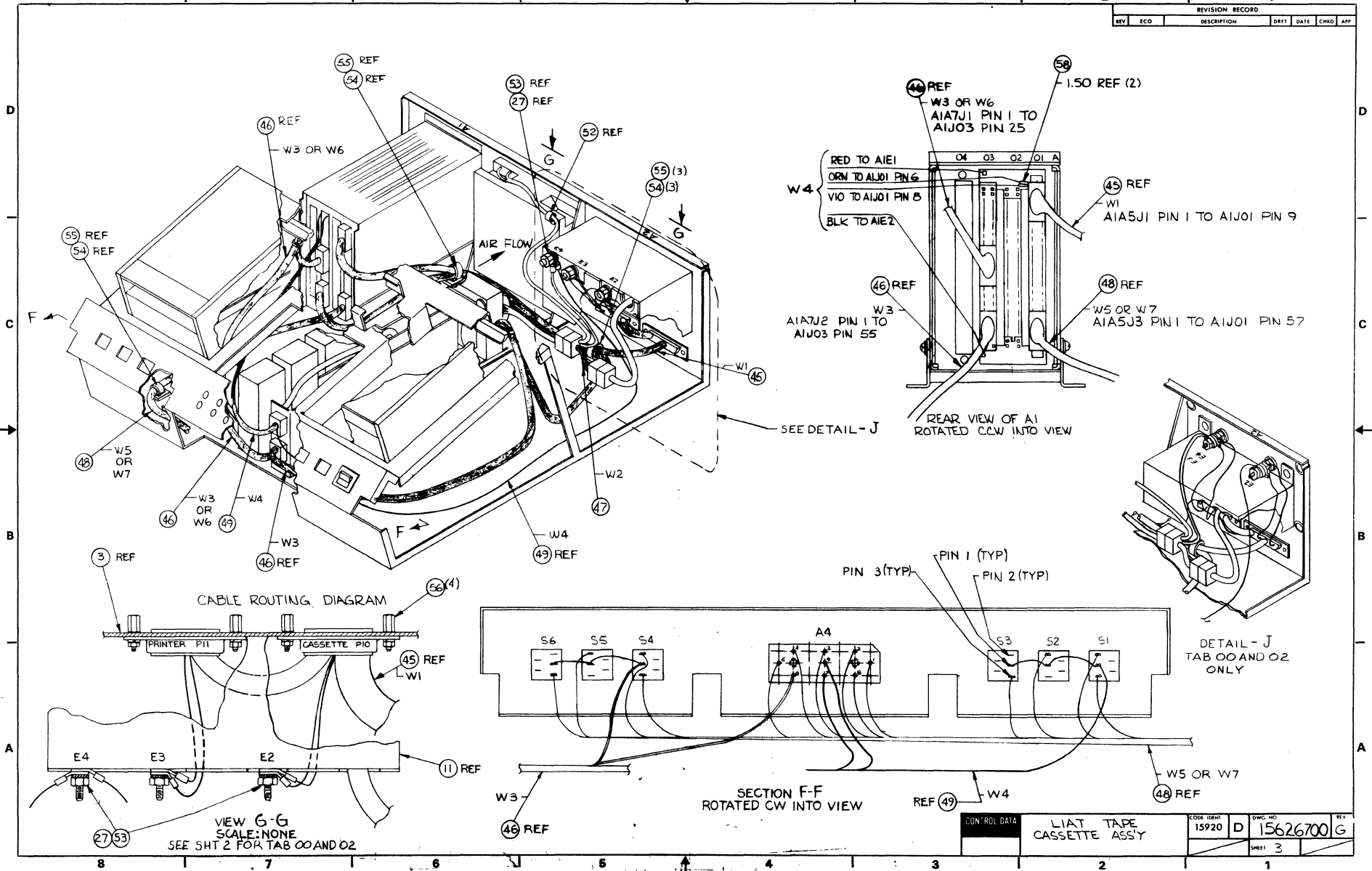
CONTROL DATA	LIAT TAPE CASSETTE ASSY	CODE IDENT 15920	D	DWG NO 15626700	REV G
		SHEET 2			

7-160

62962300 F

00292951 2

REVISION RECORD						
REV	ECO	DESCRIPTION	DRY1	DATE	CHKD	APP



VIEW G-G  
SCALE: NONE  
SEE SHT 2 FOR TAB 00 AND 02

SECTION F-F  
ROTATED CW INTO VIEW

CON'ROL DATA

LIAT TAPE  
CASSETTE ASSY

CODE IDENT	DWG NO	REV
15920	D 15626700	G
SHEET 3		

BUILD ARC 440 G

**ASSEMBLY PARTS LIST**

PRINT DATE 12-13-77 PAGE 1 FILE CHANGE NO. 00012624

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	15626700	7	A	A	CASSFTE, DUAL TAPE 60HZ (TA)	N	REL	06-24-76	8E603A	12-13-77			
TRND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	71480300	4	1		PC COVER CASSETTF	P						
002	01	71480400	2	1		PC BASE CASSETTE	P						
003	01	71480500	9	1		PC FRAME CASSETTE	P						
004	01	71480601	5	2		PC REZEL CASSETTF CUT OFF BOTTOM	P						
005	01	71480700	5	1		PC HOOR, CASSETTE (CRS) GOLD	P						
006	02	61407590	1	1		PC CASSETTE LOGIC CHASSIS ASSY	A	11767				7642	
008	01	51885400	5	1		PC PWR SPLY, 50/60HZ MULTI-OUT	V						
009	01	51915200	3	2		PC DRIVE, TAPE CASSETTE DIGITAL	V						
010	01	51886600	9	1		PC FAN 50 CFM 115 VAC	P						
011	01	61371113	4	1		PC PANEL ASSY (AC ENTRY) 60 HZ	A			12624			7750
011	02	61407956	4	1		PC PANEL ASSY (AC ENTRY) 60HZ	A	12624					
012	01	51805801	1	4		PC RUMPER, RUBBER .300H SLF-STKG	B						
013	02	61391110	6	1		PC GROUND WIRE ASSY 16AWG	A	11821				7649	
014	01	90432000	9	1		PC CD ASSY 58PD-0 LED BOARD	A						
015	01	51722100	8	2		PC GRILL METAL MUF	P						
016	02	10122901	1	4		PC NUT TWIN SELF LOCKING 6-32	B	12123				7712	
017	01	90430600	8	1		PC CD ASSY 58JD-0 I/O DELAY	A						
018	02	90445740	3	1		PC CD ASSY 58KD-1 CONT UNITS	A	11767				7642	
019	01	90431200	6	1		PC CD ASSY 58LD-0 (READ WRITE)	A						
020	01	71482200	4	1		PC RRACKET, FAN (CRS)	P						
021	01	51906400	0	2		PC SW, ROCKER SPDT ON-NONE-ON	P						

BUILD ARC 440 G

**ASSEMBLY PARTS LIST**

PRINT DATE 12-13-77 PAGE 2 FILE CHANGE NO. 00012624

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	15626700	7	A	A	CASSFTE, DUAL TAPE 60HZ (TA)	N	REL	06-24-76	8E603A	12-13-77			
TRND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
022	01	51906401	8	2		PC SW, ROCKER SPDT ON-OFF-ON	P						
023	01	51906404	2	2		PC SW, ROCKER SPDT ON-NONE-ON.	P						
024	01	10127143	5	6		PC MSCR PAN PHL 10-32X 1/2	B						
025	01	10127142	7	2		PC MSCR PAN PHL 10-32X 3/8	B						
026	01	10125607	1	8		PC WASHER FLT NO.10 STL CP	B						
027	01	10126403	4	11		PC WSHR NO.10 EXT TOOTH LK TYP A	A			12624	12624		7750
027	02	10126403	4	14		PC WSHR NO.10 EXT TOOTH LK TYP A	B						
028	01	10127122	9	6		PC MSCR PAN PHL R-32X 3/8	B						
029	01	10125606	3	6		PC WASHER FLT NO.8 STL CP	B						
030	01	10126402	6	6		PC WSHR NO.8 EXT TOOTH LK TYP A	B						
031	02	10127113	8	10		PC MSCR PAN PHL 6-32X 3/8	B	12291				7725	
032	03	10126103	0	2		PC WSHR NO.6 INTL TOOTH LOCK STL	B	12123				7712	
033	02	10127114	6	4		PC MSCR PAN PHL 6-32X 1/2	B	12291				7725	
036	03	10125605	5	3		PC WSHR NO.6 TYP A PLAIN STL CP	B	12123				7712	
037	01	10127104	7	6		PC MSCR PAN PHL 4-40X 3/8	B						
038	01	10125103	1	1		PC NUT HEX MCH 4-40 STL CP OR ZP	B						
039	01	10125603	0	7		PC WASHER FLT NO.4 STL CP	B						
040	01	10126400	0	8		PC WSHR NO.4 EXT TOOTH LK TYP A	B						
041	02	10126101	4	4		PC INT TOOTH LK WSHR #4	B	11821				7649	
042	01	93114371	3	2		PC STDOFF, HEX CRS 4-40X.375 TAP	P						
043	01	51787306	3	4		PC NUT U TYPE 6/32	B						

RUILD ARC 440 *G*

### ASSEMBLY PARTS LIST

PRINT DATE	PAGE	FILE CHANGE NO.
12-13-77	3	0012676

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION			MC	STATUS	STATUS DATE		ENG. RESP.		FILE DATE		
0860		15626700		7	<i>G</i>	A	CASSETTE, DUAL TAPE 60HZ (TA)			N	REL	06-24-76		BE603A		12-13-77		
TP/IND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION					MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT	
044	03	10127343	1	4		PC	SCREW MACH SLTD 6-32X2.250					B		12123				7712
045	01	61398800	5	1		PC	CABLE ASSY I/O (W1)					A						
046	01	61398900	3	1		PC	CABLE ASSY DUAL TP DR (W3)					A						
047	01	61399000	1	1		PC	CABLE ASSY AC PWR SPLY (W2)					A						
048	01	61399100	9	1		PC	CABLE ASSY DUAL IND + SW (W5)					A						
049	01	61399200	7	1		PC	CABLE ASSY DC POWER (W4)					A						
051	01	66299240	3	REF		PC	GENEALOGY LIAT CASSETTE					D						
052	01	24565000	7	1		PC	CLAMP, 1/8DIA CABLE BLK NYLON					B						
053	01	10125108	0	3		PC	NUT HEX MCH 10-32 STL CP DR Z					B		12624	12624		7750	7750
053	02	10125108	0	2		PC	NUT HEX MCH 10-32 STL CP DR Z					B						
054	01	62044200	4	3		PC	CLAMP-CABLE ADHESIVE BACK					B						
055	01	94277401	9	3		PC	STRAP CARLE TIE TYPE 1					B						
056	01	94288024	6	4		PC	LKB DEVICE, CONN TYP 4 W/TYP3					P						
057	01	10127102	1	2		PC	MSCR PAN PHL 4-40X.250					B						
058	01	24528627	3	208		FT	TBO, INSUL NO.13 CLEAR UL PVC					B						
059	01	15010307	5	1		PC	ID EMBLEM, PRODUCT MEDIUM AL					P						
0058 TOTAL LINES																		

BUILD ARC 440										ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.
										04-05-77				1	00012169	
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION				MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	15626701	5	E	A	CASSETTE, DUAL TAPE 50HZ (TA)				N	REL	06-24-76	8E603B	04-05-77			
FOUND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION			MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT	
001	01	71480300	4	1		PC	COVER CASSETTE		P							
002	01	71480400	2	1		PC	BASE CASSETTE		P							
003	01	71480500	9	1		PC	FRAME CASSETTE		P							
004	01	71480601	5	2		PC	BEZEL CASSETTE CUT OFF BOTTOM		P							
005	01	71480700	5	1		PC	DOOR, CASSETTE (CRS) GOLD		P							
006	01	61396800	7	1		PC	REPLACED BY 61407590 11723		A							
006	02	61407590	1	1		PC	CASSETTE LOGIC CHASSIS ASSY		A	11767	11767			7642	7642	
008	01	51885400	5	1		PC	PWR SPLY, 50/60HZ MULTI-OUT		V							
009	01	51915200	3	2		PC	DRIVE, TAPE CASSETTE DIGITAL		V							
010	01	51886600	9	1		PC	FAN 50 CFM 115 VAC		P							
011	01	61374010	9	1		PC	PANEL ASSY (AC ENTRY) 50 HZ		A							
012	01	51805801	1	4		PC	BUMPER, RUBBER .300H SLF-STKG		B							
013	01	61391104	9	1		PC	GND WIRE ASSY 4.5 16GA		A							
013	02	61391110	6	1		PC	GROUND WIRE ASSY 16AWG		A	11821	11821			7649	7649	
014	01	90432000	9	1		PC	CD ASSY 58PD-0 LED BOARD		A							
015	01	51722100	8	2		PC	GRILL METAL MUF		P							
016	01	51871600	6	8		PC	CLIP FAN MOUNTING		B							
016	02	10122901	1	4		PC	NUT TWIN SELF LOCKING 6-32		B	12169	12169			7715	7715	
017	01	90430600	8	1		PC	CD ASSY 5BJD-0 I/O DELAY		A							
018	01	90430900	2	1		PC	REPLACED BY 90445760 11723		A							
018	02	90445760	3	1		PC	CD ASSY 5BKD-1 CONT UNITS		A	11767	11767			7642	7642	
019	01	90431200	6	1		PC	CD ASSY 5BLD-0 (READ WRITE)		A							
020	01	71482200	4	1		PC	BRACKET, FAN (CRS)		P							

BUILD ARC 440										ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.
										04-05-77				2	00012169	
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION				MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	15626701	5	F	A	CASSETTE, DUAL TAPE 50HZ (TA)				N	REL	06-24-76	8E603B	04-05-77			
FOUND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION			MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT	
021	01	51906400	0	2		PC	SW, ROCKER SPDT ON-NONE-ON		P							
022	01	51906401	8	2		PC	SW, ROCKER SPDT ON-OFF-ON		P							
023	01	51906404	2	2		PC	SW, ROCKER SPDT ON-NONE-ON		P							
024	01	10127143	5	6		PC	SCREW MACH 10-32 X 1/2 PAN HD		B							
025	01	10127142	7	2		PC	SCREW MACH 10-32 X 3/8 PAN HD		B							
026	01	10125607	1	8		PC	WASHER FLT NO.10 STL CP		B							
027	01	10126403	4	11		PC	WSHR NO.10 EXT TOOTH LK TYP A		B							
028	01	10127122	9	6		PC	SCREW MACH 8-32 X 3/8 PAN HD		B							
029	01	10125606	3	6		PC	WASHER FLT NO.8 STL CP		B							
030	01	10126402	6	6		PC	WSHR NO.8 EXT TOOTH LK TYP A		B							
031	01	10127113	8	6		PC	MSCH PAN PHL 6-32X3/8 (TYP I)		B							
032	01	10126103	0	14		PC	WSHR NO.6 INTL TOOTH LOCK STL		B							
032	02	10126103	0	19		PC	WSHR NO.6 INTL TOOTH LOCK STL		B	11821	11821			7649	7649	
032	03	10126103	0	6		PC	WSHR NO.6 INTL TOOTH LOCK STL		B	12169	12169			7715	7715	
033	01	10125715	2	4		PC	MSCH FLAT HD SLTD 6-32X.500		B							
034	01	10125714	5	4		PC	MSCH FLAT HD SLTD 6-32X.375		B							
036	01	10125605	5	9		PC	WSHR NO.6 TYP A PLAIN STL CP		B							
036	02	10125605	5	4		PC	WSHR NO.6 TYP A PLAIN STL CP		B							
036	03	10125605	5	3		PC	WSHR NO.6 TYP A PLAIN STL CP		B	11821	11821			7649	7649	
037	01	10127104	7	6		PC	SCREW PAN HD 4-40X3/8 STEEL		B	12169	12169			7715	7715	
038	01	10125103	1	1		PC	NUT HEX MCH 4-40 STL CP OR ZP		B							
039	01	10125603	0	7		PC	WASHER FLT NO.4 STL CP		B							
040	01	10126400	1	4		PC	WSHR NO.4 EXT TOOTH LK TYP A		B							

BUILD ARC 440

**ASSEMBLY PARTS LIST**

PRINT DATE 04-05-77 PAGE 3 FILE CHANGE NO. 00012169

DIV.		ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
0060		15626701	5	F	A	CASSETTE, DUAL TAPE 50HZ (TA)	N	REL	06-24-76	BE6038	04-05-77		
ITEM NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
041	01	10126101	4	2		PC INT TOOTH LK WSHR #4	B						
041	02	10126101	4	4		PC INT TOOTH LK WSHR #4	B		11821	11821		7649	7649
042	01	93114371	3	2		PC STDOFF, HEX CRS 4-40X.375 TAP	P						
043	01	51787306	3	4		PC NUT U TYPE 4/32	B						
044	01	10127114	6	8		PC SCREW WACH PAN HD 6-32X1/2 ST	B			11821	11821		7649
044	02	10127115	3	8		PC MSCR PAN PHL 6-32X5/8 (TYP I)	B		11821	12169		7649	7715
044	03	10127343	1	4		PC SCREW WACH SLTD 6-32X2.250	B		12169			7715	
045	01	61398800	5	1		PC CABLE ASSY I/O (W1)	A						
046	01	61398900	3	1		PC CABLE ASSY DUAL TP DR (W3)	A						
047	01	61399000	1	1		PC CABLE ASSY AC PWR SPLY (W2)	A						
048	01	61399100	9	1		PC CABLE ASSY DUAL IND + SW (W5)	A						
049	01	61399200	7	1		PC CABLE ASSY DC POWER (W4)	A						
051	01	66299240	3	REF		PC GENEALOGY LIAT CASSETTE	D						
052	01	24565000	7	1		PC CLAMP, 1/8DIA CABLE BLK NYLON	B						
053	01	10125108	0	3		PC NUT HEX MCH 10-32 STL CP OR Z	B						
054	01	62044200	4	3		PC CLAMP-CABLE ADHESIVE BACK	B						
055	01	94277401	9	3		PC STRAP CABLE TIE TYPE 1	B						
056	01	94288024	6	4		PC LKG DEVICE, CONN TYP 4 W/TYP3	P						
057	01	10127102	1	2		PC MSCR PAN PHL 4-40X1/4 (TYP I)	B						
058	01	24528627	3	208		FT TUBING INS SZ 13 CLEAR	B						
059	01	15010307	5	1		PC ID EMBLEM, PRODUCT MEDIUM AL	P						

BUILD ARC 440

**ASSEMBLY PARTS LIST**

PRINT DATE 04-05-77 PAGE 4 FILE CHANGE NO. 00012169

DIV.		ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
0060		15626701	5	F	A	CASSETTE, DUAL TAPE 50HZ (TA)	N	REL	06-24-76	BE6038	04-05-77		
ITEM NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
						0067 TOTAL LINES							



BUILD ARC 440 G

**ASSEMBLY PARTS LIST**

PRINT DATE 01-04-78 PAGE 1 FILE CHANGE NO. 00012624

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		15626702		3	8	A	CASSETTE, 90L TAPE 60HZ (TA)		N	REL	06-24-76		HEB03C	01-04-78	
FIND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT		
001	01	71480300	4	1		PC COVER CASSETTE	P								
002	01	71480400	2	1		PC BASE CASSETTE	P								
003	01	71480500	9	1		PC FRAME CASSETTE	P								
004	01	71480601	5	1		PC BEZEL CASSETTE CUT OFF BOTTOM	P								
005	01	71480700	5	1		PC DOOR, CASSETTE (CRS) GOLD	P								
006	02	61407590	1	1		PC CASSETTE LOGIC CHASSIS ASSY	A		11767			7642			
007	01	71480600	7	1		PC BEZEL CASSETTE	P								
008	01	51885400	5	1		PC PWR SPLY, 50/60HZ MULTI-OUT	V								
009	01	51915200	3	1		PC DRIVE, TAPE CASSETTE DIGITAL	V								
010	01	51886600	9	1		PC FAN 50 CFM 115 VAC	P								
011	01	61371113	4	1		PC PANEL ASSY (AC ENTRY) 60 HZ	A			12624		7750			
011	02	61407956	4	1		PC PANEL ASSY (AC ENTRY) 60HZ	A		12624			7750			
012	01	51805801	1	4		PC BUMPER, RUBBER .300H SLF-STKG	B								
013	02	61391110	6	1		PC GROUND WIRE ASSY 19AWG	A		11821			7649			
014	01	90432000	9	1		PC CD ASSY 58PD=0 LED BOARD	A								
015	01	51722100	8	2		PC GRILL METAL MUF	P								
016	02	10122901	1	4		PC NUT TWIN SELF LOCKING 6-32	B		12169			7715			
017	01	90430600	8	1		PC CD ASSY 58JD=0 I/O DELAY	A								
018	02	90445760	3	1		PC CD ASSY 58KD=1 CONI UNITS	A		11767			7642			
019	01	90431200	6	1		PC CD ASSY 58LD=0 (REAU WRITE)	A								
020	01	71482200	4	1		PC BRACKET, FAN (CRS)	P								

BUILD ARC 440 G

**ASSEMBLY PARTS LIST**

PRINT DATE 01-04-78 PAGE 2 FILE CHANGE NO. 00012624

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE	
0860		15626702		3	8	A	CASSETTE, 90L TAPE 60HZ (TA)		N	REL	06-24-76		HEB03C	01-04-78	
FIND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT		
021	01	51906400	0	2		PC SW, ROCKER SPDT ON=NONE=ON	P								
022	01	51906401	8	2		PC SW, ROCKER SPDT ON=OFF=ON	P								
023	01	51906404	2	2		PC SW, ROCKER SPDT ON=NONE=ON	P								
024	01	10127143	5	6		PC MSCR PAN PHL 10=32X 1/2	B								
025	01	10127142	7	2		PC MSCR PAN PHL 10=32X 3/8	B								
026	01	10125607	1	8		PC WASHER FLT NO.10 SIL CP	B								
027	01	10126403	4	11		PC WSHR NO.10 EXT TOOTH LK TYP A	B			12624		7750			
027	02	10126403	4	14		PC WSHR NO.10 EXT TOOTH LK TYP A	B		12624			7750			
028	01	10127122	9	6		PC MSCR PAN PHL 8=32X 3/8	B								
029	01	10125606	3	6		PC WASHER FLT NO.8 STL CP	B								
030	01	10126402	6	6		PC WSHR NO.8 EXT TOOTH LK TYP A	B								
031	02	10127113	8	10		PC MSCR PAN PHL 6=32X 3/8	B		12291			7725			
032	03	10126103	0	6		PC WSHR NO.6 INIL TOOTH LOCK SIL	B		12169			7715			
033	02	10127114	6	4		PC MSCR PAN PHL 6=32X 1/2	B		12291			7725			
036	03	10125605	5	3		PC WSHR NO.6 TYP A PLAIN STL CP	B		12169			7715			
037	01	10127104	7	6		PC MSCR PAN PHL 4=40X 3/8	B								
038	01	10125103	1	1		PC NUT HEX MCH 5=40 SIL CP OR ZP	B								
039	01	10125603	0	7		PC WASHER FLT NO.4 STL CP	B								
040	01	10126400	0	8		PC WSHR NO.4 EXT TOOTH LK TYP A	B								
041	02	10126101	4	4		PC INT TOOTH LK WSHR #4	B		11821			7649			
042	01	93114371	3	2		PC STDOFF, HEX CRS 4=40X.375 TAP	P								

BUILD ARC 440

# ASSEMBLY PARTS LIST

PRINT DATE: 01-04-78  
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DIV.		ASSEMBLY NUMBER		REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE	
0860		15626702		3	M	A	CASSETTE, SOL TAPE 60HZ (TA)	N	REL	06-24-76	HE03C	01-04-78	
TRFIND NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
043	01	51787306	3	4		PC NUT U TYPE 6/32	B						
044	03	10127343	1	4		PC SCREW MACH SLTU 6-32X2.250	B		12169			7715	
045	01	61398800	5	1		PC CABLE ASSY I/O (W1)	A						
046	01	61399500	0	1		PC CABLE ASSY SINGLE IP DR (W6)	A						
047	01	61399000	1	1		PC CABLE ASSY AC PWR 3PLY (W2)	A						
048	01	61399600	8	1		PC CABLE ASSY SOL IND + SW (W7)	A						
049	01	61399200	7	1		PC CABLE ASSY DC POWER (W4)	A						
051	01	66299240	3	REF		PC GENEALOGY LIST CASSETTE	D						
052	01	24565000	7	1		PC CLAMP, 1/8DIA CABLE BLK NYLON	B						
053	01	10125108	0	3		PC NUT HEX MCH 10-32 STL CP OH Z	B						
053	02	10125108	0	2		PC NUT HEX MCH 10-32 STL CP OH Z	B		12624	12624		7750	7750
054	01	62044200	4	3		PC CLAMP-CABLE ADHESIVE BACK	B						
055	01	94277401	9	3		PC STRAP CABLE IIE TYPE 1	B						
056	01	94288024	6	4		PC LKG DEVICE, GONN TYP 4 W/TYP3	P						
057	01	10127102	1	2		PC WSCR PAN PHL 4-40X.250	B						
058	01	24528627	3	204	FT	T80, INSUL NO.13 CLEAR UL PVC	B						
059	01	15010307	5	1		PC ID EMBLEM, PRODUCT MEDIUM AL	P						
						0059 TOTAL LINES							

BUILD ARC 440										ASSEMBLY PARTS LIST					PRINT DATE	PAGE	FILE CHANGE NO.
															04-05-77	1	00012109
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION			MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE					
0860	15626703	1	F	A	CASSETTE, SGL TAPE 50HZ (TA)			N	REL	06-24-76	8E6030	04-05-77					
TRND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT			
001	01	71480300	4	1		PC COVER CASSETTE		P									
002	01	71480400	2	1		PC BASE CASSETTE		P									
003	01	71480500	9	1		PC FRAME CASSETTE		P									
004	01	71480601	5	1		PC BEZEL CASSETTE CUT OFF BOTTOM		P									
005	01	71480700	5	1		PC DOOR, CASSETTE (CRS) GOLD		P									
006	01	61396800	7	1		PC REPLACED BY 61407590 11723		A									
006	02	61407590	1	1		PC CASSETTE LOGIC CHASSIS ASSY		A		11767	11767	-	7642	7642			
007	01	71480600	7	1		PC BEZEL CASSETTE		P									
008	01	51885400	5	1		PC PWR SPLY, 50/60HZ MULTI-OUT		V									
009	01	51915200	3	1		PC DRIVE, TAPE CASSETTE DIGITAL		V									
010	01	51886600	9	1		PC FAN 50 CFM 115 VAC		P									
011	01	61374010	9	1		PC PANEL ASSY (AC ENTRY) 50 HZ		A									
012	01	51805801	1	4		PC BUMPER, RUBBER .300H SLF-STKG		B									
013	01	61391104	9	1		PC GND WIRE ASSY 4.5 16GA		A			11821			7649			
013	02	61391110	6	1		PC GROUND WIRE ASSY 16AWG		A		11821			7649	7649			
014	01	90432000	9	1		PC CD ASSY 5BPD-0 LED BOARD		A									
015	01	51722100	8	2		PC GRILL METAL MUF		P									
016	01	51871600	6	8		PC CLIP FAN MOUNTING		B			12169	12169	7715	7715			
016	02	10122901	1	4		PC NUT TWIN SELF LOCKING 6-32		B		12169			7715	7715			
017	01	90430600	8	1		PC CD ASSY 5BJD-0 I/O DELAY		A									
018	01	90430900	2	1		PC REPLACED BY 90445760 11723		A									
018	02	90445760	3	1		PC CD ASSY 5BKD-1 CONT UNITS		A		11767	11767		7642	7642			
019	01	90431200	6	1		PC CD ASSY 5BLD-0(READ WRITE)		A									

BUILD ARC 440										ASSEMBLY PARTS LIST					PRINT DATE	PAGE	FILE CHANGE NO.
															04-05-77	2	00012109
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION			MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE					
0860	15626703	1	F	A	CASSETTE, SGL TAPE 50HZ (TA)			N	REL	06-24-76	8E6030	04-05-77					
TRND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT			
020	01	71482200	4	1		PC BRACKET, FAN (CRS)		P									
021	01	51906400	0	2		PC SW, ROCKER SPDT ON-NONE-ON		P									
022	01	51906401	8	2		PC SW, ROCKER SPDT ON-OFF-ON		P									
023	01	51906404	2	2		PC SW, ROCKER SPDT ON-NONE-ON.		P									
024	01	10127143	5	6		PC SCREW MACH 10-32 X 1/2 PAN HD		B									
025	01	10127142	7	2		PC SCREW MACH 10-32 X 3/8 PAN HD		B									
026	01	10125607	1	8		PC WASHER FLT NO.10 STL CP		B									
027	01	10126403	4	11		PC WSHR NO.10 EXT TOOTH LK TYP A		B									
028	01	10127122	9	6		PC SCREW MACH 8-32 X 3/8 PAN HD		B									
029	01	10125606	3	6		PC WASHER FLT NO.8 STL CP		B									
030	01	10126402	6	6		PC WSHR NO.8 EXT TOOTH LK TYP A		B									
031	01	10127113	8	6		PC MSCH PAN PHL 6-32X3/8 (TYP I)		B									
032	01	10126103	0	14		PC WSHR NO.6 INTL TOOTH LOCK STL		B			11821	11821	7649	7649			
032	02	10126103	0	10		PC WSHR NO.6 INTL TOOTH LOCK STL		B		11821	12169		7649	7715			
032	03	10126103	0	6		PC WSHR NO.6 INTL TOOTH LOCK STL		B		12169			7715	7715			
033	01	10125715	2	4		PC MSCH FLAT HD SLTD 6-32X.500		B									
034	01	10125714	5	4		PC MSCH FLAT HD SLTD 6-32X.375		B									
036	01	10125605	5	8		PC WSHR NO.6 TYP A PLAIN STL CP		B			11821	11821	7649	7649			
036	02	10125605	5	4		PC WSHR NO.6 TYP A PLAIN STL CP		B		11821	12169		7649	7715			
036	03	10125605	5	3		PC WSHR NO.6 TYP A PLAIN STL CP		B		12169			7715	7715			
037	01	10127104	7	6		PC SCREW PAN HD 4-40X3/8 STEEL		B									
038	01	10125103	1	1		PC NUT HEX MCH 4-40 STL CP OR ZP		B									
039	01	10125603	0	7		PC WASHER FLT NO.4 STL CP		B									

BUILD ARC 440

**ASSEMBLY PARTS LIST**

BUILD ARC 440										ASSEMBLY PARTS LIST			PRINT DATE	PAGE	FILE CHANGE NO.
										04-05-77			3	00012109	
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE					
0060	15626703	1	F	A	CASSETTE, SGL TAPE 50HZ (TA)	N	REL	06-24-76	0E609D	04-05-77					
T/IND NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT		
040	01	10126400	0	8		PC WSHR NO.4 EXT TOOTH LK TYP A	B								
041	01	10126101	4	2		PC INT TOOTH LK WSHR #4	B		11021	11021		7049	7049		
041	02	10126101	4	4		PC INT TOOTH LK WSHR #4	B								
042	01	93114371	3	2		PC STDOFF, HEX CRS 4-40X.375 TAP	P								
043	01	51787306	3	4		PC NUT U TYPE 6/32	B								
044	01	10127114	6	8		PC SCREW MACH PAN HD 6-32X1/2 ST	B		11021	11021		7049	7049		
044	02	10127115	3	8		PC MSCR PAN PHL 6-32X5/8 (TYP I)	B		11021	12169		7049	7715		
044	03	10127343	1	4		PC SCREW MACH SLTD 6-32X2.250	B		12169			7715			
045	01	61398800	5	1		PC CABLE ASSY I/O (W1)	A								
046	01	61399500	0	1		PC CABLE ASSY SINGLE TP DR (W6)	A								
047	01	61399000	1	1		PC CABLE ASSY AC PWR SPLY (W2)	A								
048	01	61399600	8	1		PC CABLE ASSY SGL IND + SW (W7)	A								
049	01	61399200	7	1		PC CABLE ASSY DC POWER (W4)	A								
051	01	66299240	3	REF		PC GENEALOGY LIAT CASSETTE	D								
052	01	24565000	7	1		PC CLAMP, 1/8DIA CABLE BLK NYLON	B								
053	01	10125108	0	3		PC NUT HEX MCH 10-32 STL CP OR Z	B								
054	01	62044200	4	3		PC CLAMP-CABLE ADHESIVE BACK	B								
055	01	94277401	9	3		PC STRAP CABLE TIE TYPE 1	B								
056	01	94288024	6	4		PC LKG DEVICE, CONN TYP 4 W/TYPS	P								
057	01	10127102	1	2		PC MSCR PAN PHL 4-40X1/4 (TYP I)	B								
058	01	24528627	3	208	FT	TUBING INS SZ 13 CLEAR	B								
059	01	15010307	5	1		PC ID EMBLEM, PRODUCT MEDIUM AL	P								

BUILD ARC 440

**ASSEMBLY PARTS LIST**

BUILD ARC 440										ASSEMBLY PARTS LIST			PRINT DATE	PAGE	FILE CHANGE NO.
										04-05-77			4	00012109	
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE					
0060	15626703	1	F	A	CASSETTE, SGL TAPE 50HZ (TA)	N	REL	06-24-76	0E609D	04-05-77					
T/IND NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT		
						0068 TOTAL LINES									





BUILD ARC 220

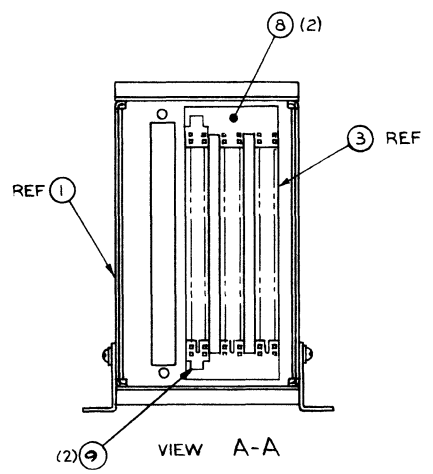
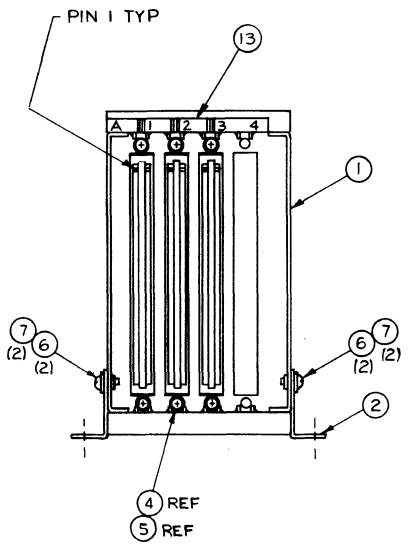
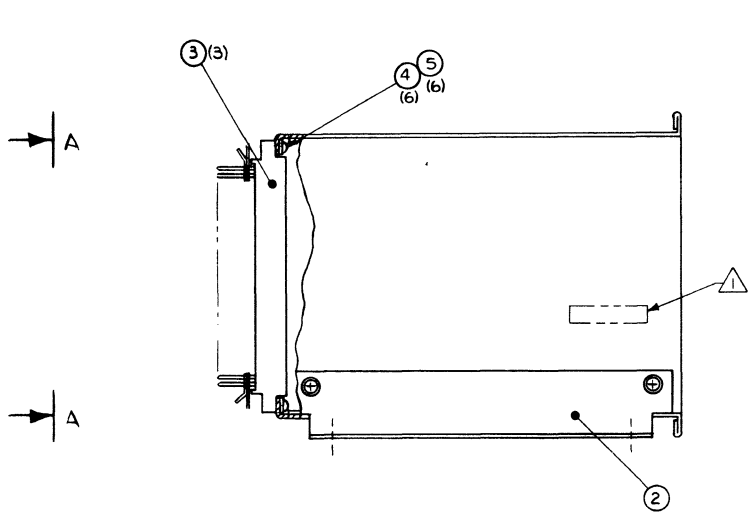
### ASSEMBLY PARTS LIST

PRINT DATE: 09-15-76  
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DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.		FILE DATE	
0860		61407590		1	A	D	CASSETTE LOGIC CHASSIS ASSY		A	REL	09-13-76		DE61A		09-15-76	
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
FIND NO	LT	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT			
001	01	71480800	3	1		PC CHASSIS, CASSETTE LOGIC (CRS)	P									
002	01	71480900	1	2		PC BRKT, LOGIC CHASSIS (CRS)	P									
003	01	51900300	8	3		PC CONN BRD EDGE 40/80 DUAL R/O	P									
004	01	10127103	9	6		PC SCR WACH PAN HD 4-40X.312	B									
005	01	10126400	0	6		PC WSHR NO.4 EXT TOOTH LK TYP A	B									
006	01	10127121	1	4		PC SCREW PAN HD 8-32X.312 LG	B									
007	01	10126402	6	4		PC WSHR NO.8 EXT TOOTH LK TYP A	B									
008	01	71454008	5	2		PC BUS, PHR 1.55LG W/POSTS CU	P									
009	01	71454100	0	2		PC CONTACT	P									
010	01	52629949	0	9	500	FT WIR 30GA SLD WHITE	W									
011	01	61399400	3	REF		PC L/W LOGIC CHASSIS	D									
012	01	71474108	9	1		PC LABEL A CC CHAS 2.80 VINYL	P									
							0012 TOTAL LINES									

7-172

62962300 B



SHEET REVISION STATUS		REVISION RECORD					
REV	ECO	DESCRIPTION	DEPT	DATE	CHKD	APP	
01	C 436	RELEASED CLASS C ADDED F/N 10, 11, 12 SHORTENED CHASSIS F/N		3/21/75			
02	C 676	MOVED CASE VIEW A-A		8/14/75			
03	C 685	DELETED F/N 11		10/16/75			
04	C 688	ADDED F/N 13		3-12-76			
A	106533	RELEASED CLASS A		7/19/78			

NOTES:  
 1. MARK "ASSY 61396800" IN AREA SHOWN PER CDC SPEC 10121303.

APL 61396800 DETACHED LISTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTROL DATA		TITLE	
	TOLERANCES		PART USED ON		BE6A1A	
	3 PLACE	2 PLACE	ANGLES	DRAWN BY	D. WELLS 6/14/75	
	DO NOT SCALE DRAWING		CHECKED BY	ENGINEER		
MATERIAL		DATE	APPROVED		CODE IDENT	DRAWING NO
		3-12-76	D. WELLS 3-12-76		15920	D 61396800
			APPROVED		SCALE	NHA 15627600 SHEET / OF /



BUILD ARC 220 ~~220~~

### ASSEMBLY PARTS LIST

DIV.		ASSEMBLY NUMBER	CD	DWG	DESCRIPTION	MC	STATUS	PRINT DATE	PAGE	FILE CHANGE NO.			
0860		61396800	7	D	CASSETTE LOGIC CHASSIS ASSY	H	REL NLS	08-11-76 08-28-76	1	1003-1-76 1000-1-76			
TRFIND NO.	LT	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECCO. NO. IN	ECCO. NO. OUT	S/N	CHK IN	CHK OUT
001	01	71480800	3	1		PC CHASSIS CASSETTE							
002	01	71480900	1	2		PC BRACKET CHASSIS LOGIC							
003	01	51900300	0	3		PC CONN BRD EDGE 40/80 DUAL R/U							
004	01	10127103	0	6		PC SCR MACH PAN HD 4-4X.312							
005	01	10126400	0	6		PC WASHER LOCK EXT TOOIM 4 STEEL							
006	01	10127121	1	4		PC SCREW PAN HD 8-32X.312 LG							
007	01	10126402	6	4		PC WASHER EXT. 8							
008	01	71454008	3	2		PC BUS BAR QTY 2							
009	01	71454100	0	2		PC CONTACT							
010	01	15006509	2	9 500		FT WIR 30GA SLD WHT UL TEFZEL							
011	01	51654001	0	3		FT WIR 26GA RED 500V UL MYL							
012	01	61399400	3	REF		PC L/W LOGIC CHASSIS U012 TOTAL LINES							
013	01	71474108		1		PC LABEL COLOR CODING							

DWN	D. Wells	7/24/75	CONTROL DATA	TITLE	L/W CHASSIS CASSETTE	PREFIX	LW	DOCUMENT NO.	61399400	REV.	A
CHKD	<i>[Signature]</i>	<i>[Signature]</i>		FIRST USED ON	BEBA1A	NHA	61396800	SHEET	1 of 11		
ENG	<i>[Signature]</i>	5-8-75		CODE IDENT	15920						
MFG	<i>[Signature]</i>	7-12-76									
APPR	<i>[Signature]</i>										

SHEET REVISION STATUS											REVISION RECORD										
11	10	9	8	7	6	5	4	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP					
													RELEASED CLASS C			<i>[Signature]</i>					
									01		01	01	C619	SMT 4, LAST ROW DEST. PIN FROM 43 TO 44	<i>[Signature]</i>	7/24/75	<i>[Signature]</i>				
									02	02	02	02	C672	REVISED PER ECO	RT	7/31/76	<i>[Signature]</i>				
									A	A	A	A	A	A	A	A	10653-38	RELEASED CLASS A	<i>[Signature]</i>	7/26/76	<i>[Signature]</i>

NOTES:

DETACHED LISTS

AA3180 REV. 8/71

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CONTROL DATA				CODE IDENT	SHEET	PREFIX	DOCUMENT NO.	REV.					
				15920	2	LW	61399400	A					
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR			
BUSED +5V		A1	A01	1									
				2									
				3									
				4									
				1									
				2									
				3									
				4									
				1									
				2									
				3									
				4									
BUSED +5V				1									
				2									
				3									
				4									
OPEN				5									
				6									
				5									
				6									
				5									
				6									
				7									
OPEN		A1	A01	8									

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CONTROL DATA				CODE IDENT 15920	SHEET 3	LW	DOCUMENT NO. 61399400	REV. A					
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR			
OPEN		A1	A02	7									
			A02	8									
			A03	7									
OPEN			A03	8									
OPEN			A01	9									
				10									
				11									
				12									
				13									
				14									
				15									
				16									
				17									
				18									
				19									
				20									
				21									
				22									
				23									
OPEN		A1	A01	24									

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CONTROL DATA				CODE IDENT 15920	SHEET 4	LW	DOCUMENT NO. 61399400	REV. A					
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	FIND NO	COLOR		
	3 IN	A1	A01	25	1	A1	A02	25	30	10	9		
				26	2			26					
				27	3			27					
				28	4			28					
				29	5			29					
				30	6			30					
				31	7			31					
				32	8			32					
				33	9			33					
				34	10			34					
				35	11			35					
				36	12			36					
				37	13			37					
				38	14			38					
				39	15			39					
				40	16			40					
				41	17			41					
				42	18			42					
				43	19			43					
	3 IN	A1	A01	44	20	A1	A02	44	30	10	9		

AA3184

PRINTED IN U.S.A.

CONTROL DATA				CODE IDENT 15920	SHEET 5	LW	DOCUMENT NO. 61399400	REV. A					
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	FIND NO	COLOR		
	3 IN	A1	A01	45	21	A1	A02	45	30	10	9		
	3 IN			46	22		A02	46					
	3.5 IN			47	23		A03	47					
				48	24			48					
				49	25			49					
				50	26			50					
				51	27			51					
				52	28			52					
	3.5 IN		A01	53	29	A1	A03	53	30	10	9		
OPEN			A01	54									
				55									
				56									
				57									
				58									
				59									
				60									
				61									
				62									
				63									
OPEN		A1	A01	64									

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CONTROL DATA				CODE IDENT 15920	SHEET 6	LW	DOCUMENT NO. 61399400	REV. A					
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	FIND NO	COLOR		
OPEN		A1	A01	65									
				66									
				67									
				68									
				69									
OPEN				70									
RESERVE FOR -1.8V				71									
				72									
OPEN				73									
OPEN				74									
RESERVE FOR -1.8V				75									
				76									
BUSED GND				77									
				78									
				79									
BUSED GND			A01	80									
	3 IN		A02	9	30	A1	A03	9	30	10	9		
	3 IN		A02	10	31	A1	A03	10	30	10	9		
	3 IN	A1	A02	11	32	A1	A03	11	30	10	9		

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CONTROL DATA					CODE IDENT 15920	SHEET 7	LW	DOCUMENT NO. 61399400	REV. A				
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	FIND NO	COLOR		
	3 IN	A1	A02	12	33	A1	A03	12	30	10	9		
	↑	↑	↑	13	34	↑	↑	13	↑	↑	↑		
				14	35			14					
	↓			15	36	↓	↓	15	↓	↓	↓		
	3 IN			16	37	A1	A03	16	30	10	9		
OPEN				17									
	3 IN			18	38	A1	A03	18	30	10	9		
	↑			19	39	↑	↑	19	↑	↑	↑		
				20	40			20					
				21	41			21					
				22	42			22					
				23	43			23					
	↓			24	44	↓	↓	24	↓	↓	↓		
	3 IN			45	45	A1	A03	45	30	10	9		
OPEN				47									
↑				48									
				49									
				50									
	↓			51									
OPEN		A1	A02	52									

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CONTROL DATA					CODE IDENT 15920	SHEET 8	LW	DOCUMENT NO. 61399400	REV. A				
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	FIND NO	COLOR		
OPEN		A1	A02	53									
↑		↑	↑	54									
				55									
				56									
				57									
				58									
				59									
				60									
				61									
				62									
				63									
				64									
				65									
				66									
				67									
				68									
				69									
OPEN				70									
RESERVE FOR				71									
+18V		A1	A02	72									

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CONTROL DATA				CODE IDENT 15920	SHEET 9	LW	DOCUMENT NO. 61399400	REV. A				
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR	ECO NUMBER	
OPEN		A1	A02	73								
↑				74								
RESERVE FOR -18V				75								
				76								
BUSED GND				77								
↑				78								
↓				79								
BUSED GND			A02	80								
↑			A03	25								
				26								
				27								
				28								
				29								
				30								
				31								
				32								
				33								
				34								
↓				35								
OPEN		A1	A03	36								

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CONTROL DATA				CODE IDENT 15920	SHEET 10	LW	DOCUMENT NO. 61399400	REV. A				
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE			ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR	ECO NUMBER	
OPEN		A1	A03	37								
↑				38								
				39								
				40								
				41								
				42								
				43								
				44								
				45								
				54								
				55								
				56								
				57								
				58								
				59								
				60								
				61								
				62								
↓				63								
OPEN		A1	A03	64								

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CONTROL DATA		CODE IDENT 15920			SHEET 11			LW		DOCUMENT NO. 61399400		REV. A
SUBJECT TERM	LENGTH	ORIGIN			SORT	DESTINATION			TYPE - WIRE		ECO NUMBER	ADD OR DELETE
		CHASSIS	ROW	PIN		CHASSIS	ROW	PIN	SIZE	COLOR		
OPEN		A1	A03	65								
↑		↑	↑	66								
				67								
				68								
↓				69								
OPEN				70								
RESERVE FOR				71								
+1.8V				72								
OPEN				73								
OPEN				74								
RESERVE FOR				75								
-1.8V				76								
BUSED GND				77								
↑				78								
↓				79								
BUSED GND		A1	A03	80								

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DWN	D. Wells	7-17-75	CONTROL DATA	TITLE	CABLE ASSY I/O (W1)	PREFIX	A	DOCUMENT NO.	61398800	REV.	A
CHKD	<i>[Signature]</i>	7/25		FIRST USED ON	BE6A1A/B/C/D	NHA	15627600	SHEET	1 of 4		
ENG	<i>[Signature]</i>	7/25		CODE IDENT	15920						
MFG	<i>[Signature]</i>	7/26									
APPR	<i>[Signature]</i>	8-3-76									

SHEET REVISION STATUS					REVISION RECORD				
4	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
						RELEASED CLASS C			GH
				01	01	C455		8-18-75	W
				02	02	C619		3/2/76	W
				03	03	C647		9/11/76	W
				03	03	C672		3/3/76	W
				03	03	C685		3/4/76	GH
				A	A	10653-38		3/16/76	M.C.T.

NOTES:

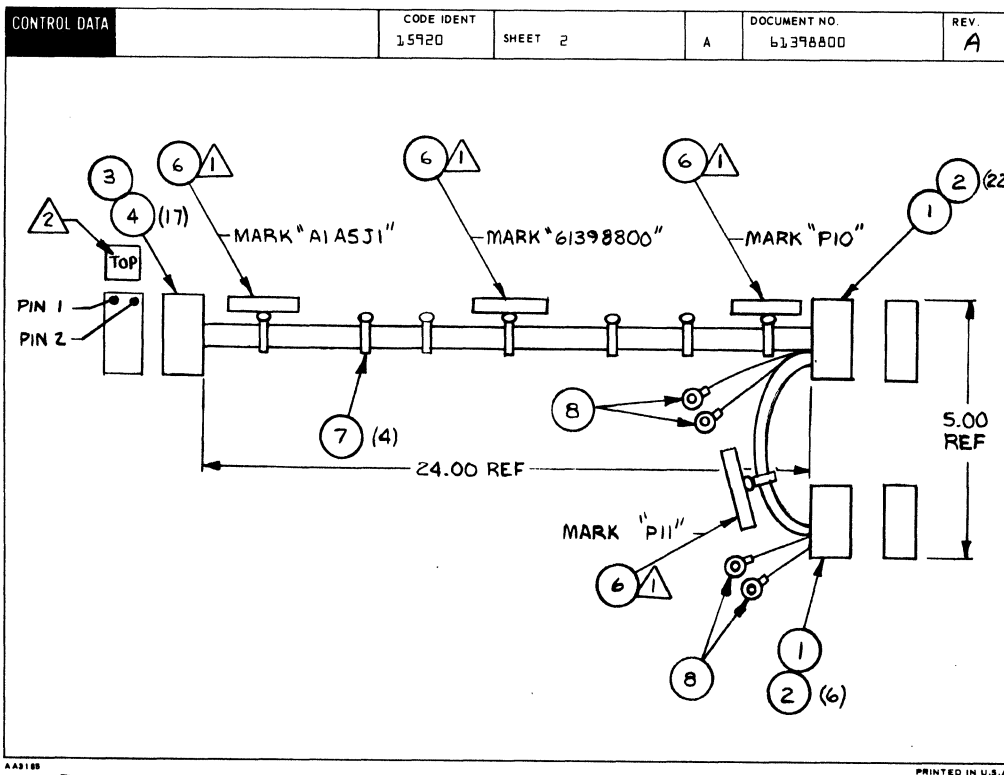
1. Apply label to cable per drawing 82191061, Method B. Mark as shown.

2. Mark per CDC Spec 10121508; .12 High, white and locate approximately as shown. (Optional Method: Identify with a .06 Dia Min. white dot)

APL	61398800
DETACHED LISTS	

AA3180 REV. 8/71

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BUILD ARC 104

### ASSEMBLY PARTS LIST

DIV.		ASSEMBLY NUMBER	CO	REV.	DWG.	DESCRIPTION	MC	STATUS	PRINT DATE	PAGE	FILE CHANGE NO.		
0060		61398800	5	28	A	CABLE ASSY I/O (W1)	A	478	03-03-76	1	10653-30		
ITEM NO.	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	53397914	2	2		PC CONN, FEM 25POSN PLUG ALONE	P						
002	01	53397917	5	28		PC CONTACT, STRIP SKT 20-24GA	P						
003	01	51863008	2	1		PC CONN HSG (DBL ROW) 16 GAVITY	P						
004	01	94245602	1	16		PC CONTACT SOC 24-26AWG STRIP	P						
005	01	24548310	2	36		FT WIR 24GA STRD WHT 300V UL PVC	W						
006	01	94277409	2	4		PC STRAP CABLE TIE TYPE 6	P						
007	01	94277401	9	4		PC STRAP CABLE TIE TYPE 1	P						
008	01	51797217	0	4		PC LUG, CRMP R TFRM #22-18GA 10S	B						
009	01	93462000	6	1 666		FT WIR 20GA STRD BLK 300V UL PVC	W						
						0009 TOTAL LINES							

DWN	D. Wells	7-12-75	CONTROL DATA	TITLE	CABLE ASSY AC PWR SPLY (W2)	PREFIX	A	DOCUMENT NO.	61399000	REV.	A
CHKD	<i>[Signature]</i>	<i>[Signature]</i>		FIRST USED ON	BELAJA/B/C/D	NHA	15627600	SHEET	1 of 3		
MFG	<i>[Signature]</i>	<i>[Signature]</i>	CODE IDENT								
APPR	S. M. K...	7-12-76	15920								

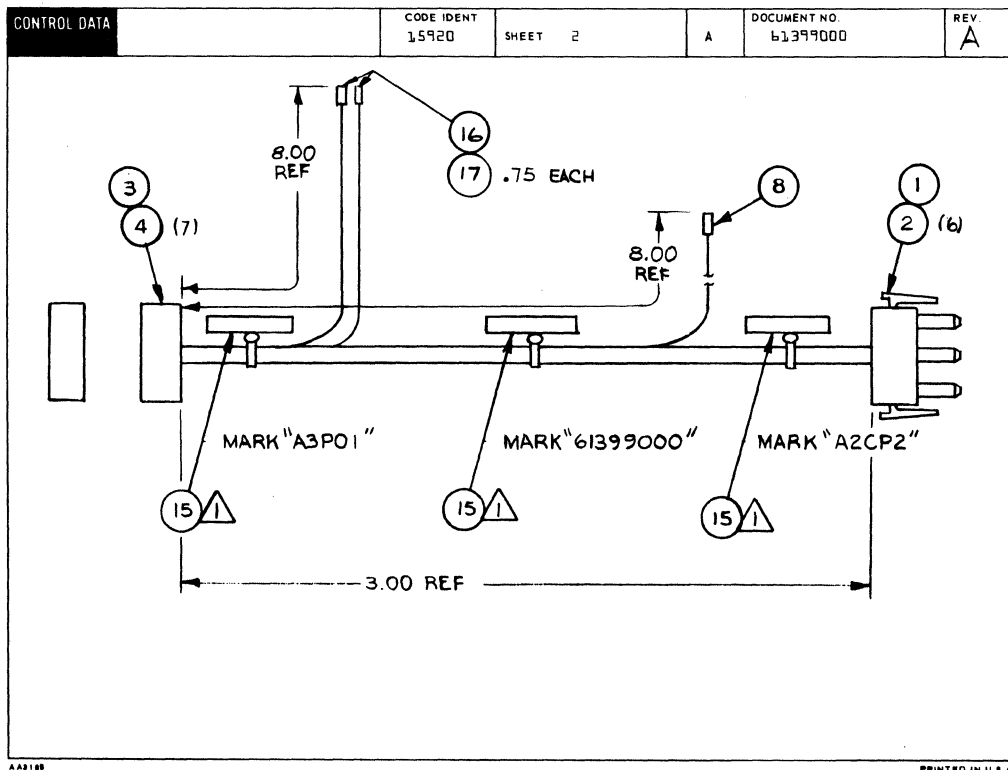
  

SHEET REVISION STATUS				REVISION RECORD						
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP		
					RELEASED CLASS C			GH		
			01	01	C455	F/N 2 WAS 51905802 ADDED W2 TO TITLE	R	8-13-75	W	
			02	02	C619	COND. ID. 9, CHG A2-3 TO A2E4	W	2/2/76	W	
			03	03	C647	COND ID 2 & 4 LGTH WAS 11 " " 9 LGTH WAS 3	R	7/1/76	W	
			04	04	C672	DELETED F/N 9 & 10 ADDED F/N 16	R	3/3/76	W	
			05	05	C695	F/N 16 WAS 65642201 ADDED F/N'S 9, 10 & 17	R	3/16/76	GH	
			A	A	A	10653-38	RELEASED CLASS A	3/16/76	M.C.T.	

NOTES:  
 1. Apply label to cable per drawing 62191061, Method B. Mark as shown.

APL 61399000
DETACHED LISTS

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CONTROL DATA					CODE IDENT	SHEET	DOCUMENT NO	REV		
					15920	3	A 61399000	A		
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN	ACCESS FIND NO	DESTINATION	ACCESS FIND NO	REMARKS	
1	7	18	9	3	A3P01	1 4	A2CP2	1 2		
2	9	24	9	18	↑	1 -	B1	1 16-17	FAN	
3	5	18	0	3		2 4	A2CP2	2 2		
4	10	24	0	18		2 -	B1	2 16-17	FAN	
5	11	18	1	3		3 4	A2CP2	3 2		
6	12	18	3	3		4 4	A2CP2	4 2	LOW SW 50 HZ	
7	13	18	8	3		5 4	A2CP2	5 2		
8	14	18	4	3		6 4	A2CP2	6 2	HIGH SW 50 HZ	
9	6	18	5	8		A3P01	7 4	A2	E4 8	FRAM GND

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BUILD ARC 104A				ASSEMBLY PARTS LIST				PRINT DATE	PAGE	FILE CHANGE NO.			
								03-06-76	1	00000000			
DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61399000	1	04	A	CABLE ASSY AC PWR SPLY (W2)	A	REV	03-10-76	BE6A1A/B	03-06-76			
FIND NO	LI	PART NUMBER	CD	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/W	WR IN	WR OUT
001	01	51906005	7	1		PC CONN PLUG 12 PIN							
002	01	51905800	2	6		PC CONT, PIN 20-14GA .130INS STR							
003	01	94091003	7	1		PC CONN 8 CIRCUIT SKY HOUSING							
004	01	93843002	1	7		PC CONTACT SKT 1R -14 AWG STRIP							
005	01	62021501	5										
		93463000	5	250	FT	WIR 18GA STRD BLK 300V UL PVC							
006	01	93463555	8	666	FT	WIR 18GA STRD GRN 300V UL PVC							
007	01	93463999	8	250	FT	WIR 18GA STRD WHT 300V UL PVC							
008	01	51797217	0	1		PC LUG, FRMP R TFRM .22-18GA 10S							
011	01	93463111	0	250	FT	WIR 18GA STRD BRN 300V UL PVC							
012	01	93463333	0	250	FT	WIR 18GA STRD ORN 300V UL PVC							
013	01	93463888	3	250	FT	WIR 18GA STRD GRY 300V UL PVC							
014	01	93463444	5	250	FT	WIR 18GA STRD YEL 300V UL PVC							
015	01	94277409	2	3		PC STRAP CABLE TIE TYPE 6							
016	01	85642201	1	1		PC CORD ASSY FAN 18GA 24.50 IN							
						0014 TOTAL LINES							
						CONTACT PARTON 22-24 AWG							
						<del>CONTACT PARTON 17-18 AWG</del>							
016	01	93747009	2	2		PC							
017	01	24534710	9	125	FT	INS SLEEVE 3/8 BLACK							
009	01	24548310	2	1500	FT	WIR 24 GA STRD WHT							
010	01	24548301	1	1500	FT	WIR 24 GA STRD BLK							

DWN	D. Wells	7-14-75	CONTROL DATA	TITLE	CABLE ASSY D.C. POWER {W4}	PREFIX	A	DOCUMENT NO.	61399200	REV	A
CHKD				FIRST USED ON	BEBA1A/B/C/D	NHA	15627600	SHEET 1 of 3			
ENG				CODE IDENT	15920						
MFG											
APPR											

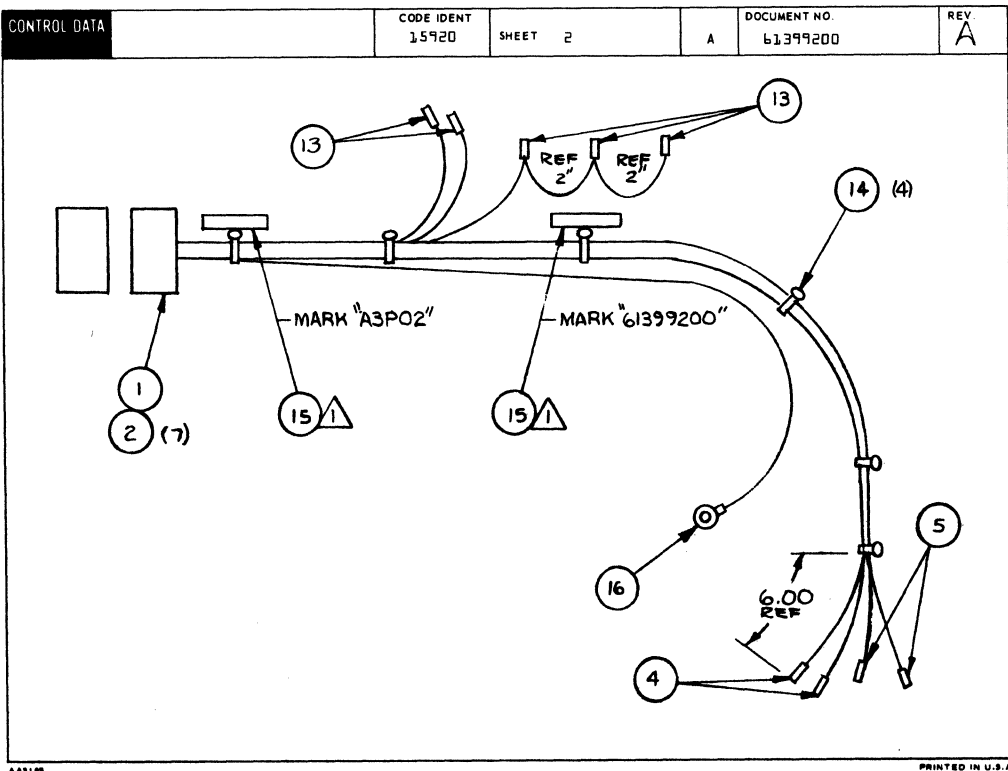
SHEET REVISION STATUS					REVISION RECORD						
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP			
					RELEASED CLASS C			GH			
		01	01	01	C455	DELETED F/N 6 ADDED W4 TO TITLE	R	8-13-75	W		
		02	01	02	C558	CHG'D DESTINATIONS ON SHEET 3	M/D	12-23-75	W		
		03	03	03	C619	ADDED GND TO CABLE, AND F/N 10	M/D	3/21/76	W		
		04	03	04	C647	CHANGED LENGTHS OF COND ID'S PER S.S. C. 1102	L	7/1/76	W		
		05	05	05	C672	F/N 2 QTY WAS 8 DELETED F/N 3	R	7/9/76	W		
		06	05	06	C676	COND IDENT 3 & 4 DEST. WAS 5 & 7	R	3/21/76	W		
		06	05	07	C695	F/N 2 WAS 93942016	R	3/16/76	W		
		A	A	A	10653-38	RELEASED CLASS A		3/16/76	P.C.T.		

NOTES:  
 1. APPLY LABEL TO CABLE PER DRAWING 82191061, METHOD B. MARK AS SHOWN.

APL	61399200
DETACHED LISTS	

AA3180 REV. 6/71 PRINTED IN U.S.A.



# COMMENT SHEET

MANUAL TITLE: 751-10 Terminal Subsystem, Volume 1 of 2, Hardware Maintenance Manual

PUBLICATION NO.: 62962300

REVISION: G

NAME: \_\_\_\_\_

COMPANY: \_\_\_\_\_

STREET ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

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DWN	D. Wells	7-187	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO.	REV.
CHKD	<i>[Signature]</i>	<i>[Signature]</i>		CABLE ASSY DUAL TAPE DRIVE (W3)	A	61398900	A
ENG	<i>[Signature]</i>	<i>[Signature]</i>		FIRST USED ON	NHA	1,5627600	SHEET 1 of 5
MFG	<i>[Signature]</i>	<i>[Signature]</i>	CODE IDENT	BE6A1A/B			
APPR	<i>[Signature]</i>	<i>[Signature]</i>	15920				

SHEET REVISION STATUS					REVISION RECORD					
5	4	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
							RELEASED CLASS C			GH
					01	01	DELETED FN 4 ADDED NRE 2 ADDED W3 TO TITLE	R	8-13-75	W
					02	01	CHG'D DESTINATIONS ON SHT 2	MP	11-20-76	W
					03	01	COND ID 17, 18 LGTH WAS 6	R	3/1/76	W
					04	04	FN 2 WAS 93942016 FN 3 WAS 93942014	R	3/1/76	W
					04	04	ADDED FN 17	R	3/1/76	W
					04	04	FN 2 WAS 93942016 FN 3 WAS 93942014	R	3/1/76	W
					A	A	RELEASED CLASS A		3/16/76	WGT

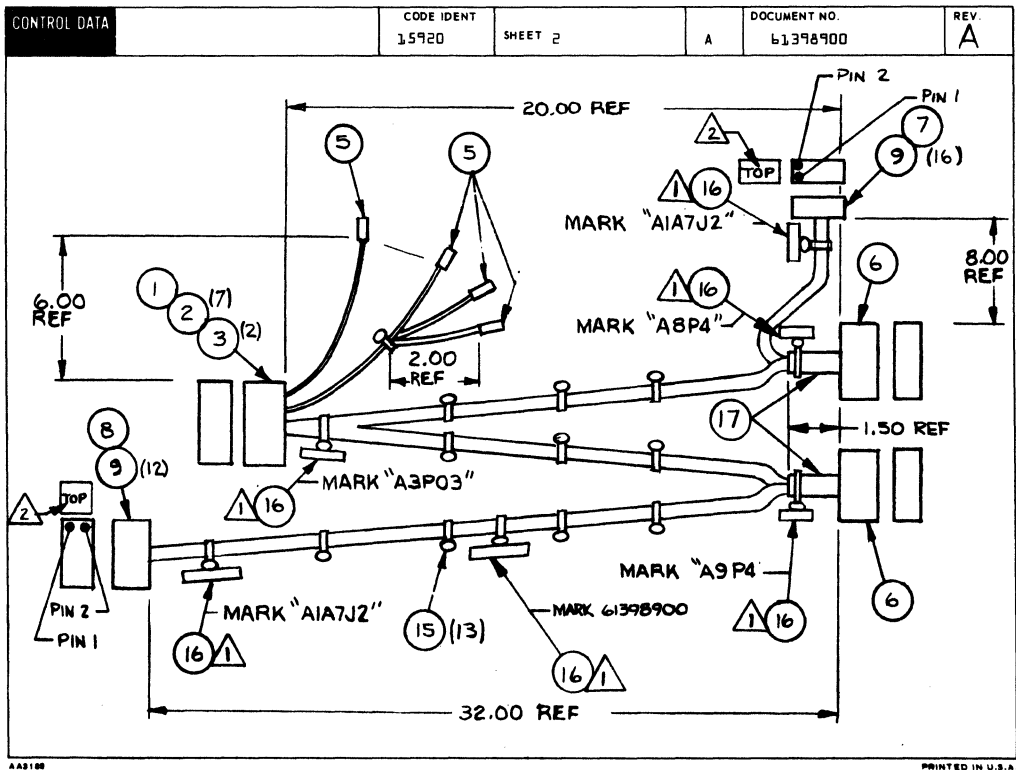
NOTES:

- Apply label to cable per drawing 621910b1, Method b. Mark as shown.
- Mark per CDC Spec 10121508; .12 high, white and locate approximately as shown. (optional Method: Identify with .06 Dia. Min. white dot)

APL 61398900  
DETACHED LISTS

A43180 REV. 8/71

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CONTROL DATA					CODE IDENT	SHEET	#A	DOCUMENT NO.	REV.		
					15920	3		61398900	A		
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
1	11	24	2	20'	A3P03	1	2	A8P4	20	SOLDER	1 +5
2	11	↑	2	20"	↑	1	-	A8P4	22	↑	1 +5
3	11	↑	2	20"	↑	2	2	A9P4	20	↑	2 +5
4	11	↑	2	20"	↑	2	-	A9P4	22	↑	2 +5
5	12	↑	3	20"	↑	6	2	A8P4	23	↑	1 +12
6	12	↑	3	20"	↑	6	-	A8P4	24	↑	1 +12
7	12	↑	3	20"	↑	7	2	A9P4	23	↑	2 +12
8	12	↑	3	20"	↑	7	-	A9P4	24	↑	2 +12
9	13	↑	7	20"	↑	8	3	A8P4	13	↑	1 -12
10	13	↑	7	20"	↑	9	3	A9P4	13	↑	2 -12
11	10	↑	0	20"	↑	10	2	A8P4	11	↑	1 GND
12	10	↑	0	20"	↑	10	-	A8P4	12	↑	1 GND
13	10	↑	0	20"	↑	11	2	A9P4	11	↑	2 GND
14	10	↑	0	20"	A3P03	11	-	A9P4	12	SOLDER	2 GND
15	10	↑	0	2"	S4	1	5	S6	1	5	SWITCH GND
16	10	↑	0	2"	S4	1	-	S5	1	5	SWITCH GND
17	10	↑	0	8"	A3P03	12	2	S5	11	-	SWITCH GND
18	10	↑	0	8"	A3P03	12	-	A4	16	5	2 POWER ON IND
19	14	↑	9	2"	A8P4	1	SOLDER	A8P4	14	SOLDER	1 LICL-INT.
20	14	↑	9	8"	A1A7J1	3	9	A8P4	18	SOLDER	STOP/G0

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CONTROL DATA					CODE IDENT	SHEET	#A	DOCUMENT NO.	REV.		
					15920	4		61398900	A		
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX)	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS
21	14	↑	9	8"	A1A7J1	4	9	A8P4	19	SOLDER	FORWARD/REV
22	↑	↑	↑	↑	↑	5	↑	↑	6	↑	SLOW/FAST
23	↑	↑	↑	↑	↑	6	↑	↑	17	↑	WRITE SELECT
24	↑	↑	↑	↑	↑	7	↑	↑	7	↑	READ ENABLE
25	↑	↑	↑	↑	↑	8	↑	↑	2	↑	WRITE DATA
26	↑	↑	↑	↑	↑	9	↑	↑	21	↑	READ DATA
27	↑	↑	↑	↑	↑	10	↑	↑	9	↑	READ DATA
28	↑	↑	↑	↑	↑	11	↑	↑	4	↑	BOT/EOT
29	↑	↑	↑	↑	↑	12	↑	↑	5	↑	READY
30	↑	↑	↑	↑	↑	13	↑	↑	15	↑	WRITE PROTECT
31	↑	↑	↑	8"	A1A7J1	14	9	A8P4	16	↑	SIDE A/B
32	↑	↑	↑	2"	A9P4	1	SOLDER	A9P4	14	↑	2 LICL-INT
33	↑	↑	↑	32"	A1A7J2	4	9	↑	18	↑	STOP/G0
34	↑	↑	↑	↑	↑	5	↑	↑	19	↑	FORWARD/REV
35	↑	↑	↑	↑	↑	6	↑	↑	6	↑	SLOW/FAST
36	↑	↑	↑	↑	↑	7	↑	↑	17	↑	WRITE SELECT
37	↑	↑	↑	↑	↑	8	↑	↑	7	↑	READ ENABLE
38	↑	↑	↑	↑	↑	9	↑	↑	2	↑	WRITE DATA
39	↑	↑	↑	↑	↑	10	↑	↑	21	↑	READ DATA
40	14	↑	9	32"	A1A7J2	11	9	A9P4	9	SOLDER	READ DATA

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BUILD ARC 104

### ASSEMBLY PARTS LIST

DIV.		ASSEMBLY NUMBER	CD	REV	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860		61399500	0	02	A	CABLE ASSY SINGLE TP DR (W6)	A	REV	03-06-76	BE6A1C/D	03-06-76			
PRINT DATE	PAGE	FILE CHANGE NO.												
03-06-76	1	10453-30000072												
TRND NO	LI	PART NUMBER	CO	M	QUANTITY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	93948002	6		1		PC CONNECTOR 12 PIN HOUSING							
002	01	93942016	2		3		PC CONTACT PIN 22-18 GA STRIP							
003	01	62021400	7		1		PC CONTACT PIN 30-22 STRIP							
004	01	93942014	7		1		PC CONN PLUG 24CONTACT RECT LOCK							
005	01	62021422	1		1		PC CONN MSG (DBL ROW) 14 CAVITY							
006	01	24548802	8		14		PC CONTACT SOC 24-26AWG STRIP							
007	01	51863007	4		1		PC CONN MSG (DBL ROW) 14 CAVITY							
008	01	94245602	1		14		PC CONTACT SOC 24-26AWG STRIP							
009	01	24548301	1		3	333	FT WIR 24GA STRD BLK 300V UL PVC							
010	01	24548303	7		3	333	FT WIR 24GA STRD RED 300V UL PVC							
011	01	24548304	5		3	333	FT WIR 24GA STRD ORN 300V UL PVC							
012	01	24548308	6		1	666	FT WIR 24GA STRD V10 300V UL PVC							
013	01	24548310	2		8	166	FT WIR 24GA STRD WMT 300V UL PVC							
014	01	94277401	9		8		PC STRAP CABLE TIE TYPE 1							
015	01	94277409	2		4		PC STRAP CABLE TIE TYPE 6							
							0013 TOTAL LINES							
014	01	24528637	2		125	FT	TUBING INS 32 - BLACK							

DWN	D. Wells	7-15-75	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO.	REV.
CHKD	<i>[Signature]</i>	<i>[Signature]</i>		CABLE ASSY DUAL INDICATOR & SW (W5)	A	61399100	A
ENG	<i>[Signature]</i>	<i>[Signature]</i>		FIRST USED ON	NHA		
MFG	<i>[Signature]</i>	3-17-76		BE6A1A/B	15627600		SHEET 1 of 3
APPR	<i>[Signature]</i>	3-12-76	CODE IDENT				
			15920				

SHEET REVISION STATUS				REVISION RECORD						
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP		
					RELEASED CLASS C			GN		
		01	01	01	C455 DELETED F/N 4 ADDED NRE 2 ADDED WS TO TITLE	R	8-13-75	<i>[Signature]</i>		
		02	01	02	C558 CHG'D DESTINATIONS ON SHT 3	<i>[Signature]</i>	12-29-75	<i>[Signature]</i>		
		03	03	03	C672 ADDED OPT MKG METHOD F/N 13 QTY WAS 6	R	3/1/76	<i>[Signature]</i>		
		A	A	A	10653-38 RELEASED CLASS A		3/16/76	P.G.T.		

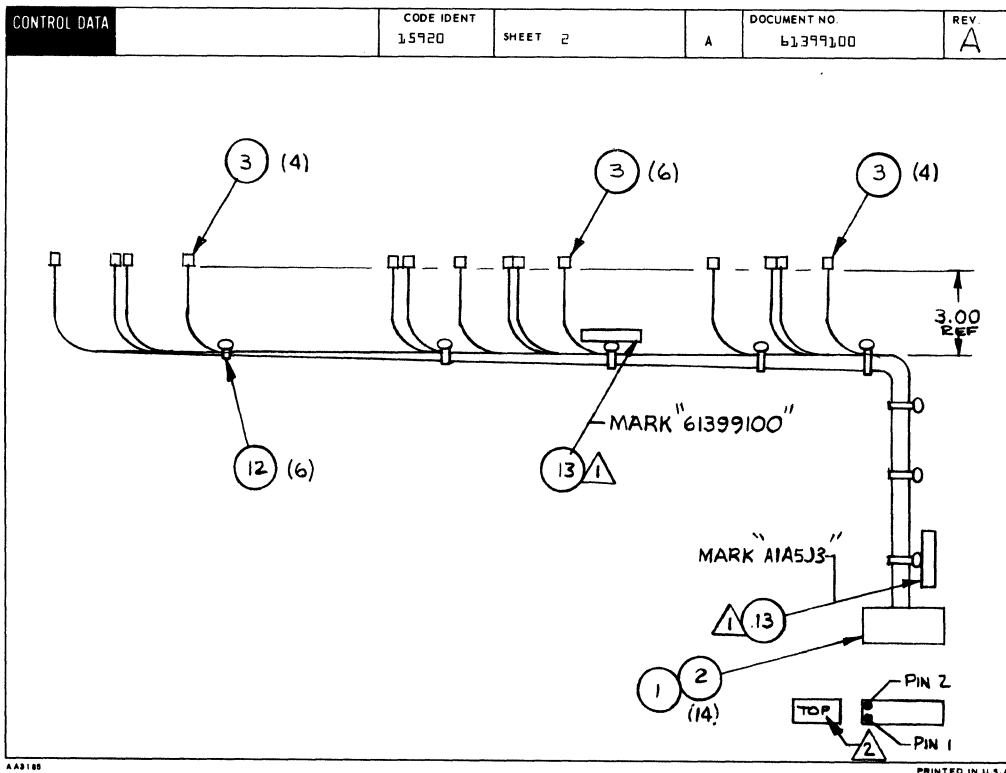
NOTES:

1. Apply label to cable per drawing 821910b1, Method b. Mark as shown.

2. Mark per CDC Spec 10121508; .12 high, white and locate approximately as shown. (Optional Method: Identify with .06 Dia. Min. white dot)

APL	61399100
DETACHED LISTS	

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DWN	D. Wells	7-14-76	CONTROL DATA	TITLE	CABLE ASSY SINGLE IND & SW (W7)	PREFIX	A	DOCUMENT NO	61399600	REV	A
CHKD				FIRST USED ON	BE6A1 C/D	NHA	15627600	SHEET 1 of 3			
ENG				CODE IDENT	15920						
MFG											
APPR											

SHEET REVISION STATUS				REVISION RECORD						
REV	ECO	DESCRIPTION	DRFT	DATE	APP					
		RELEASED CLASS C			GH					
01	01	01	01	C455	ADDED NOTE 2 DELETED F/N 4	R	8-13-75	W		
02	01	02	02	C558	CHG'D DEST. NATIONS SHT 3	MP	10-23-75	W		
03	03	03	03	C672	ADDED OPT METHOD TO NOTE 2	R	7/3/76	W		
A	A	A	A	10653-38	RELEASED CLASS A		3/16/76	P.C.T.		

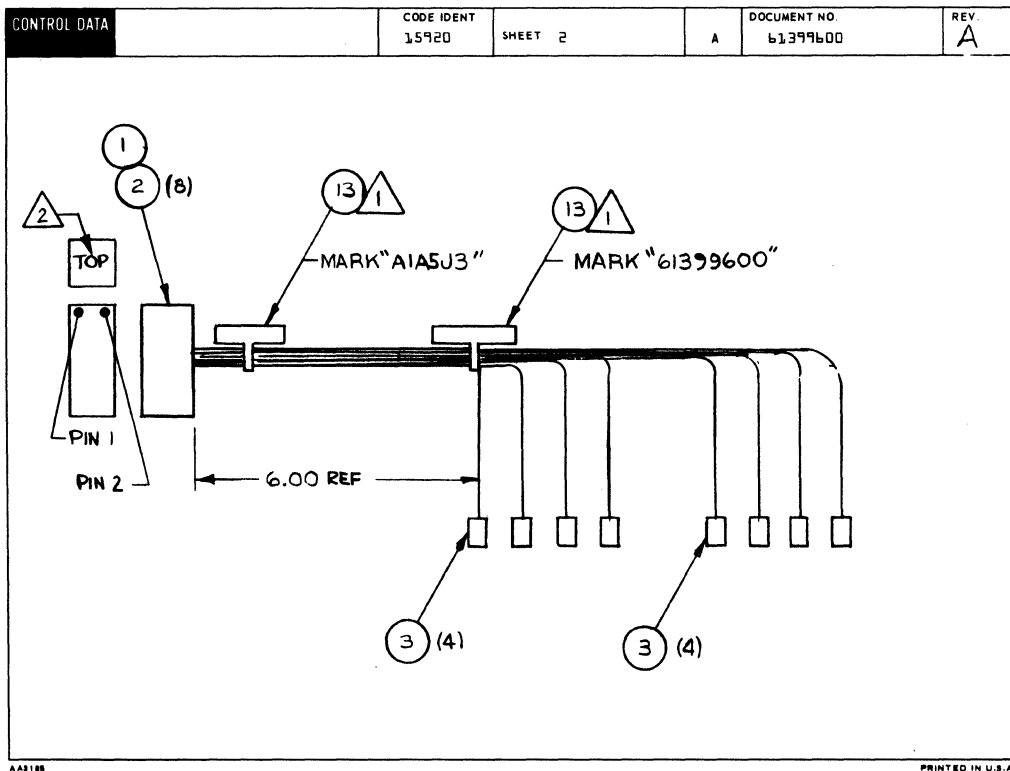
NOTES:

1. APPLY LABEL TO CABLE PER DRAWING 82191061, METHOD B. MARK AS SHOWN.

2. Mark per CDC Spec 10121508: .12 high, white and locate approximately as shown. (Optional Method: Identify with .06 Dia. Min. white dot)

APL	61399600
DETACHED LISTS	

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BUILD ARC 104

### ASSEMBLY PARTS LIST

PRINT DATE 08-15-77 PAGE 1 FILE CHANGE NO. 012402-3

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE		ENG. RESP.	FILE DATE		
0860		61407806		1	A	A	ADAPTER CABLE ASSY		A	REL	08-12-77			08-15-77		
TP/IND NO	LI	PART NUMBER	CO	IN	QUANTITY	U/M	PART DESCRIPTION			MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	53397814	4		1		PC	CONN, MALE 25POSN PLUG ALONE	P							
002	01	51908500	5		1	500	FT	CBL, SHLD FIG 1 25 CNUCT 300V	W							
003	01	53397817	7		25		PC	CONTACT, STRIP PINS 20-24GA	P							
004	01	94288021	2		2		PC	LKG DEVICE, CONNECTOR TYP 3M	P							
005	01	51908402	4		2		PC	CONN HOOD, .430/.390 CHL DIA	P							
006	01	10123821	0		2		PC	LABEL, CBL MK (CDC 12 RVLPS)	B							
007	01	94277407	6		1		PC	STRAP CABLE TIE TYPE 4	B							
008	01	24528606	7		200		FT	TBG, INSUL NO.17 BLK UL PVC	B							
009	01	94277400	1		2		PC	STRAP CABLE TIE TYPE 1	B							
010	01	71491967	7		2		PC	CLIP, GROUND (COPPER/TIN PL)	P							
011	01	24548301	1		100		FT	WIR 24GA STRD BLK 300V UL PVC	W							
012	01	53397914	2		1		PC	CONN, FEM 25POSN PLUG ALONE	P							
013	01	53397917	5		25		PC	CONTACT, STRIP SKT 20-24GA	P							
014	01	94288024	6		2		PC	LKG DEVICE, CONN TYP 4 W/TYP3	P							
015	01	66300462	0	REF			PC	ADAPTER MATRIX	D							
016	01	18563109	0		250		FT	WIRE 26 GA THIN WALL INS 300V	W							
0016 TOTAL LINES																

DWN E. GRONO 2/1/77	(CONTROL) DATA	TITLE ADAPTER CABLE ASSY	PREFIX A	DOCUMENT NO. 61407807	REV A
CHKD [Signature]	ENG [Signature]	FIRST USED ON CC6B1A-B	NHA 15620600	SHEET 1 OF 4	
MFG [Signature]	APPR [Signature]	CODE IDENT 15920			

SHEET REVISION STATUS					REVISION RECORD				
4	3	2	1	REV	ECO	DESCRIPTION	DRFT.	DATE	APP
A	A	A	A	A	12402-3	RELEASED CLASS A		8-18-77	MSK

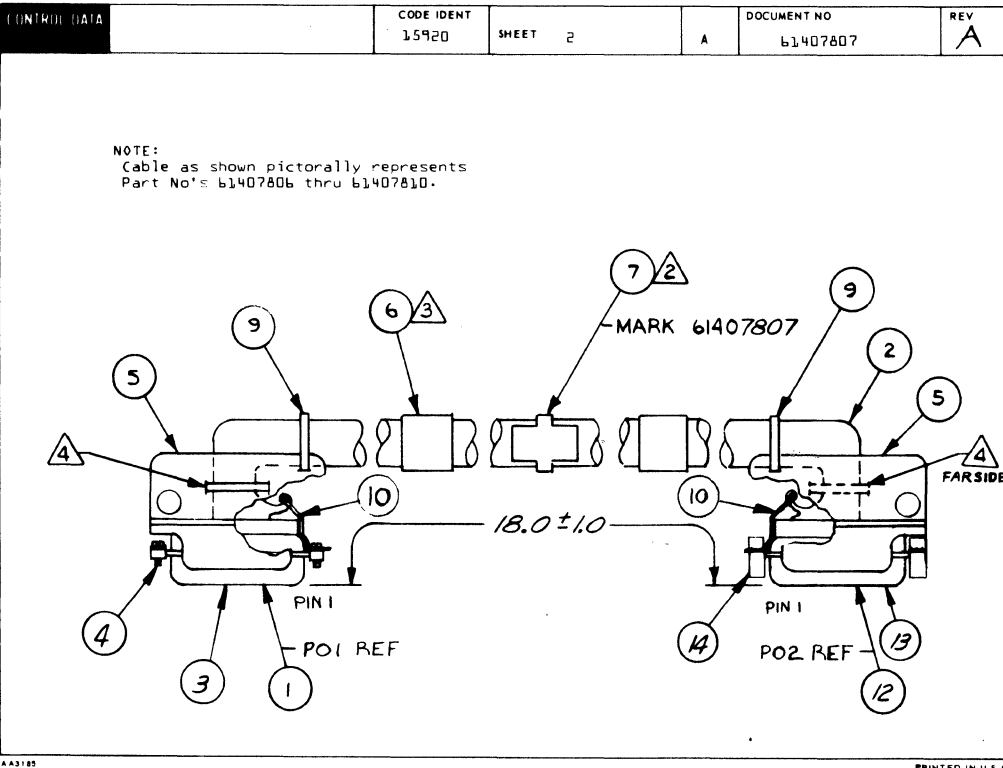
  

NOTES: 1. SEE 66300462 FOR PROPER USE OF EACH TAB.  
2. APPLY LABEL TO CABLE PER DRAWING 82191061, METHOD 5.  
3. APPLY LABEL TO CABLE PER CDC SPEC 1.30-808.  
4. CABLE TIE FURNISHED WITH CONNECTOR.

APL 61407807  
 DETACHED LISTS

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CONTROL DATA					CODE IDENT		SHEET		WL		DOCUMENT NO.		REV.
					15920		3				61407807		A
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX) IN.	ORIGIN		ACCESS FIND NO.		DESTINATION		ACCESS FIND NO.		REMARKS
1	2	22	Bare	1.8	P01	01	3-8-10 gnd clip 11		P02	01	3-8-10 gnd clip 11		Solder bare drain wire with sleeving to gnd clip. Solder black wire from Pin 1 to gnd clip.
2	2	24	0	1.8	P01	02	3		P02	02	3		
3		24	9		P01	03	3		P02	03	3		
4		24	2		P01	04	3		P02	04	3		
5		24	5		P01	05	3		P02	05	3		
6		26	90		P01	06	3		P02	06	3		
7		26	91		P01	07	3		P02	07	3		
8		26	92		P01	08	3		P02	08	3		
9		26	93		P01	09	3		P02	09	3		
10		26	94		P01	10	3		P02	10	3		
11		26	95	1.8	P01	11	3		P02	11	3		
12		26	96	3 1.8	P01	11 P01	12 12	3	P01	19	-		
13		26	97		P01	13	3		P02	12	3		
14		26	98		P01	14	3		P02	13	3		
15		26	900		P01	15	3		P02	14	3		
16		26	901		P01	16	3		P02	15	3		
17		26	902		P01	17	3		P02	16	3		
18		26	903		P01	18	3		P02	17	3		
19	2	26	904	1.8	P01	19	3		P02	18	3		

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CONTROL DATA					CODE IDENT		SHEET		WL		DOCUMENT NO.		REV.
					15920		4				61407807		A
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX) IN.	ORIGIN		ACCESS FIND NO.		DESTINATION		ACCESS FIND NO.		REMARKS
20	2	26	905	1.8	P01	20	3		P02	20	3		
21	2	26	906		P01	21	3		P02	21	3		
22	2	26	907		P01	22	3		P02	22	3		
23	2	26	908		P01	23	3		P02	23	3		
24	2	26	910		P01	24	3		P02	24	3		
25	2	26	911	1.8	P01	25	3		P02	25	3		

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BUILD ARC 104

### ASSEMBLY PARTS LIST

PRINT DATE 08-15-77 PAGE 1 FILE CHANGE NO. U1240203

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE	
0860		61407807		9	A	A	ADAPTER CABLE ASSY		A	REL	08-12-77		08-15-77	
ITEM NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	53397814	4	1		PC CONN, MALE 25POSN PLUG ALONE		P						
002	01	51908500	5	1	500	FT CBL, SHLD FIG 1 25 CONDCT 300V		W						
003	01	53397817	7	25		PC CONTACT, STRIP PINS 20-24GA		P						
004	01	94288021	2	2		PC LKG DEVICE, CONNECTOR TYP 3M		P						
005	01	51908402	4	2		PC CONN HOOD, .430/.390 CBL DIA		P						
006	01	10123821	0	2		PC LABEL, CRL MK (CDC 12 RVL0PS)		B						
007	01	94277407	6	1		PC STRAP CABLE TIE TYPE 4		B						
008	01	24528606	7	200		FT TBG, INSUL NO.17 BLK UL PVC		B						
009	01	94277400	1	2		PC STRAP CABLE TIE TYPE 1		B						
010	01	71491967	7	2		PC CLIP, GROUND (COPPER/TIN PL)		P						
011	01	24548301	1	100		FT WIR 24GA STRD BLK 300V UL PVC		W						
012	01	53397914	2	1		PC CONN, FEM 25POSN PLUG ALONE		P						
013	01	53397917	5	25		PC CONTACT, STRIP SKT 20-24GA		P						
014	01	94288024	6	2		PC LKG DEVICE, CONN TYP 4 W/TYP3		P						
015	01	66300462	0	REF		PC ADAPTER MATRIX		D						
016	01	18563109	0	250		FT WIRE 26 GA THIN WALL INS 300V		W						
0016 TOTAL LINES														



CONTROL DATA				CODE IDENT		SHEET		WL		DOCUMENT NO.		REV.
				15920		3				61407808		A
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX) IN.	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS	
1	2	22	Bare	18	P01	01	3-8-10 gnd clip 11	P02	01	3-8-10 gnd clip 11	Solder bare drain wire with sleeving to gnd clip. Solder black wire from Pin 1 to gnd clip.	
2	2	24	0	18	P01	02	3	P02	02	3		
3	2	24	9	18	P01	03	3	P02	03	3		
4	2	24	2	18	P01	04	3	P02	04	3		
5	2	24	5	18	P01	05	3	P02	05	3		
6	2	26	90	18	P01	06	3	P02	06	3		
7	2	26	91	18	P01	07	3	P02	07	3		
8	2	26	92	18	P01	08	3	P02	08	3		
9	2	26	93	18	P01	09	3	P02	09	3		
10	2	26	94	18	P01	10	3	P02	10	3		
11	2	26	95	18	P01	11	3	P02	11	3		
12	2	26	96	18	P01	12	3	P02	12	3		
13	2	26	97	18	P01	13	3	P02	13	3		
14	2	26	98	18	P01	14	3	P02	14	3		
15	2	26	900	18	P01	15	3	P02	15	3		
16	2	26	901	18	P01	16	3	P02	16	3		
17	2	26	902	18	P01	17	3	P02	17	3		
18	2	26	903	18	P01	18	3	P02	18	3		
19	2	26	904	18	P01	19	3	P02	19	3		

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CONTROL DATA				CODE IDENT		SHEET		WL		DOCUMENT NO.		REV.
				15920		4				61407808		A
CONDUCTOR IDENT.	FIND NO.	GAUGE (REF.)	COLOR (REF.)	LENGTH (APPROX) IN.	ORIGIN		ACCESS FIND NO.	DESTINATION		ACCESS FIND NO.	REMARKS	
20	2	26	905	18	P01	20	3	P02	20	3		
21	2	26	906	18	P01	21	3	P02	21	3		
22	2	26	907	18	P01	22	3	P02	22	3		
24	2	26	910	18	P01	24	3	P02	24	3		
25	2	26	911	18	P01	25	3	P02	25	3		

AA3183 REV. 8-71

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BUILD ARC 104

### ASSEMBLY PARTS LIST

PRINT DATE 08-15-77 PAGE 1 FILE CHANGE NO. 012402-3

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION			MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE
0860		61407808		7	A	A	ADAPTER CABLE ASSY			A	REL	08-12-77		08-15-77
IND NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/M	WK IN	WK OUT
001	01	53397814	4	1		PC	CONN, MALE 25POSN PLUG ALONE	P						
002	01	51908500	5	1	500	FT	CBL, SHLD FIG 1 25 CNDUCT 300V	W						
003	01	53397817	7	25		PC	CONTACT, STRIP PINS 20-24GA	P						
004	01	94288021	2	2		PC	LKG DEVICE, CONNECTOR TYP 3M	P						
005	01	51908402	4	2		PC	CONN HOOD, .430/.390 CBL DIA	P						
006	01	10123821	0	2		PC	LABEL, CBL MK (CUC 12 RVLPS)	B						
007	01	94277407	6	1		PC	STRAP CARLE TIE TYPE 4	B						
008	01	24528606	7	200		FT	TBG, INSUL NO.17 BLK UL PVC	B						
009	01	94277400	1	2		PC	STRAP CARLE TIE TYPE 1	B						
010	01	71491967	7	2		PC	CLIP, GROUND (COPPER/TIN PL)	P						
011	01	24548301	1	100		FT	WIR 24GA STRD BLK 300V UL PVC	W						
012	01	53397914	2	1		PC	CONN, FEM 25POSN PLUG ALONE	P						
013	01	53397917	5	25		PC	CONTACT, STRIP SKT 20-24GA	P						
014	01	94288024	6	2		PC	LKG DEVICE, CONN TYP 4 K/TYP3	P						
015	01	66300462	0	REF		PC	ADAPTER MATRIX	0						
							0015 TOTAL LINES							

DWN	E. GRONO	7/1/77	CONTROL DATA	TITLE	ADAPTER CABLE ASSY	PREFIX	DOCUMENT NO	REV
CHKD	<i>[Signature]</i>	7/1/77		FIRST USED ON	CC6B1A-B	A	61407809	A
ENG	<i>[Signature]</i>	7/1/77				NHA	15620600	SHEET 1 OF 4
MFG	<i>[Signature]</i>	7/1/77	CODE IDENT					
APPR	<i>[Signature]</i>	7-11-77	15920					

SHEET REVISION STATUS				REVISION RECORD					
4	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
	A	A	A	A	12402-3	RELEASED CLASS	A	8-12-77	<i>[Signature]</i>

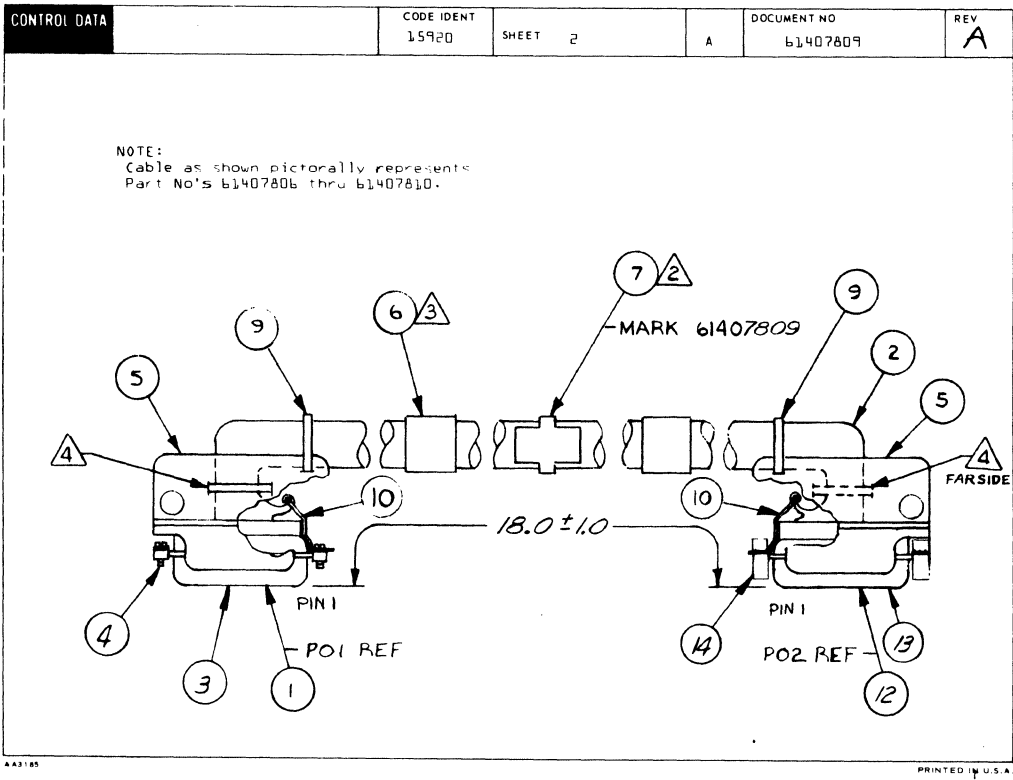
  

NOTES

- 1. SEE 66300462 FOR PROPER USE OF EACH TAB.
- 2. APPLY LABEL TO CABLE PER DRAWING 82191061, METHOD 5.
- 3. APPLY LABEL TO CABLE PER CDC SPEC 1-30-808.
- 4. CABLE TIE FURNISHED WITH CONNECTOR.

APL 61407809  
DETACHED LISTS

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### ASSEMBLY PARTS LIST

PRINT DATE: 08-15-77  
 PAGE: 1  
 FILE CHANGE NO.: 01240203

DIV.	ASSEMBLY NUMBER	CD	REV.	DWG.	DESCRIPTION	MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE			
0860	61407809	S	A	A	ADAPTER CABLE ASSY	A	REL	08-12-77		08-15-77			
ITEM NO.	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	53397814	4	1		PC CONN, MALE 25POSN PLUG ALONE	P						
002	01	51908500	5	1	500	FT CBL, SHLD FIG 1 25 CNDCT 300V	W						
003	01	53397817	7	25		PC CONTACT, STRIP PINS 20-24GA	P						
004	01	94288021	2	2		PC LKG DEVICE, CONNECTOR TYP 3M	P						
005	01	51908402	4	2		PC CONN HOOD, .430/.390 CBL DIA	P						
006	01	10123821	0	2		PC LABEL, CBL MK (CDC 12 RVLPS)	B						
007	01	94277407	6	1		PC STRAP CABLE TIE TYPE 4	B						
008	01	24528606	7	200		FT TBG, INSUL NO.17 BLK UL PVC	B						
009	01	94277400	1	2		PC STRAP CABLE TIE TYPE 1	B						
010	01	71491967	7	2		PC CLIP, GROUND (COPPER/TIN PL)	P						
011	01	24548301	1	100		FT WIR 24GA STRD BLK 300V UL PVC	W						
012	01	53397914	2	1		PC CONN, FEM 25POSN PLUG ALONE	P						
013	01	53397917	5	25		PC CONTACT, STRIP SKY 20-24GA	P						
014	01	94288024	6	2		PC LKG DEVICE, CONN TYP 4 /TYP3	P						
015	01	66300462	0	REF		PC ADAPTER MATRIX	D						
016	01	18563109	0	1		FT WIRE 26 GA THIN WALL INS 300V	W						
0016 TOTAL LINES													





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### ASSEMBLY PARTS LIST

PRINT DATE 08-15-77 PAGE 1 FILE CHANGE NO. 012402-03

DIV.		ASSEMBLY NUMBER		CD	REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
0860		61407810		3	A	A	ADAPTER CABLE ASSY		A	REL	08-12-77		08-15-77		
TP	IND	NO	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION	MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01			53397814	4	1		PC CONN, MALE 25POSN PLUG ALONE	P						
002	01			51908500	5	1	500	FT CBL, SMLD FIG 1 25 CNDCT 300V	W						
003	01			53397817	7	25		PC CONTACT, STRIP PINS 20-24GA	P						
004	01			94288021	2	2		PC LKG DEVICE, CONNECTOR TYP 3M	P						
005	01			51908402	4	2		PC CONN HOOD, .430/.390 CBL DIA	P						
006	01			10123821	0	2		PC LABEL, CRL MK (CDC 12 RVLOPS)	B						
007	01			94277407	6	1		PC STRAP CABLE TIE TYPE 4	B						
008	01			24528606	7	200		FT TBG, INSUL NO.17 BLK UL PVC	B						
009	01			94277400	1	2		PC STRAP CABLE TIE TYPE 1	B						
010	01			71491967	7	2		PC CLIP, GROUND (COPPER/TIN PL)	P						
011	01			24548301	1	100		FT WIR 24GA STRD BLK 300V UL PVC	W						
012	01			53397914	2	1		PC CONN, FEM 25POSN PLUG ALONE	P						
013	01			53397917	5	25		PC CONTACT, STRIP SKT 20-24GA	P						
014	01			94288024	6	2		PC LKG DEVICE, CONN TYP 4 W/TYP3	P						
015	01			66300462	0	REF		PC ADAPTER MATRIX	D						
016	01			18563109	0	2		FT WIRE 26 GA THIN WALL INS 300V	W						
								0016 TOTAL LINES							





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### ASSEMBLY PARTS LIST

PRINT DATE: 09-07-77  
 PAGE: 1  
 FILE CHANGE NO.: 012402-3

DIV.		ASSEMBLY NUMBER		REV.	DWG.	DESCRIPTION		MC	STATUS	STATUS DATE	ENG. RESP.	FILE DATE		
0860		61407811		1	A	ADAPTER CABLE ASSY		A	REL	08-12-77		09-07-77		
TP/IND NO.	LI	PART NUMBER	CD	QTY	U/M	PART DESCRIPTION		MC	YLD	ECO. NO. IN	ECO. NO. OUT	S/N	WK IN	WK OUT
001	01	51916925	4	2		PC CONN 25 PIN								
002	01	65832242	5	333	FT	CBL SLAT 25 CONDUCT 28AWG F3								
003	01	51875323	1	2		PC STDOFF M-F HEX BRS 4-40X3								
004	01	94288024	6	2		PC LKG DEVICE, CONN TYP 4 W/TYP3								
005	01	66304317	2	REF		PC CONVERTER INSTALLATION INST								
006	01	66300462	0	REF		PC ADAPTER MATRIX								
0006 TOTAL LINES														







This section contains the spare parts lists available for the terminal subsystem. These are the listings of parts which should be maintained as site spares and which should be available for repairing the terminal in the field.

This section contains the spare parts lists for the keyboard display, nonimpact printer, and tape cassette unit. These are the parts/assemblies/modules which should be maintained as site spares and be available for repairing these equipments in the field. For spare parts identification for the impact printer, refer to the manual or spares list for that printer. See the preface of this manual for the numbers of such publications.

	<u>Drawing</u>	<u>Page</u>
Display Station 80 x 12 60 Hz .....		8-3
Display Station 80 x 12 50 Hz .....		8-5
Display Station 80 x 12 50 Hz .....		8-7
Display Station 80 x 12 60 Hz .....		8-9
SPL, Printer, Serial, Thermal 60 Hz .....		8-11
SPL, Printer, Serial, Thermal 50 Hz .....		8-12
LIAT Tape Cassette (BE6A1A/C) .....		8-13
LIAT Tape Cassette (BE6A1B/D) .....		8-14
Extended Memory Option .....		8-15
Printer Controller .....		8-16
Current Loop Option .....		8-17
Answerback Option .....		8-18
Multi-Drop Option .....		8-19
SPL Cassette Option .....		8-20
Edit Option .....		8-21
Highlight Option .....		8-22
Paging Option .....		8-23

### NOTE

The part number 71452900 revision B and later access panels are made with slotted air holes to provide more cooling for the display terminal. The panels are listed on the top level assemblies parts lists but not on any spare parts lists. When ordering, the slotted version access panel will be sent, but to ensure it, request access panel part number 71452900 with slots.



DWN	R Trautman	b-75	CONTROL DATA	TITLE	DISPLAY STATION 80 X 12 60HZ	PREFIX	DOCUMENT NO.	REV.
CHKD	M Plantenberg	75		SPL	66248200	AA		
ENG	E Anderson	b-75		FIRST USED ON	CC6B1A/C & CC614A/C	SHEET	1 of 3 and 1A	
MFG	L Link	b-75		CODE IDENT	15920			
APPR	E Anderson	b-75		E.S.	B Bayer	b-75		

SHEET REVISION STATUS										REVISION RECORD				
1A	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP					
-	S	S	S	S	CD 12153	Retyped sheet 1, added note 3 & F/Ns 30 & 31	RT	6/6/77	AKD					
-	S	T	T	T	12351	REVISED PER ECO	MD	8/1/77	MD					
-	S	U	U	U	CD 12714	REVISED PER ECO	JM	1-24-78	AKD					
-	V	V	V	V	12745	REVISED PER ECO	EE	2/23/78	mc B					
W	W	W	W	W	12687	ADDED SHT 1A REVISED PER ECO	R	2-21-78	ENH					
W	Y	W	Y	Y	12855	REVISED PER ECO	E.E.	4-21-78	AKD					
W	Z	W	Z	Z	12827	REVISED PER ECO	WJG	5-19-78	AKD					
W	AA	AA	AA	AA	12995	REVISED PER ECO	WJG	8-8-78	AKD					

NOTES: 1. SP Loc. Codes: W = Warehouse, S = Site.  
2. Find number 16, 24 and 25 to be replaced as per specific regulator assembly as called out in Subsystem Maint. Manual.

DETACHED LISTS

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CONTROL DATA	CODE IDENT	SHEET	PREFIX	DOCUMENT NO.	REV.
	15920	1A	SPL	66248200	W

NOTES: (cont)

4 F/N 32 can only be used in CC6B1-A10, CC6B1-C05, CC614-A06 and CC614-C06, and up. F/N 3 can be used in any Series Code level.

AA3180

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CONTROL DATA		LIAT DISPLAY		CODE IDENT	SHEET	S PL	DOCUMENT NO.	REV.		
				15920	2		66248200	AA		
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED						UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL
1	51905600	1						PC W	Transformer, Power	
2	51907303	1						PC W	CRT, 12 inch, P4	
3	51907402	1						PC S	Keyboard, 95 Key	△
4	90393600	1						PC S	P.C. Assy, 4BBD	5V Reg.
5	90445705	1						PC S	P.C. Assy, 4BXD-4	Refresh
6	90442100	1						PC S	P.C. Assy, 4BYD-1	Processor
7	90421700	1						PC W	P.C. Assy, 4DWD	Filter and Reg.
8	90411600	1						PC W	P.C. Assy, 4CKD	LED Panel
9	90417300	1						PC W	P.C. Assy, 4DFD	LED Panel
10	90460619	1						PC S	P.C. Assy, 6BND-0	CRT Monitor △
11	90444900	1						PC S	P.C. Assy, 5ACD-3	Memory, 4K
12	61401100	4						PC S	Switch Rocker	2 Pos. SPDT
13	61401101	1						PC S	Switch Rocker	3 Pos. SPDT
14	61401102	1						PC S	Switch Rocker	2 Pos. SPDT Pwr.
15	61375200	1						PC S	CABLE ASSY Intensity Control	
16	61407437	1						PC W	I C ASSY	T0199 package
17	61407419	1						PC W	CHOKE ASSY	
18	61407418	1						PC W	YOKE ASSY	
19	51899703	1						PC W	Filter RF1 5 Amp	AC Entry Panel
20	18797101	1						PC S	SW Push Button	Momentary

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CONTROL DATA		LIAT DISPLAY		CODE IDENT	SHEET	S PL	DOCUMENT NO.	REV.		
				15920	3		66248200	AA		
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED						UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL
21	51781602	1						PC S	SW Slide	DPST
22	61401103	1						PC S	Switch Rocker	* 3 POS DPDT
23	614086075	1						PC W	H.V. TRANSFORMER ASSY	
24	58018602	1						PC W	Pass Transistor	T03 Package
25	15130504	1						PC W	1.5V Regulator	T03 Package
26	93418327	1						PC S	FUSE 2.0A 250V	
27	51917050	1						PC S	MAGNET ORANGE 1.5 GAUSS	
28	51917051	1						PC S	MAGNET YELLOW 2.0 GAUSS	
29	51917052	1						PC S	MAGNET SILVER 3.0 GAUSS	
30	51908902	1						PC W	SONALART	
31	51777314	4						PC S	Support, Plastic P.C.	
32	51907705	1						PC S	CB W/Trip Coil 3.5 Amp	AC Entry Panel
33	51908602	1						PC S	Thms, Disc 2.5 Ohm	AC Entry Panel
34	51907405	1						PC S	Keyboard, 95 Key	△
35	61407856	1						PC W	CAP ASSY- CRT	
36	51915101	1						PC W	KN0B PLAIN	
37	51004063	.1						OZ W	ADHESIVE	
38	95637304	3						PC S	DIODE, SIL, 1N4004	

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DWN	R Trautman	b-75	CONTROL DATA	TITLE	DISPLAY STATION 80 X 12 50HZ	PREFIX	DOCUMENT NO.	REV.
CHKD	M Plantenberg	75				SPL	66248100	W
ENG	F Anderson	b-75			FIRST USED ON			
MFG	L Link	b-75			CC6B1B & CC614B			SHEET 1 of 3 and 1A
APPR	F Anderson	b-75		CODE IDENT				
F.S.	B Bayer	b-75	15920					

SHEET REVISION STATUS										REVISION RECORD				
1A	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP					
	-	P	P	P	P	CD12153		RT	5/6/77	920				
		-	P	R	R	12351	REVISED PER ECO	MD	8/1/77	920				
		-	P	S	S	CD12714	REVISED PER ECO	JM	1-24-78	920				
		T	T	T	T	12687	Added Sht 1A-REVISED PER ECO	RB	3-21-78	EMZ				
		T	U	T	U	12855	REVISED PER ECO	E.E.	4-21-78	920				
		T	V	T	V	12827	REVISED PER ECO	WJG	5-19-78	920				
		T	W	W	W	12995	REVISED PER ECO	WJG	8-8-78	920				

NOTES: 1. SP Loc Codes: W = Warehouse, S = Site.  
2. Find No. 16, 24 & 25 to be replaced as per specific regulator assembly as called out in Systems Maint. manuals.

DETACHED LISTS

AA3180 REV. 8/77

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CONTROL DATA	CODE IDENT	SHEET	DOCUMENT NO.	REV.
	15920	1A	66248100	T

Notes: (Cont)

4 F/N 32 can only be used in CC6B1-B15, CC614-B06 and up. F/N 3 can be used in any Series code level.

AA3185

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CONTROL DATA		LIAT DISPLAY		CODE IDENT 15920	SHEET 2	SPL	DOCUMENT NO. 66248100	REV. W					
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED								UNIT OF MEAS		NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL
1	51905600	1								PC	W	Transformer, Power	
2	51907303	1								PC	W	CRT, 12 inch, P4	
3	51907402	1								PC	S	Keyboard, 95 Key	△
4	90393600	1								PC	S	P.C. Assy, 48BD	5V Reg.
5	90445705	1								PC	S	P.C. Assy, 48XD-4	Refresh
6	90442100	1								PC	S	P.C. Assy, 4BYD-1	Processor
7	90421700	1								PC	W	P.C. Assy, 4DWD	Filter & Reg.
8	90411600	1								PC	W	P.C. Assy, 4CKD	LED Panel
9	90417300	1								PC	W	P.C. Assy, 4DFD	LED Panel
10	90460619	1								PC	S	P.C. Assy, 6BND-0	CRT Monitor △
11	90444900	1								PC	S	P.C. Assy, 5ACD-3	Memory, 4K
12	61401100	4								PC	S	Switch Rocker	2 Pos. SPDT
13	61401101	1								PC	S	Switch Rocker	3 Pos. SPDT
14	61401102	1								PC	S	Switch Rocker	2 Pos. SPDT Pwer.
15	61375200	1								PC	S	CABLE ASSY INTENSITY CONTROL	
16	61407437	1								PC	W	15V Regulator	T0199 package
17	61407419	1								PC	W	CHOKE ASSY	
18	61407418	1								PC	W	Yoke ASSY	
19	61374003	1								PC	W	AC Entry Panel 50HZ	
20	18797101	1								PC	S	SW Push Button	Momentary

AA3181 REV. 8/71

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CONTROL DATA		LIAT DISPLAY		CODE IDENT 15920	SHEET 3	SPL	DOCUMENT NO. 66248100	REV. W					
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED								UNIT OF MEAS		NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL
21	51781602	1								PC	S	SW Slide	DPST
22	61401103	1								PC	S	Switch, Rocker	
23	61408075	1								PC	S	H.V. Xformer Assy	
24	58018602	1								PC	W	Pass Transistor	T03 package
25	15130504	1								PC	W	15V Regulator	T03 package
26	93418327	1								PC	S	FUSE 2.0A 250V	
27	51917050	1								PC	S	MAGNET ORANGE 1.5 GAUSS	
28	51917051	1								PC	S	MAGNET YELLOW 2.0 GAUSS	
29	51917052	1								PC	S	MAGNET SILVER 3.0 GAUSS	
30	51908902	1								PC	W	SONALERT	
31	51777314	4								PC	S	Support, Plastic P.C.	
32	51907405	1								PC	S	Keyboard 95 Key	△
33	61407856	1								PC	W	CAP ASSY, CRT	
34	51915101	1								PC	W	KNOB PLAIN	
35	51004063	1								OZ	W	ADHESIVE	
36	95637304	3								PC	S	DIODE, SIL 1N4004	
37	51899703	1								PC	W	FILTER RFI 5 AMP	
38	51907703	1								PC	W	C.B. WITH TRIP COIL	
39	51908602	1								PC	W	THMS, DISC 2.5 OHM	

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DWN	R. TRAUTMAN	7-76	CONTROL DATA	TITLE	DISPLAY STATION 80 X 12 50HZ	PREFIX	DOCUMENT NO.	REV
CHKD	<i>[Signature]</i>	<i>[Signature]</i>				SPL	66299635	H
ENG	<i>[Signature]</i>	<i>[Signature]</i>						
MFG	<i>[Signature]</i>	<i>[Signature]</i>						
APPR	<i>[Signature]</i>	<i>[Signature]</i>	CODE IDENT	FIRST USED ON	CC614D + CC6B1D		SHEET	1 of 3
			15920					

SHEET REVISION STATUS										REVISION RECORD				
1A	3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP					
				A	10653-62	RELEASED CLASS A	—	8/6/76	<i>[Signature]</i>					
				B	CD11747	ADDED F/N 25, 26, 27, 28	WJA	12/1/76	<i>[Signature]</i>					
				C	CD12153	Added note 5, sheet 1 & F/Ns 29 & 30.	RT	3/6/77	<i>[Signature]</i>					
				C	12495	F/N 3 WAS 51907402	WJA	11/2/77	<i>[Signature]</i>					
				E	CD12714	REVISED PER ECO	JM	1-24-78	<i>[Signature]</i>					
				F	12657	REVISED PER ECO	Ro	7-21-78	<i>[Signature]</i>					
				G	12855	REVISED PER ECO	E.E.	4-21-78	<i>[Signature]</i>					
				G	12827	REVISED P/N 25	WJG	5-19-78	<i>[Signature]</i>					

NOTES:  
1. SP LOC. CODES: W = Warehouse; S = SITE.  
2. TOP LEVEL ASSEMBLY 15611304 (CC614D) AND 15620604 (CC6B1D).  
3. Find No. 23 & 24 to be replaced as per specific regulator assembly as called out in Subsystems Maint. Manuals.  
4. EQUIPMENT CONFIGURATOR 15611303 (CC614D) AND 15620603 (CC6B1D).

DETACHED LISTS

CONTROL DATA	CODE IDENT	SHEET	DOCUMENT NO.	REV.
	15920	1A	66299635	G

Notes Cont. :

**△** Either F/N 3 or F/N 31 can be used at any Series Code Level.

CONTROL DATA			CODE IDENT 15920				SHEET 2		SPL		DOCUMENT NO. 66299635	REV. F	
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED								UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL	
1	51905600	1								PC	W	Transformer, Power	
2	51907303	1								PC	W	CRT, 12 inch, P4	
3	51907402	1								PC	S	Keyboard, 95 Key	△
4	90393600	1								PC	S	P.C. Assy, 4BBD	5V Reg.
5	90445705	1								PC	S	P.C. Assy, 4BXD-4	Refresh
6	90442100	1								PC	S	P.C. Assy, 4BYD-1	Processor
7	90421700	1								PC	W	P.C. Assy, 4DWD	Filter & Reg.
8	90411600	1								PC	W	P.C. Assy, 4CKD	LED Panel
9	90417300	1								PC	W	P.C. Assy, 4DFD	LED Panel
10	90460619	1								PC	S	P.C. Assy, 6BND-0	CRT Monitor △
11	90443500	1								PC	S	P.C. Assy, 5ACD-2	Memory, 4K
12	61401100	4								PC	S	Switch Rocker	2 Pos. SPDT
13	61401101	1								PC	S	Switch Rocker	3 Pos. SPDT
14	61401102	1								PC	S	Switch Rocker	2 Pos. SPDT Pwr.
15	51899042	1								PC	S	Pot Intensity Control	1 Meg.
16	51906800	1								PC	W	Coil 320 MH	
17	61407418	1								PC	W	Yoke Deflection	
18	61374003	1								PC	W	AC Entry Panel 50HZ	
19	18797101	1								PC	S	SW Push Button	Momentary
20	51781602	1								PC	S	SW Slide	DPST

REV. 8/71

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CONTROL DATA			CODE IDENT 15920				SHEET 3		SPL		DOCUMENT NO. 66299635	REV. H	
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED								UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL	
21	61401103	1								PC	S	Switch, Rocker	
22	61408075	1								PC	S	H.V. Xformer Assy	
23	58018602	1								PC	W	Pass Transistor	T03 package
24	51605400	1								PC	W	15V Regulator	T02 package
25	93418327	1								PC	S	FUSE 2.0A 250V	
26	51917050	1								PC	S	MAGNET ORANGE 1.5 GAUSS	
27	51917051	1								PC	S	MAGNET YELLOW 2.0 GAUSS	
28	51917052	1								PC	S	MAGNET SILVER 3.0 GAUSS	
30	51777314	4								PC	S	Support, Plastic P.C.	
31	51907405	1								PC	S	Keyboard, 95 Key	△
32	61407856	1								PC		CAP ASSY, CRT	

A43181 REV. 8/71

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DWN	R. TRAUTMAN	7-76	CONTROL DATA	TITLE	DISPLAY STATION 80 X 12 60HZ	PREFIX	DOCUMENT NO.	REV
CHKD	<i>[Signature]</i>	<i>[Signature]</i>		FIRST USED ON	CC614E	SPL	66299634	G
ENG	<i>[Signature]</i>	<i>[Signature]</i>						
MFG	<i>[Signature]</i>	<i>[Signature]</i>						
APPR	<i>[Signature]</i>	<i>[Signature]</i>	CODE IDENT				SHEET	1 of 3
			15920					

SHEET REVISION STATUS				REVISION RECORD				
3	2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP
A	A	A	A	106532	RELEASED CLASS A		8-6-76	<i>[Signature]</i>
B	B	B	B	CD11747	ADDED F/N 25,26,27,28	<i>[Signature]</i>	12/17/76	<i>[Signature]</i>
C	C	C	C	CD12153	F/N 10 WAS 90460619 ADDED F/N 29	<i>[Signature]</i>	5/1/77	<i>[Signature]</i>
D	D	D	D	12745	REVISED PER ECO	EE	2/23/78	<i>[Signature]</i>
E	E	E	E	12855	REVISED PER ECO	E.E.	4-21-78	<i>[Signature]</i>
F	F	F	F	12827	CHG P/N 25	WJG	5-19-78	<i>[Signature]</i>
G	G	G	G	12995	REVISED PER ECO	WJG	8-8-78	<i>[Signature]</i>

NOTES:

- SP LOC. CODES; W = WAREHOUSE; S = SITE. S Either F/N 3 or F/N 37 can be used on any series code level.
- TOP LEVEL ASSEMBLY 15b1130b.
- Find Number 23 & 24 to be replaced as per specific regulator assembly as called out in Subsystem Maint. Manuals.
- EQUIPMENT CONFIGURATOR 15b11305.

DETACHED LISTS


AA3180 REV. 8-71

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CONTROL DATA			CODE IDENT	SHEET	SPL	DOCUMENT NO.	REV.
			15920	2		66299634	G
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED	UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL		
1	51905600	1	PC W	Transformer, Power			
2	51907303	1	PC W	CRT, 12 inch, P4			
3	51907402	1	PC S	Keyboard, 95 Key	<span style="border: 1px solid black; padding: 2px;">S</span>		
4	90393600	1	PC S	P.C. Assy, 48BD	5V Reg.		
5	90445705	1	PC S	P.C. Assy, 48XD-4	Refresh		
6	90442100	1	PC S	P.C. Assy, 4BYD-1	Processor		
7	90421700	1	PC W	P.C. Assy, 4DWD	Filter and Reg.		
8	90411600	1	PC W	P.C. Assy, 4CKD	LED Panel		
9	90417300	1	PC W	P.C. Assy, 4DFD	LED Panel		
10	90450619	1	PC S	P.C. ASSY, LBND-0			
11	90444900	1	PC S	P.C. Assy, 5ACD-3	Memory, 4K		
12	61401100	4	PC S	Switch Rocker	2 Pos. SPDT		
13	61401101	1	PC S	Switch Rocker	3 Pos. SPDT		
14	61401102	1	PC S	Switch Rocker	2 Pos. SPDT Pwr.		
15	61375200	1	PC S	CABLE ASSY INTENSITY CONTROL			
16	61407419	1	PC W	Choke Assy			
17	61407418	1	PC W	Yoke Assy			
18	51899703	1	PC W	Filter RF, 5 Amp	AC Entry Panel		
19	18797101	1	PC S	SW Push Button	Momentary		
20	51781602	1	PC S	SW Slide	DPST		

AA3181 REV. 8-71

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CONTROL DATA		CODE IDENT	SHEET	SPL	DOCUMENT NO.	REV.								
		15920	3		66299634	G								
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED										UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL
21	61401103	1										PC S	Switch Rocker	No. 3 POS DPDT
22	61408075	1										PC W	H.V. Transformer Assy	
23	56016602	1										PC W	Pass Transistor	T03 Package
24	15130304	1										PC W	1.5V Regulator	T03 Package
25	93416327	1										PC S	FUSE 2.0A 250V	
26	51917050	1										PC S	MAGNET ORANGE 1.5 GAUSS	
27	51917051	1										PC S	MAGNET YELLOW 2.0 GAUSS	
28	51917052	1										PC S	MAGNET SILVER 3.0 GAUSS	
29	51777314	4										PC S	Support Plastic - P.C.	Monitor Bd Support
30	51907705	1										PC S	CB W/Trip Coil 3.5 Amp	AC Entry Panel
31	51908602	1										PC S	Thms. Disc 2.5 Ohm	AC Entry Panel
32	61407856	1										PC W	CAP ASSY - CRT	
33	51908902	1										PC W	SONALERT	
34	51915101	1										PC W	KNOB PLAIN	
35	51004063	.1										PC W	ADHESIVE	
36	95637304	3										PC S	DIODE, SIL, 1N4004	
37	51907405	1										PC S	KEYBOARD 95 KEY	

AA3181 REV. 8/71

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DWN	G. Church	10-14-76	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO	REV
CHKD				SPL PRINTER, SERIAL, THERMAL 60 HZ	SP	66294800	D
ENG	<i>G. Church</i>	10/14/76		FIRST USED ON			
MFG	<i>P. P. P.</i>	10/15/76		CL114			
APPR	<i>G. Church</i>	10/14/76	CODE IDENT			SHEET 1 of 2	
	<i>P. P. P.</i>	10/15/76	15920				

SHEET REVISION STATUS				REVISION RECORD			
Z	I	REV	ECO	DESCRIPTION	DRFT	DATE	APP
A	A	A	10842-26	RELEASED CLASS A	-	10/15/75	M.C.T.
B	B	B	CD11311	REVISED PER ECO	6	7/17/76	<i>[Signature]</i>
C	C	C	CD12225	REVISED PER ECO	6	6/21/77	<i>[Signature]</i>
D	D	D	13322	PIN 66295670 WAS 66295602	WJG 1-30-79	1-31-79	M.C.T.

NOTES:  
On site spare parts list for 60 Hz printer (CDC Dwg 619093xx) with Parity-Switch selectable.

DETACHED LISTS

AA3180 REV. 8-71

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CONTROL DATA		SPARE PARTS LIST OF CL114			CODE IDENT	SHEET	DOCUMENT NO.	REV.
					15920	2 of 2	PL 66294800	D

FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED	UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL
	66295666	1		Board Plug-In {Signal}	
	66295670	1		Board Plug-In {Control}	
	66295667	1		Frame Final Assy.	{Prntr Mech, Par Sw with Logic Bds}
	66295604	1		Power Supply {60 Hz}	

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DWN	G. Chubb	10-476	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO.	REV.
CHKD				SPL PRINTER, SERIAL, THERMAL 50 Hz	SP	66294700	D
ENG	R. Chubb	10-139		FIRST USED ON			
MFG	R. Chubb	10-139		CL114			
APPR	R. Chubb	10-139	CODE IDENT				SHEET 1 of 2
ES	R. Chubb	10-139	15920				

SHEET REVISION STATUS										REVISION RECORD			
1	2	REV	ECO	DESCRIPTION	DRFT	DATE	APP						
A	A	A	1092-26	RELEASED CLASS A	-	10/15-75	PK.T.						
B	B	B	CD11311	REVISED PER ECO	R	2/12/76	JK						
C	C	C	CD12225	REVISED PER ECO	R	4/21/77	KR						
D	D	D	13322	PAU 66295670 WAS 66295608	10/15	1-31-79	JK						

NOTES:  
On site spare parts list for 50 Hz printer (CDC Dwg 519093xx) with Parity-Switch selectable.

DETACHED LISTS

AA3180 REV. 8/71

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INVENTORY		SPARE PARTS LIST FOR CL114			CODE IDENT	SHEET	PL	DOCUMENT NO.	REV.
					15920	2 of 2	PL	66294700	D

FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED					UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL
	66295666	1					Board Plug-In (Signal)		
	66295670	1					Board Plug-In (Control)		
	66295667	1					Frame Final Assy.	{Pntr Mech, Par Sw with logic bds.}	
	66295605	1					Power Supply (50 Hz)		

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DWN	D. W. Wells	4-1-75	CONTROL DATA	TITLE	LIAT TAPE CASSETTE	PREFIX SPL	DOCUMENT NO.	REV.
CHKD	<i>[Signature]</i>	1/18		FIRST USED ON	BE6A1A/C, BE603A/C		66266100	E
ENG	<i>[Signature]</i>	2/15						
MFG	<i>[Signature]</i>	3/16						
APPR	<i>[Signature]</i>		CODE IDENT					SHEET 1 of 2
			15920					

SHEET REVISION STATUS										REVISION RECORD				
2	1	REV	ECO	DESCRIPTION	DRFT	DATE	APP							
				RELEASED CLASS C		9/2/75	JH							
A	A	A	10653-41	RELEASED CLASS A		3/19/76	W.C.T.							
B	B	B	CD11546	Added F/N's 9 thru 11	rt	5/19/76	JH							
B	C	C	11568	REVISED PER ECO	W.C.T.	6/2/76	JH							
D	D	D	CD11587	Added F/N's 12 & 13	rt	8/24/76	JH							
E	E	E	11723	F/N 7 WAS 90430900	W.C.T.	9-28-76	JH							

NOTES:  
1. Equipment Configurator 15627500, 15627502, 15626600 & 15626602.  
2. Top Level Assy 15627600, 15627602, 15626700 & 15626702.

DETACHED LISTS

AA3180 REV. 8/71

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CONTROL DATA			CODE IDENT	SHEET	SPL	DOCUMENT NO.	REV
			15920	2		66266100	E
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED	UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL		
1	51915200	1		Cassette Drive			
2	51885400	1		Power Supply			
3	51886600	1		Fan 52 CFM 115 VAC			
4	61371113	1		Ac Entry 60 Hz			
5	90432000	1		5BPD-0 P.C. Card			
6	90430600	1		5BJD P.C. Card			
7	90445760	1		5BKD-1 P.C. Card			
8	90431200	1		5BLD P.C. Card			
9	51906400	1		Sw, Rocker SPDT On-None-Off			
10	51906401	1		Sw, Rocker SPDT On-Off-On			
11	51906404	1		Sw, Rocker SPDT On-None-On			
12	47464400	1		P.C. Board Assy			
13	47373100	1		P.C. Board Assy (+5V)			

DWN	D. Wall	7-1-75	CONTROL DATA	TITLE	LIAT TAPE CASSETTE	PREFIX	DOCUMENT NO.	REV.
CHKD	<i>[Signature]</i>	7-1-75				SPL	66266200	E
ENG	<i>[Signature]</i>	7-1-75		FIRST USED ON	BE6A1B/D , BE603B/D			
MFG	<i>[Signature]</i>	3-19-76					SHEET 1 of 2	
APPR	<i>[Signature]</i>	3-19-76	CODE IDENT					
			15920					

SHEET REVISION STATUS										REVISION RECORD					
										REV	ECO	DESCRIPTION	DRFT	DATE	APP
												RELEASED CLASS C		9/2/75	<i>[Signature]</i>
										A	A	10653-41 RELEASED CLASS A		9/19/76	MGT.
										B	B	CD11546 Added F/N's 9 thru 11	rt	5/19/76	<i>[Signature]</i>
										B	C	11568 REVISED PER ECO		6/2/76	<i>[Signature]</i>
										D	D	CD11587 Added F/N's 12 & 13	rt	9/24/76	<i>[Signature]</i>
										E	E	11723 F/N 7 WAS 90430900		9-28-76	<i>[Signature]</i>

NOTES:  
1. Equipment Configurator 15627501, 15627503, 15626601, 15626603.  
2. Top Level Assy 15627601, 15627603, 15626701, 15626703.

DETACHED LISTS

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CONTROL DATA			CODE IDENT	SHEET	SPL	DOCUMENT NO.	REV.
			15920	2		66266200	E
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED	UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL		
1	51915200	1		Cassette Drive			
2	51885400	1		Power Supply			
3	51886600	1		Fan 52 CFM 115 VAC			
4	61374010	1		AC Entry 50 Hz			
5	90432000	1		5BPD-0 P.C. Card			
6	90430600	1		5BJD P.C. Card			
7	90445760	1		5BKD-1 P.C. Card			
8	90431200	1		5BLD P.C. Card			
9	51906400	1		Sw. Rocker SPDT On-None-0n			
10	51906401	1		Sw. Rocker SPDT On-Off-0n			
11	51906404	1		Sw. Rocker SPDT On-None-10n			
12	47464400	1		P.C Board Assy			
13	47373100	1		P.C. Board Assy (+5V)			

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DWN	<i>[Signature]</i>	5-17-76	N-2	TITLE	Extended Memory Option	PREFIX	DOCUMENT NO.	REV.
CHKD	<i>[Signature]</i>	9/13/76				SPL	66258300	C
ENG	<i>[Signature]</i>	1-18-76		FIRST USED ON				
MFG	<i>[Signature]</i>	5-28-76						
APPR	<i>[Signature]</i>	8-19-76	CODE IDENT				SHEET	1 of 2
OR	<i>[Signature]</i>	10-11-76	15920		XA1A7A & XA150A			

SHEET REVISION STATUS					REVISION RECORD					
					REV	ECO	DESCRIPTION	DRFT	DATE	APP
					A	A	10653-8 RELEASED CLASS A	-	9/13/76	P.C.T.
					B	B	CD10973 SPL CHG ONLY		9/14/76	<i>[Signature]</i>
					B	C	CD115b7 Added XA150A	rt	9/27/76	<i>[Signature]</i>

NOTES: SP LOC. CODES: W = WAREHOUSE; S = SITE.

DETACHED LISTS

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CONTROL DATA			CODE IDENT	SHEET 2	SPL	DOCUMENT NO.	REV.	
						66258300	B	
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED			UNIT OF MEAS	SP LOC	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL
1	90443700				1	S	P.C. Assy 4CND-1	EXTENDED MEMORY OPTION

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DWN	<i>Salerno</i>	997	CONTROL DATA	TITLE	Printer Controller	PREFIX	SPL	DOCUMENT NO.	66258400	REV	F
CHKD	<i>S. J. Brown</i>	997-20		FIRST USED ON	XA1A8A & XA151A						
ENG	<i>S. J. Brown</i>	997-20									
MFG	<i>S. J. Brown</i>	997-20	CODE IDENT								
APPR	<i>S. J. Brown</i>	997-20	15920					SHEET	1 of 2		

SHEET REVISION STATUS										REVISION RECORD			
REV	ECO	DESCRIPTION	DRFT	DATE	APP								
2	1												
A	A	A 10653-14		9/10/75	M.C.F.								
B	B	B CD11143	R	9/10/75	M.C.F.								
B	C	C CD11567	rt	9/10/75	M.C.F.								
D	D	D 11604	MW	9/10/75	M.C.F.								
E	E	E CD1177!	⊕	9/10/75	M.C.F.								
F	F	F 12295	rt	9/10/75	M.C.F.								

NOTES:

DETACHED LISTS

AA3180 REV. 8/71

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CONTROL DATA		SPARE PART LIST XA1A8A XA151A			CODE IDENT	15920	SHEET	2	SPL	DOCUMENT NO.	66258400	REV	F
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED					UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL				
1	90445805	1						CARD ASSY 4DD-4					

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DWN	<i>Falkema</i>	9925	CONTROL DATA	TITLE	PREFIX	DOCUMENT NO.	REV.
CHKD				Multi-Drop Option	SPL	66258700	E
ENG	<i>S. J. Gorman</i>	7-21-73		FIRST USED ON			
MFG	<i>66-200</i>	<i>8-22-73</i>	CODE IDENT	XA1B2A. & XA154A		SHEET	1 of 2
APPR	<i>E.S.</i>	<i>7-21-73</i>	15920				

SHEET REVISION STATUS				REVISION RECORD					
Z	I	REV	ECO	DESCRIPTION	DRFT	DATE	APP		
A	A	A	10653-16	RELEASED CLASS A		7/21/75	<i>W.C.T.</i>		
B	B	B	CD11144	SPL CHG ONLY	<i>W.C.D.</i>	2-27-76	<i>D.W.B.</i>		
B	C	C	CD11567	Revised per ECO	rt	4-7-76	<i>W.C.T.</i>		
D	D	D	11603	REVISED PER ECO	<i>E.E.</i>	7/29/76	<i>W.C.T.</i>		
E	E	E	11923	REVISED PER ECO	<i>E.E.</i>	9/11/76	<i>W.C.T.</i>		

NOTES:

DETACHED LISTS

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CONTROL DATA		SPARE PART LIST		XA154A	XA1B2A	CODE IDENT	15920	SHEET	2	S PL	DOCUMENT NO.	66258700	REV.	E
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FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED	UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL
1	90445772	1	PC	CARD ASSY SCDD-3	

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DWN	<i>9/10-5</i>	CONTROL DATA	TITLE	EDIT Option	PREFIX	DOCUMENT NO.	REV
CHKD					SPL	66289100	D
ENG	<i>18-11-2</i>		FIRST USED ON	XALB6A & XAL74A			
MFG	<i>12/7/68</i>	CODE IDENT					
APPR	<i>12/7/68</i>	1592D					
E	<i>12/7/68</i>						

SHEET REVISION STATUS				REVISION RECORD					
Z	I	REV	ECO	DESCRIPTION	DRFT	DATE	APP		
		A	A	10653-25	RELEASED CLASS A		1/30/76 P.C.T.		
		A	B	CD11567	Revised per ECO	rt	5/6/77		
		C	C	CD11602	REVISED PER ECO	JM	7-22-77		
		D	D	11890	REVISED PER ECO	EG	1-31-77		

NOTES:

DETACHED LISTS

AA3180 REV. 8/71

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CONTROL DATA		SPARE PART LIST	XALB6A XAL74A	CODE IDENT	1592D	SHEET	2	P	PL	DOCUMENT NO.	66289100	REV.	D
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED			UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL						
1	90430300	1			PC	CARD ASSY 5BHD							
2	90445769	1			PC	CARD ASSY 5CED-2							

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DWN	<i>[Signature]</i>	6-11-77	<b>CONTROL DATA</b>	TITLE		SPL	DOCUMENT NO.	REV		
CHKD				SPARE PART LIST		SPL	66299176	B		
ENG	<i>[Signature]</i>	6-24-77	CODE IDENT 15920	FIRST USED ON		SHEET		1 of 2		
MFG	<i>[Signature]</i>	6-14-77		XA1C1-A		XA195-A				
APPR	<i>[Signature]</i>	6-12-76		SHEET REVISION STATUS		REVISION RECORD				
CE	<i>[Signature]</i>	6-12-76			REV	ECO	DESCRIPTION	DRFT	DATE	APP
					A	10653-54	RELEASE CLASS A	<i>[Signature]</i>	8/11/76	MCT
					B	12309	REVISED PER ECO	EE	2/11/77	(A/B)
				NOTES:						
				DETACHED LISTS						

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<b>CONTROL DATA</b>			SPARE PART LIST			CODE IDENT	SHEET	SPL	DOCUMENT NO.	REV.
						15920	2	SPL	66299176	B
FIND NO.	PART IDENTIFICATION	QUANTITY REQUIRED						UNIT OF MEAS	NOMENCLATURE OR DESCRIPTION	SPECIFICATIONS, NOTES, OR MATERIAL
1	90445806	1						PC	CARD ASSY 5DBD-1	

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# COMMUNICATIONS CABLE PIN ASSIGNMENTS A

This section contains the cabling pin assignments used for the cable connected to the communications line (data) and the peripheral connector. The communications line pin assignments are listed in table A-1; the pin assignments to peripheral equipment are listed in table A-2. The communications line voltage levels and assignments conform to EIA Standard RS-232-C and CCITT Recommendation V.24 as applied to asynchronous telecommunications. On the peripheral interface, only the voltage levels conform to RS-232-C/CCITT Recommendation V.24.

**TABLE A-1. COMMUNICATIONS LINE SIGNALS**

DATA SET CONNECTOR PIN NUMBER	CCITT MODEM CIRCUIT	EIA MODEM CIRCUIT	SIGNAL NAME	ORIGIN
1	101	AA	Protective Ground	Modem/Terminal
2	103	BA	Transmitted Data	Terminal
3	104	BB	Received Data	Modem
4	105	CA	Request To Send (RTS)	Terminal
5	106	CB	Clear To Send (CTS)	Modem
6	107	CC	Data Set Ready (DSR)	Modem
7	102	AB	Signal Ground	Modem/Terminal
8	109	CF	Received Line Signal Detector (CO)	Modem
9			Unused	
10			Unused	
11			Unused	
12	122	SCF	Secondary Received Line Signal Detector (SCO)	Modem
13	121	SCB	Secondary Clear To Send (SCTS)	Not Used
14	118	SBA	Secondary Transmitted Data	Not Used
15	114	DB	Transmission Signal Element Timing	Not Used
16	119	SBB	Secondary Received Data	Not Used
17	115	DD	Receiver Signal Element Timing	Not Used
18			Unused	
19	120	SCA	Secondary Request To Send (SRTS)	Terminal
20	108.2	CD	Data Terminal Ready (DTR)	Terminal
21	110	CG	Signal Quality Detector	Not Used
22	125	CE	Ring Indicator	Not Used
23	111/112	CH/CI	Data Signal Rate Indicator	Not Used
24	113	DA	Transmit Signal Element Timing	Not Used
25			Unused	

**TABLE A-2. PERIPHERAL CONNECTOR PIN ASSIGNMENTS**

PERIPHERAL CONNECTOR PIN NUMBER	SIGNAL NAME	ORIGIN
1	Protective Ground	Printer/Terminal
2	Play	Tape Unit
3	Printer Data	Terminal
4	Reserved	
5	BOT/EOT	Tape Unit
6	Printer Data Set Ready (DSR)	Terminal
7	Signal Ground	Printer/Terminal
8	Printer Received Line Signal Detector (CO)	Terminal
9	Line/Local	Tape Unit
10	Reserved	
11	Receive Clock	Terminal
12	Ready	Tape Unit
13	Record Gap	Tape Unit
14	Write	Terminal
15	Write Data	Terminal
16	Go	Terminal
17	Forward	Terminal
18	Terminate Write	Terminal
19	Printer Buffer 3/4 Full	Printer
20	Printer Ready (DTR)	Printer
21	Read	Terminal
22	Select Unit 2	Terminal
23	Times 16 Clock	Terminal
24	Read Data	Tape Unit
25	Record	Tape Unit

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This appendix identifies the various visual communication repertoires used by the terminal subsystem equipments. Included are the control key function repertoire and the 64/96 message-forming, alphanumeric repertoires. Table B-1 defines the technical aspects of each control function and figure B-1 shows the dot pattern symbol displayed to identify each. Figure B-2 shows the dot pattern for each of the 64/96 message-forming, alphanumeric symbols/characters which the keyboard display terminal will display on its screen. The code given for each symbol/character in tables B-1 and B-2 is octal.

Figure B-3 shows the 96-character, ASCII-compatible subset printable by the non-impact peripheral printer. Note that lowercase characters do not have descending strokes but rather remain within the 5- by 7-dot matrix. Also note, at the end of the characters shown, the three printer mechanism control codes (BS, LF, and CR) are identified. All codes given in figure B-3 are octal.

Figure B-4 shows the 64-character, ASCII-compatible subset printable by the matrix peripheral printer. Note that adjacent dots on any horizontal line are never printed. Rather, for any horizontal stroke of a character, every other dot is printed. Any 96-character subsets which may be printable (by placing proper character ROM on the controller circuit board in the matrix printer logic module) would print lowercase characters within this 7- by 7-dot matrix and without descending strokes. Note, at the end of the characters shown, the four printer mechanism control codes (LF, VT, FF, and CR) are identified. All codes shown in figure B-4 are binary.

TABLE B-1. CONTROL FUNCTION REPERTOIRE

MNEMONIC	HEXADECIMAL CODE	KEYBOARD OPERATION	DISPLAY SYMBOL ①	FUNCTION ②
NUL	00	CONTROL + @	N <sub>U</sub>	Null background character. Transmitted in character mode. Stored in line or block modes.
SOH	01	CONTROL + A	S <sub>H</sub>	Transmitted in character mode. Stored in line or block modes.
STX	02	CONTROL + B or STX key	S <sub>X</sub>	Refer to the description of the STX key under Transmission Control Keys.
ETX	03	ETX key or SEND key ③	E <sub>X</sub>	Refer to the description of the ETX key under Transmission Control Keys and to the description of the SEND key under Transmission Control Keys.
EOT	04	CONTROL + D	E <sub>T</sub>	Transmitted in character mode. Stored in line or block modes.
ENQ	05	CONTROL + E	E <sub>Q</sub>	Transmitted in character mode. Stored in line or block modes.
ACK	06	CONTROL + F	A <sub>K</sub>	Transmitted in character mode. Stored in line or block modes.
BEL	07	CONTROL + G	B <sub>L</sub>	Alarm sounds and code is transmitted in character mode. Code is stored in line or block modes.
BS	08	CONTROL + ← ④ or ← key ⑤	B <sub>S</sub>	Refer to the description of the Backspace (←) key under Cursor Control Keys.
HT	09	CONTROL + I	H <sub>T</sub>	Transmitted in character mode. Stored in line or block modes.
LF	0A	CONTROL + ↓ ⑤ or CONTROL + LINE FEED ② or ↓ ⑤ or LINE FEED key ⑤	N <sub>L</sub>	Refer to the description of the LINE FEED key under Transmission Control Keys and to the description of the Cursor Down (↓) key under Cursor Control Keys.
VT	0B	CONTROL + K	V <sub>T</sub>	Transmitted in character mode. Stored in line or block modes.
FF	0C	CONTROL + L	F <sub>F</sub>	Transmitted in character mode. Stored in line or block modes.
CR	0D	CONTROL + CARRIAGE RETURN or CARRIAGE RETURN key	C <sub>R</sub>	Refer to the descriptions of the CARRIAGE RETURN key under Cursor Control Keys and under Transmission Control Keys.

Notes:

- ① Displayed in line or block modes when the CONTROL key is pressed.
- ② Descriptions referenced appear in the terminal subsystem operators guide (see preface for publication number).
- ③ Batch mode.
- ④ Line, block, or format modes.
- ⑤ Character or batch modes.

TABLE B-1. CONTROL FUNCTION REPERTOIRE (CONTD)

MNEMONIC	HEXADECIMAL CODE	KEYBOARD OPERATION	DISPLAY SYMBOL ①	FUNCTION ②
SO	0E	CONTROL + N or TAB SET + SHIFT key	S <sub>O</sub>	Transmitted in character mode. Stored in character, line, and block modes when highlighting option is installed. Not stored in format mode. Refer to the description of the Highlighting Control Keys.
SI	0F	CONTROL + O or TAB SET + CONTROL or TAB SET Key	S <sub>I</sub>	Transmitted in character mode. Stored in character, line, and block modes. Refer to the description of the Highlighting Control Keys.
DLE	10	CONTROL + P	D <sub>L</sub>	Transmitted in character mode. Stored in line or block modes.
DC1	11	CONTROL + Q	D <sub>1</sub>	Transmitted in character mode. Stored in line and block modes.
DC2	12	CONTROL + R	D <sub>2</sub>	Transmitted in character mode. Stored in line and block modes. Used as a Device Control key when the tape cassette option is installed. Refer to the description of the Device Control Keys.
DC3	13	CONTROL + S	D <sub>3</sub>	Transmitted in character mode. Stored in line and block modes.
DC4	14	CONTROL + T	D <sub>4</sub>	Transmitted in character mode. Stored in line and block modes.

Notes:

- ① Displayed in line or block modes when the CONTROL key is pressed.
- ② Descriptions referenced appear in the terminal subsystem operators guide (see preface for publication number).
- ③ Batch mode.
- ④ Line, block, or format modes.
- ⑤ Character or batch modes.

TABLE B-1. CONTROL FUNCTION REPERTOIRE (CONTD)

MNEMONIC	HEXADECIMAL CODE	KEYBOARD OPERATION	DISPLAY SYMBOL ①	FUNCTION ②
NAK	15	CONTROL + U or CONTROL + → ⑤ or → key ⑤	N <sub>K</sub>	Refer to the description of the Skip (→) key under Cursor Control Keys.
SYN	16	CONTROL + V or or LINE CLEAR key ③	S <sub>Y</sub>	Refer to the description of the LINE CLEAR key under Clear Control Keys.
ETB	17	CONTROL + W	E <sub>B</sub>	Transmitted in character mode. Stored in character, line, and block modes when highlighting option is installed. Not stored in format mode. Refer to the description of the Highlighting Control Keys.
CAN	18	CONTROL + X or CONTROL + CLEAR ④ or CLEAR key ⑤	C <sub>N</sub>	Refer to the description of the CLEAR key under Clear Control Keys.
EM	19	CONTROL + Y or CONTROL + RESET ⑤ or RESET key ⑤	E <sub>M</sub>	Refer to the description of the RESET key under Cursor Control Keys.
SUB	1A	CONTROL + Z or CONTROL + ↑ ⑤ or ↑ key ⑤	S <sub>B</sub>	Refer to the description of the Cursor Up (↑) key under Cursor Control Keys.
ESC	1B	ESC key	E <sub>C</sub>	Transmitted in character mode. Stored in line or block modes.
FS	1C	CONTROL + M or FS key	F <sub>S</sub>	Transmitted in character mode. Stored in line or block modes.
GS	1D	CONTROL + H or GS key	G <sub>S</sub>	Transmitted in character mode. Stored in line or block modes.
RS	1E	CONTROL + J or RS key	R <sub>S</sub>	Transmitted in character mode. Stored in line or block modes.
US	1F	CONTROL + C or US key	U <sub>S</sub>	Transmitted in character mode. Stored in line or block modes.

Notes:

- ① Displayed in line or block modes when the CONTROL key is pressed.
- ② Descriptions referenced appear in the terminal subsystem operators guide (see preface for publication number).
- ③ Batch mode.
- ④ Line, block, or format modes.
- ⑤ Character or batch modes.



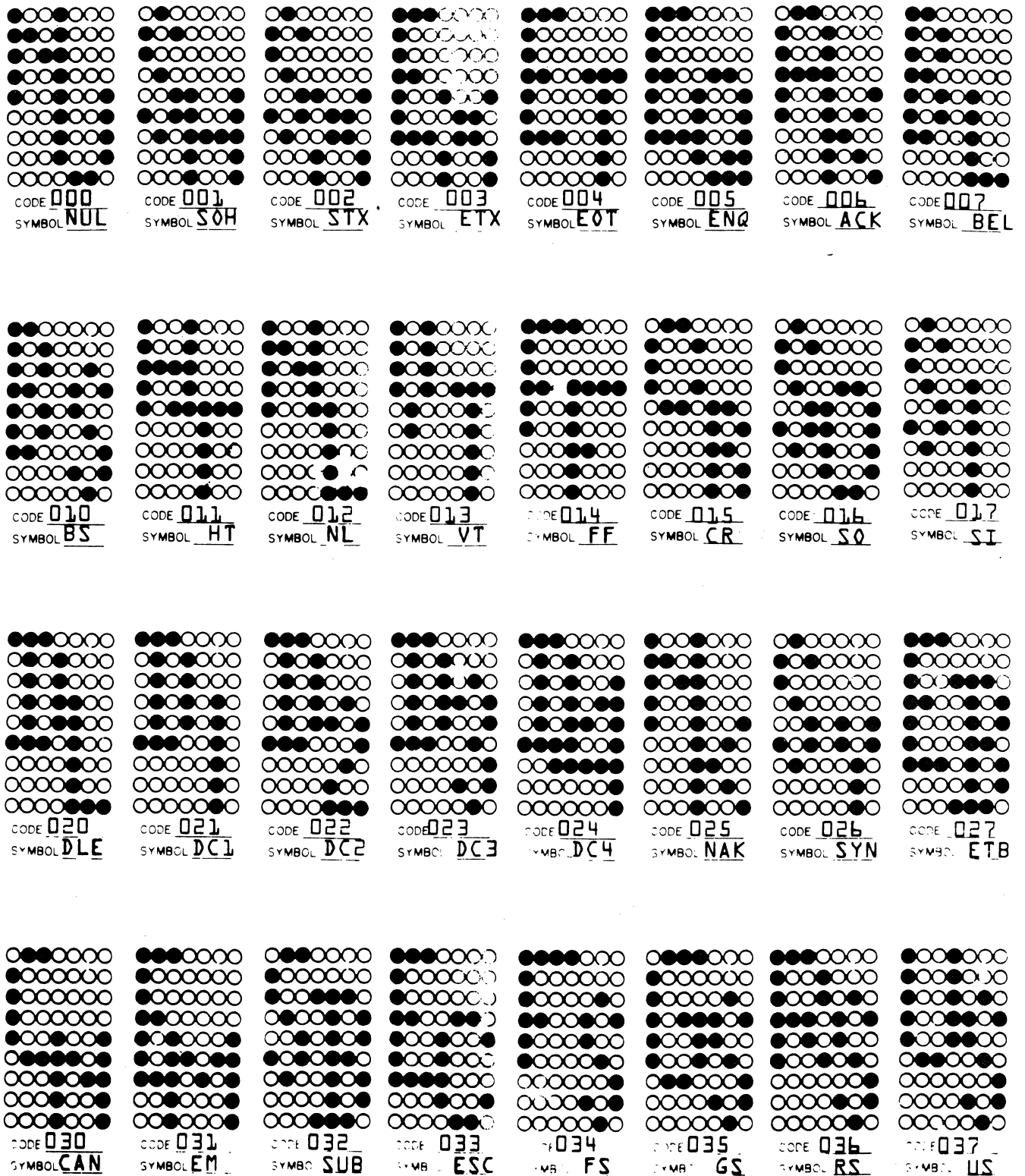


Figure B-1. Control Code Symbols

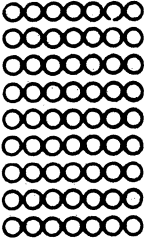
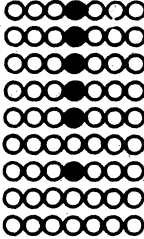
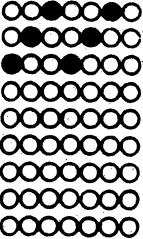
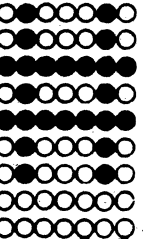
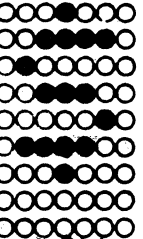
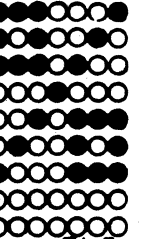
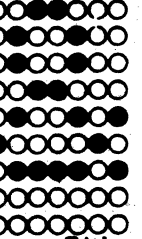
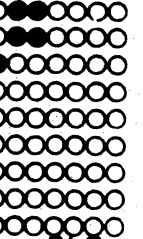
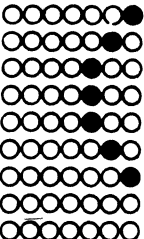
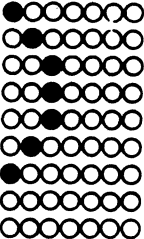
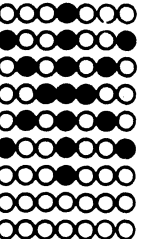
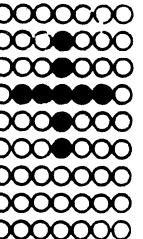
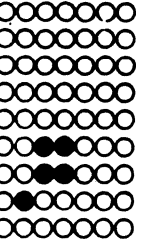
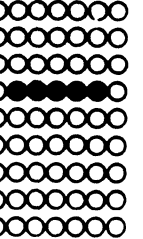
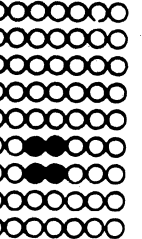
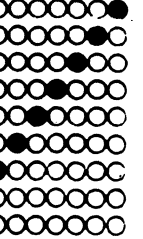
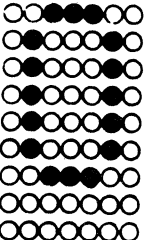
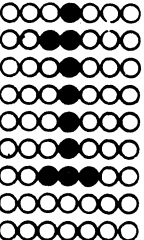
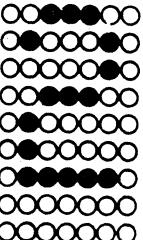
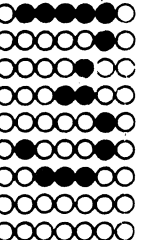
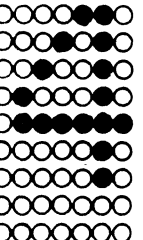
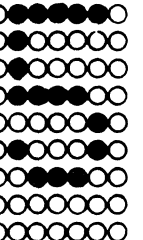
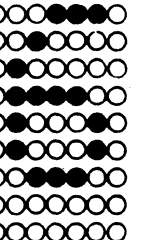
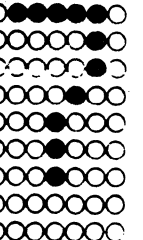
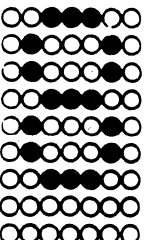
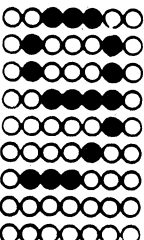
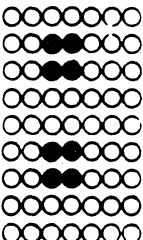
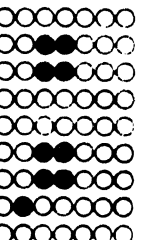
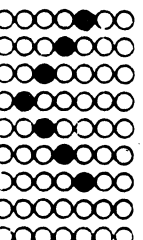
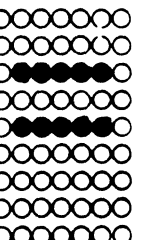
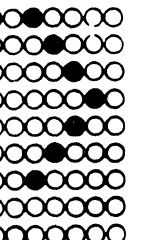
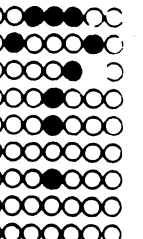
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Figure B-2. Display Alphanumeric Repertoire (Sheet 1 of 3)

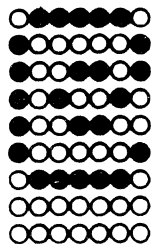
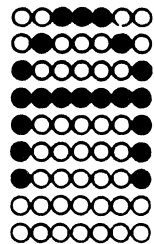
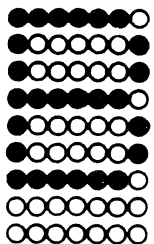
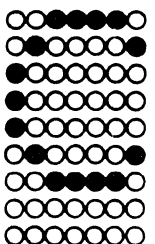
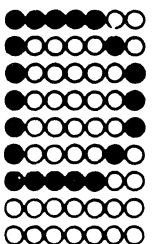
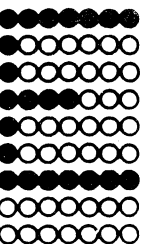
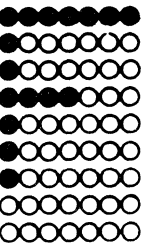
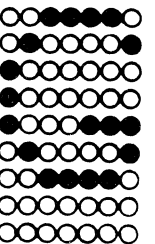
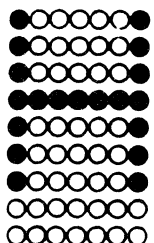
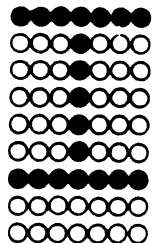
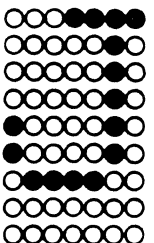
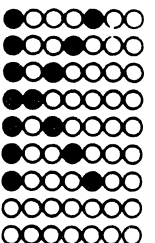
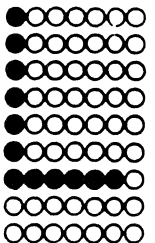
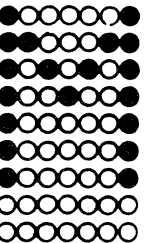
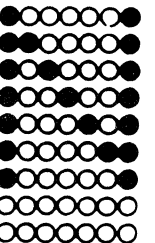
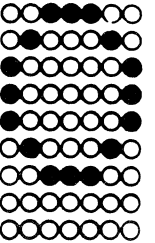
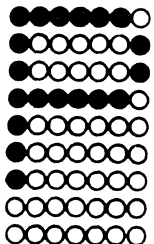
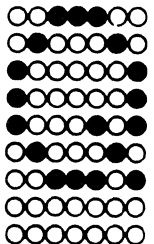
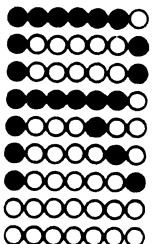
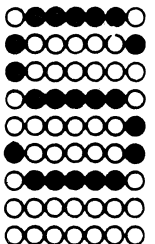
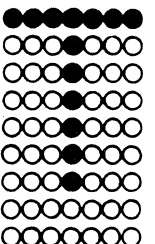
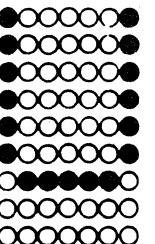
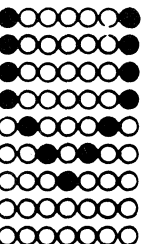
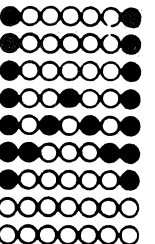
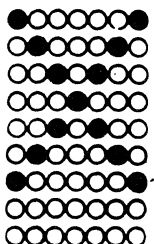
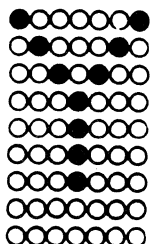
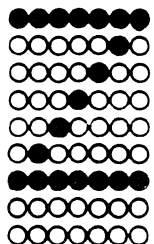
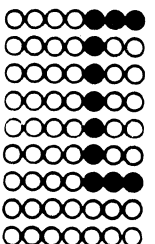
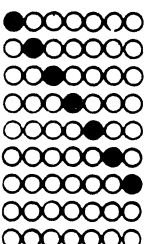
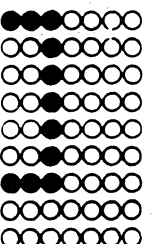
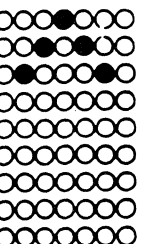
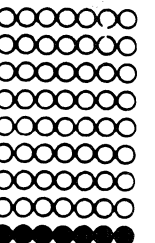
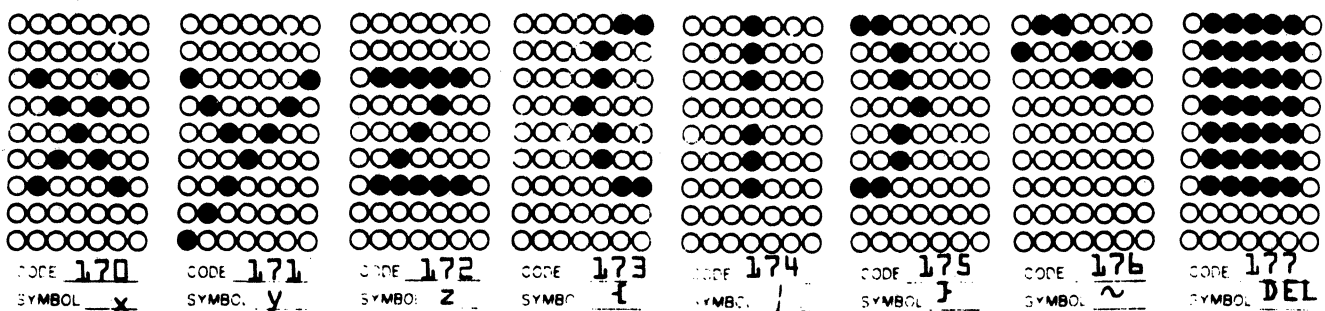
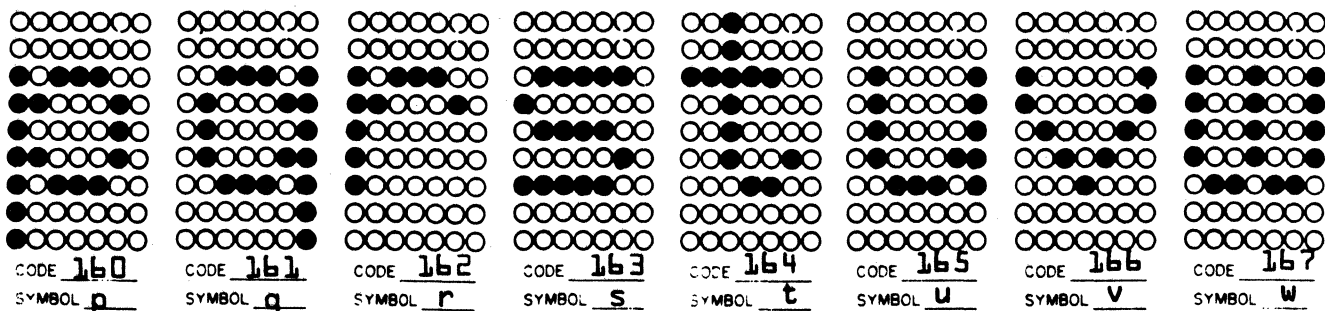
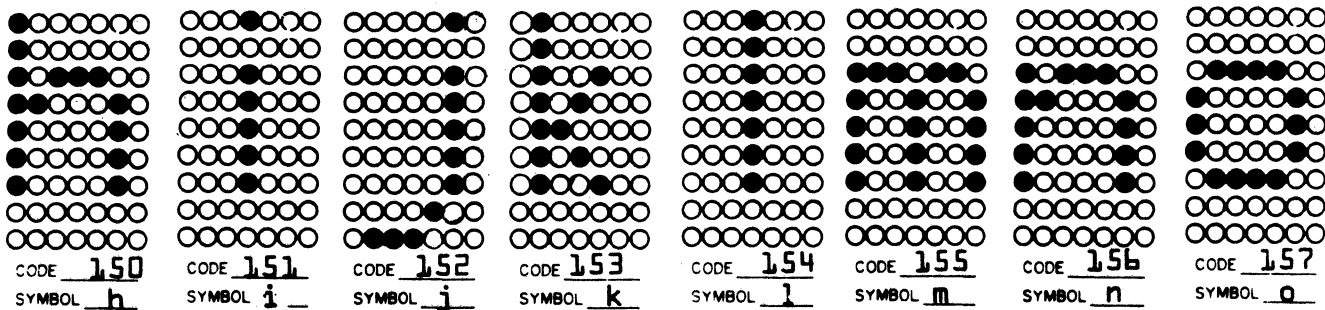
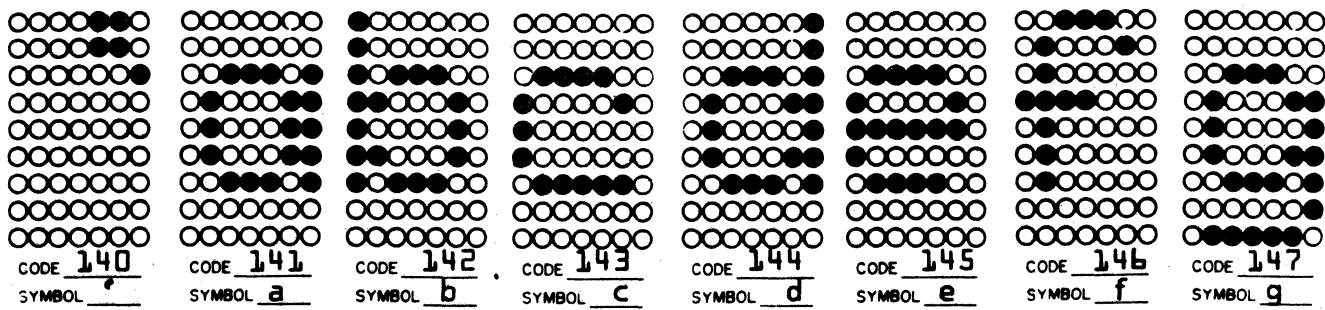
 CODE <u>100</u> SYMBOL <u>@</u>	 CODE <u>101</u> SYMBOL <u>A</u>	 CODE <u>102</u> SYMBOL <u>B</u>	 CODE <u>103</u> SYMBOL <u>C</u>	 CODE <u>104</u> SYMBOL <u>D</u>	 CODE <u>105</u> SYMBOL <u>E</u>	 CODE <u>106</u> SYMBOL <u>F</u>	 CODE <u>107</u> SYMBOL <u>G</u>
 CODE <u>110</u> SYMBOL <u>H</u>	 CODE <u>111</u> SYMBOL <u>I</u>	 CODE <u>112</u> SYMBOL <u>J</u>	 CODE <u>113</u> SYMBOL <u>K</u>	 CODE <u>114</u> SYMBOL <u>L</u>	 CODE <u>115</u> SYMBOL <u>M</u>	 CODE <u>116</u> SYMBOL <u>N</u>	 CODE <u>117</u> SYMBOL <u>O</u>
 CODE <u>120</u> SYMBOL <u>P</u>	 CODE <u>121</u> SYMBOL <u>Q</u>	 CODE <u>122</u> SYMBOL <u>R</u>	 CODE <u>123</u> SYMBOL <u>S</u>	 CODE <u>124</u> SYMBOL <u>T</u>	 CODE <u>125</u> SYMBOL <u>U</u>	 CODE <u>126</u> SYMBOL <u>V</u>	 CODE <u>127</u> SYMBOL <u>W</u>
 CODE <u>130</u> SYMBOL <u>X</u>	 CODE <u>131</u> SYMBOL <u>Y</u>	 CODE <u>132</u> SYMBOL <u>Z</u>	 CODE <u>133</u> SYMBOL <u>[</u>	 CODE <u>134</u> SYMBOL <u>\</u>	 CODE <u>135</u> SYMBOL <u>]</u>	 CODE <u>136</u> SYMBOL <u>^</u>	 CODE <u>137</u> SYMBOL <u>_</u>

Figure B-2. Display Alphanumeric Repertoire (Sheet 2 of 3)



NOTE: SYMBOLS WITH CODES 140<sub>g</sub> THROUGH 176<sub>g</sub> ARE NOT AVAILABLE FOR KEYBOARD ENTRY WHEN THE 64 CHAR/96 CHAR SWITCH IS SET AT THE 64 CHAR POSITION.

Figure B-2. Display Alphanumeric Repertoire (Sheet 3 of 3)

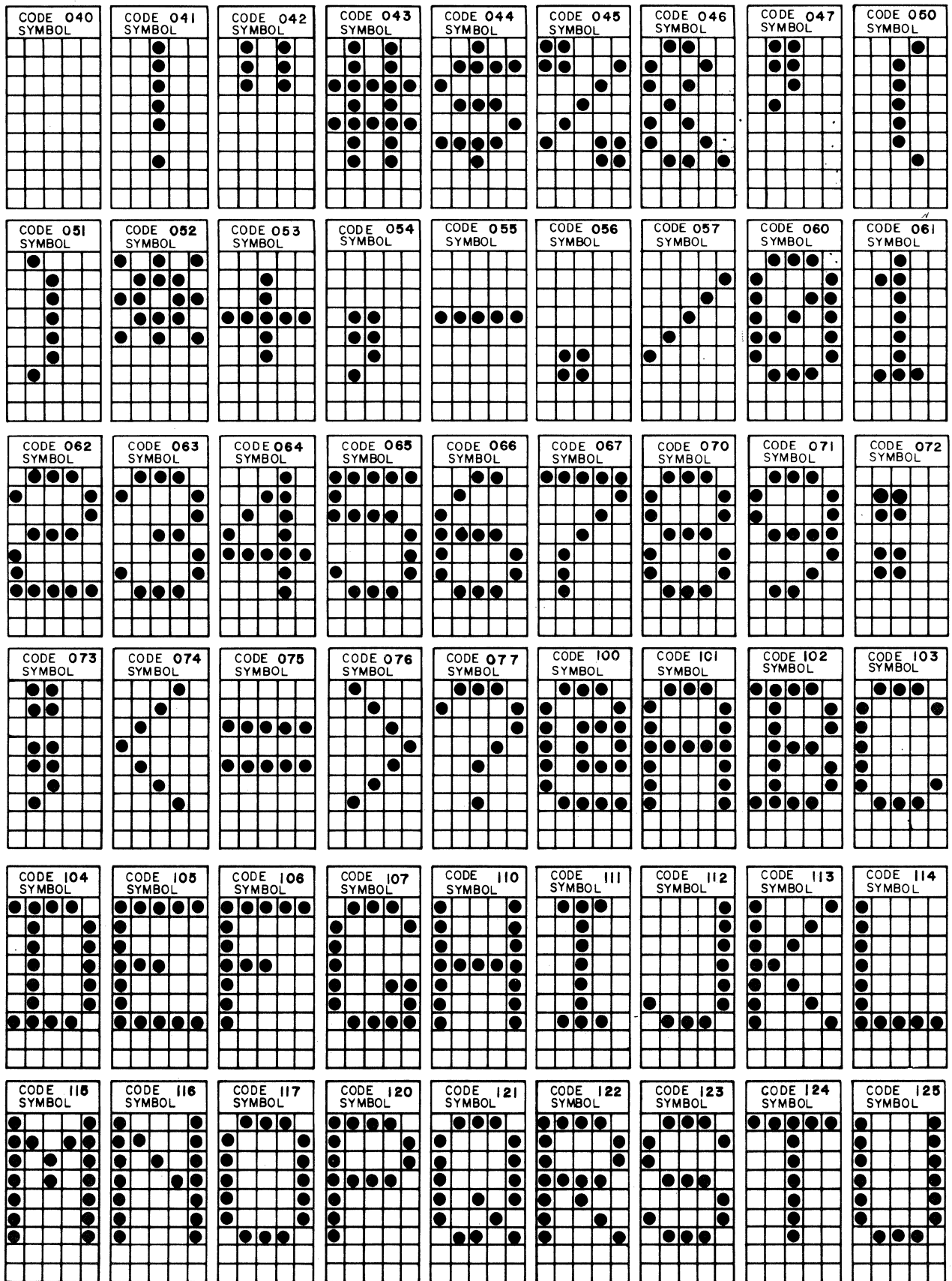


Figure B-3. Nonimpact Printer Character Repertoire (Sheet 1 of 2)

CODE 126 SYMBOL	CODE 127 SYMBOL	CODE 130 SYMBOL	CODE 131 SYMBOL	CODE 132 SYMBOL	CODE 133 SYMBOL	CODE 134 SYMBOL	CODE 135 SYMBOL	CODE 136 SYMBOL
CODE 137 SYMBOL	CODE 140 SYMBOL	CODE 141 SYMBOL	CODE 142 SYMBOL	CODE 143 SYMBOL	CODE 144 SYMBOL	CODE 145 SYMBOL	CODE 146 SYMBOL	CODE 147 SYMBOL
CODE 150 SYMBOL	CODE 151 SYMBOL	CODE 152 SYMBOL	CODE 153 SYMBOL	CODE 154 SYMBOL	CODE 155 SYMBOL	CODE 156 SYMBOL	CODE 157 SYMBOL	CODE 160 SYMBOL
CODE 161 SYMBOL	CODE 162 SYMBOL	CODE 163 SYMBOL	CODE 164 SYMBOL	CODE 165 SYMBOL	CODE 166 SYMBOL	CODE 167 SYMBOL	CODE 170 SYMBOL	CODE 171 SYMBOL
CODE 172 SYMBOL	CODE 173 SYMBOL	CODE 174 SYMBOL	CODE 175 SYMBOL	CODE 176 SYMBOL	CODE 177 SYMBOL	CODE SYMBOL	CODE SYMBOL	CODE SYMBOL
CODE SYMBOL	CODE SYMBOL	CODE SYMBOL	CODE SYMBOL	CODE SYMBOL	CODE SYMBOL	CODE SYMBOL	CODE SYMBOL	CODE SYMBOL
BACK SPACE	LINE FEED	CARRIAGE RETURN						
<p>PRINTER MECHANISM CONTROL CODES. NO CHARACTER PRINTED.</p>								

Figure B-3. Nonimpact Printer Character Repertoire (Sheet 2 of 2)

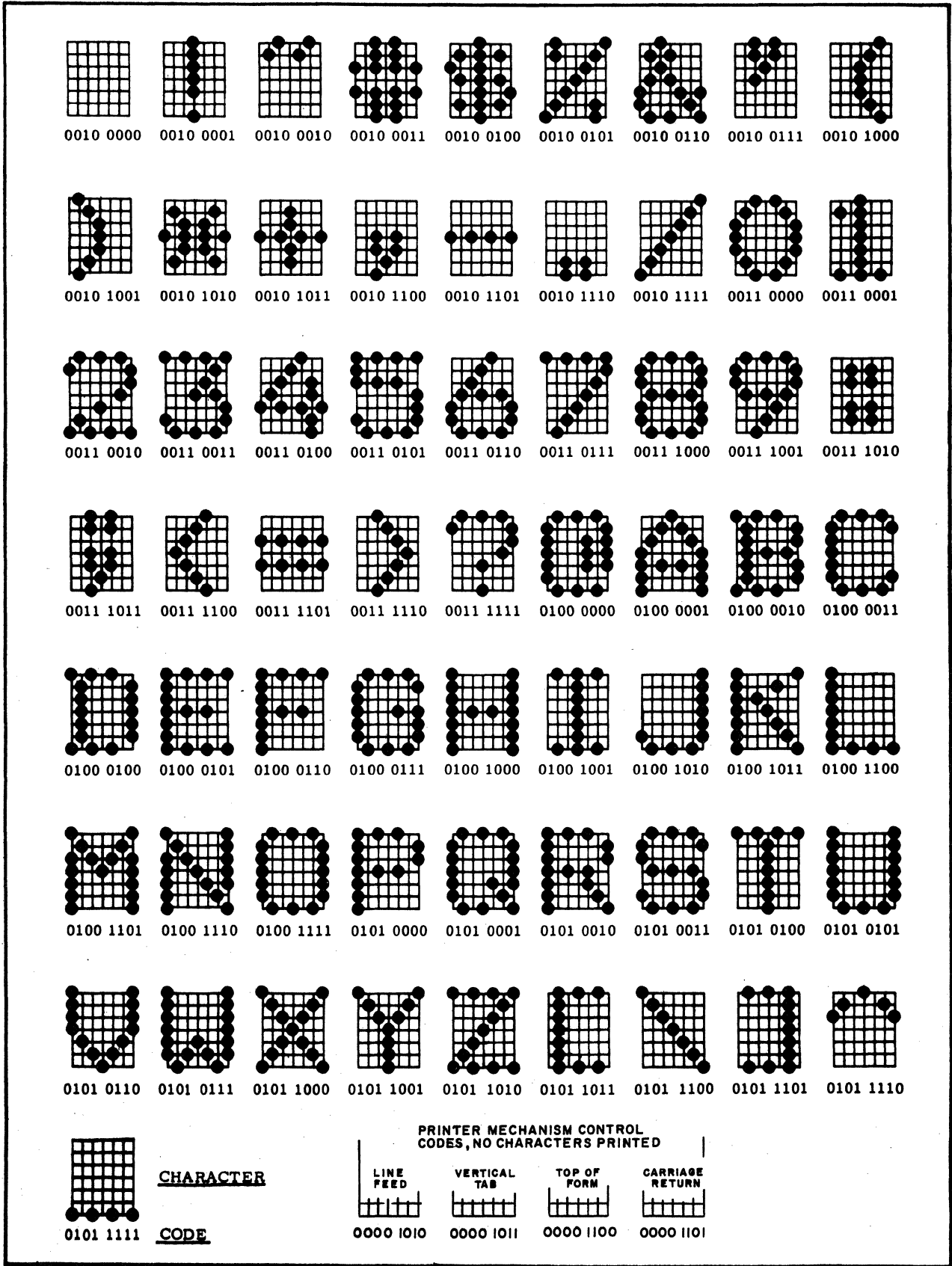


Figure B-4. Impact Printer Standard 64-Character ASCII





# MISCELLANEOUS

## GENERAL PRECAUTIONS AND INFORMATION

C

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This appendix contains: 1) MOS circuit handling precautions, 2) subsystem test mode diagnostic printer patterns, 3) impact printer test print pattern, 4) tape unit test pattern (recommended), 5) decimal-octal-hexadecimal conversions, and 6) installation options sheets.

### MOS CIRCUIT HANDLING PRECAUTIONS

Integrated circuits consisting of MOS (metal-oxide semiconductor) elements are susceptible to unrepairable damage if exposed to excessive static electricity. Since such excess charge can be easily built up on and carried by the person servicing the equipment which contains MOS circuits, certain MOS circuit handling precautions must be followed. The terminal subsystem contains a variety of MOS circuits throughout (ROM chips, receiver/transmitter chips, static shift register, etc.) so, rather than identify each of the many MOS circuits for special handling, it is safest to follow MOS circuit handling precautions at all times when performing installation, checkout, or any maintenance. The precautions to observe are as follows.

- 1) Never insert, install, remove, replace, or otherwise connect/disconnect any circuit(s) within the terminal subsystem with primary power applied to any of the cabinets and/or equipments within the subsystem. Power off for the cabinet being worked on is not sufficient. An interface adapter module, powered within another cabinet, may be supplying signals to the bus or backplane of the cabinet in which you are installing/removing a MOS circuit. This may be sufficient to damage the MOS circuits upon initial contact with the powered circuit.

### WARNING

When observing static grounding precautions, do not touch powered-on electrical equipment and chassis frame at the same time.

- 2) Before touching, grasping, or handling any circuit, connector, cable, or bus/backplane - always touch hand(s) to an exposed portion of the associated chassis frame to equalize potentials (bleed off any possible static charge from your hands onto the ground-level chassis).

- 3) Especially in dry ambient air, any movement may cause static electricity build up due to friction. In the case of shuffling one's feet across a dry carpet, such charge may be quite high and may easily jump from a cable connector being held onto the pins being mated to on an equipment. This could damage the MOS circuits within the equipment. Thus, the chassis frame must always be touched immediately before connecting any cable to it.
- 4) When removing, replacing, or otherwise handling any assembly/module which contains MOS circuits, do not touch circuit paths or conductors if at all possible. Do not carry a MOS circuit assembly across a room while touching its circuits.
- 5) When a module is out of its chassis, if it is to lay somewhere where it may be touched, if it is to be carried to some other location, or if it is to be shipped, always try to keep it in a special conductive bag or other approved MOS circuits protective container/wrapping.

#### SUBSYSTEM TEST MODE DIAGNOSTIC - SECTION 6, PRINTER PATTERN

Test Section 6 of the Subsystem Test Mode Diagnostic (described at the beginning of Maintenance, section 6 in volume 2 of this manual) should issue a fixed output to any printer connected as a peripheral in the terminal subsystem. This output will result in a set pattern printout if all portions of the subsystem involved with printout are operating correctly. Figure C-1 shows the exact pattern a nonimpact printer should print, and figure C-2 shows the exact pattern to expect from an impact printer which has 96-character capability.

```

)#+, -./0123456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~
*+, -./0123456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~
+,-./0123456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~
;,-./0123456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~
-./0123456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~
./0123456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~
/0123456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~
0123456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~
123456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~
23456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ !
3456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! "
456789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " #
56789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $
6789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ %
789: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % &
89: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & '
9: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' (
: ; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( )
; <=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) *
<=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * +
=>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + ,
>?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , -
?@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - .
@ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - . /
ABCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - . / 0
BCDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - . / 01
CDEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - . / 012
DEFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - . / 0123
EFGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - . / 01234
FGHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - . / 012345
GHIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - . / 0123456
HIJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - . / 01234567
IJKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - . / 012345678
JKLMN OPQRSTUVWXYZ[\]^_`+*~ ! " # $ % & ' ( ) * + , - . / 0123456789

```

Figure C-1. Subsystem Test Mode Nonimpact Printer Output



MATRIX PRINTER TEST PRINT PATTERN

Activating the TEST PRINT switch on the impact printer should produce a set pattern printout by the peripheral impact printer independent of the rest of the terminal subsystem. This is a means of checking for correct operation of the impact printer without introducing possible outside errors. Figure C-3 shows the exact pattern expected from any impact printer.



TAPE UNIT TEST PATTERN (RECOMMENDED)

A recommended test pattern, which can be composed on the keyboard display screen, written on tape, and read back from tape onto the display screen, appears in figure C-4. Such a pattern may be written on a tape and read/written back and forth between the display and an associated peripheral tape unit to verify correct tape unit operation within the terminal subsystem.

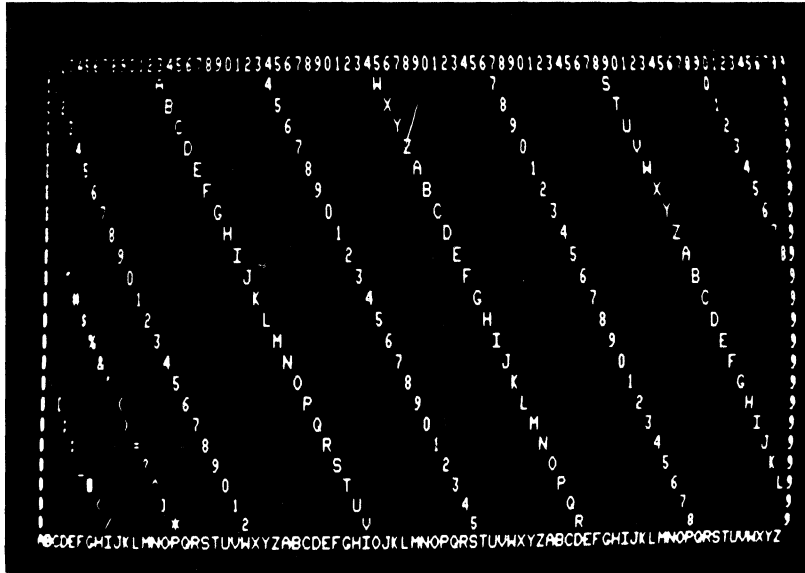


Figure C-4. Tape Unit Test Pattern (Recommended)



## DECIMAL - OCTAL - HEXADECIMAL CONVERSIONS

To advance tape to a specific written record on a peripheral tape cassette unit, one must identify such record by its hexadecimal location on tape with respect to the first record location at beginning of tape (BOT) being record  $000_{16}$ . A typical cassette tape track can contain approximately  $1200_{10}$  ( $4B0_{16}$ ) records when each record contains 128 characters of 11 bits per character. Table C-1 provides the decimal, octal, and hexadecimal equivalents for all numbers from  $000_{16}$  up to  $5FF_{16}$ . This adequately covers the range of numbers which can designate record locations on a peripheral tape unit used in the terminal subsystem.

TABLE C-1. DECIMAL-HEXADECIMAL AND OCTAL-HEXADECIMAL CONVERSION (SHEET 1 OF 5)

CONVERSION TABLE

DECIMAL - HEXADECIMAL

OCTAL - HEXADECIMAL

	0	1	2	3	4	5	6	7	8	9		0	1	2	3	4	5	6	7
0	0000	0001	0002	0003	0004	0005	0006	0007	0008	0009	00000	0000	0001	0002	0003	0004	0005	0006	0007
10	000A	000B	000C	000D	000E	000F	0010	0011	0012	0013	00010	0008	0009	000A	000B	000C	000D	000E	000F
20	0014	0015	0016	0017	0018	0019	001A	001B	001C	001D	00020	0010	0011	0012	0013	0014	0015	0016	0017
30	001E	001F	0020	0021	0022	0023	0024	0025	0026	0027	00030	0018	0019	001A	001B	001C	001D	001E	001F
40	0028	0029	002A	002B	002C	002D	002E	002F	0030	0031	00040	0020	0021	0022	0023	0024	0025	0026	0027
50	0032	0033	0034	0035	0036	0037	0038	0039	003A	003B	00050	0028	0029	002A	002B	002C	002D	002E	002F
60	003C	003D	003E	003F	0040	0041	0042	0043	0044	0045	00060	0030	0031	0032	0033	0034	0035	0036	0037
70	0046	0047	0048	0049	004A	004B	004C	004D	004E	004F	00070	0038	0039	003A	003B	003C	003D	003E	003F
80	0050	0051	0052	0053	0054	0055	0056	0057	0058	0059	00100	0040	0041	0042	0043	0044	0045	0046	0047
90	005A	005B	005C	005D	005E	005F	0060	0061	0062	0063	00110	0048	0049	004A	004B	004C	004D	004E	004F
100	0064	0065	0066	0067	0068	0069	006A	006B	006C	006D	00120	0050	0051	0052	0053	0054	0055	0056	0057
110	006E	006F	0070	0071	0072	0073	0074	0075	0076	0077	00130	0058	0059	005A	005B	005C	005D	005E	005F
120	0078	0079	007A	007B	007C	007D	007E	007F	0080	0081	00140	0060	0061	0062	0063	0064	0065	0066	0067
130	0082	0083	0084	0085	0086	0087	0088	0089	008A	008B	00150	0068	0069	006A	006B	006C	006D	006E	006F
140	008C	008D	008E	008F	0090	0091	0092	0093	0094	0095	00160	0070	0071	0072	0073	0074	0075	0076	0077
150	0096	0097	0098	0099	009A	009B	009C	009D	009E	009F	00170	0078	0079	007A	007B	007C	007D	007E	007F
160	00A0	00A1	00A2	00A3	00A4	00A5	00A6	00A7	00A8	00A9	00200	0080	0081	0082	0083	0084	0085	0086	0087
170	00AA	00AB	00AC	00AD	00AE	00AF	00B0	00B1	00B2	00B3	00210	0088	0089	008A	008B	008C	008D	008E	008F
180	00B4	00B5	00B6	00B7	00B8	00B9	00BA	00BB	00BC	00BD	00220	0090	0091	0092	0093	0094	0095	0096	0097
190	00BE	00BF	00C0	00C1	00C2	00C3	00C4	00C5	00C6	00C7	00230	0098	0099	009A	009B	009C	009D	009E	009F
200	00C8	00C9	00CA	00CB	00CC	00CD	00CE	00CF	00D0	00D1	00240	00A0	00A1	00A2	00A3	00A4	00A5	00A6	00A7
210	00D2	00D3	00D4	00D5	00D6	00D7	00D8	00D9	00DA	00DB	00250	00A8	00A9	00AA	00AB	00AC	00AD	00AE	00AF
220	00DC	00DD	00DE	00DF	00E0	00E1	00E2	00E3	00E4	00E5	00260	00B0	00B1	00B2	00B3	00B4	00B5	00B6	00B7
230	00E6	00E7	00E8	00E9	00EA	00EB	00EC	00ED	00EE	00EF	00270	00B8	00B9	00BA	00BB	00BC	00BD	00BE	00BF
240	00F0	00F1	00F2	00F3	00F4	00F5	00F6	00F7	00F8	00F9	00300	00C0	00C1	00C2	00C3	00C4	00C5	00C6	00C7
250	00FA	00FB	00FC	00FD	00FE	00FF	0100	0101	0102	0103	00310	00C8	00C9	00CA	00CB	00CC	00CD	00CE	00CF
260	0104	0105	0106	0107	0108	0109	010A	010B	010C	010D	00320	00D0	00D1	00D2	00D3	00D4	00D5	00D6	00D7
270	010E	010F	0110	0111	0112	0113	0114	0115	0116	0117	00330	00D8	00D9	00DA	00DB	00DC	00DD	00DE	00DF
280	0118	0119	011A	011B	011C	011D	011E	011F	0120	0121	00340	00E0	00E1	00E2	00E3	00E4	00E5	00E6	00E7
290	0122	0123	0124	0125	0126	0127	0128	0129	012A	012B	00350	00E8	00E9	00EA	00EB	00EC	00ED	00EE	00EF
300	012C	012D	012E	012F	0130	0131	0132	0133	0134	0135	00360	00F0	00F1	00F2	00F3	00F4	00F5	00F6	00F7
310	0136	0137	0138	0139	013A	013B	013C	013D	013E	013F	00370	00F8	00F9	00FA	00FB	00FC	00FD	00FE	00FF
320	0140	0141	0142	0143	0144	0145	0146	0147	0148	0149	00400	0100	0101	0102	0103	0104	0105	0106	0107
330	014A	014B	014C	014D	014E	014F	0150	0151	0152	0153	00410	0108	0109	010A	010B	010C	010D	010E	010F
340	0154	0155	0156	0157	0158	0159	015A	015B	015C	015D	00420	0110	0111	0112	0113	0114	0115	0116	0117
350	015E	015F	0160	0161	0162	0163	0164	0165	0166	0167	00430	0118	0119	011A	011B	011C	011D	011E	011F
360	0168	0169	016A	016B	016C	016D	016E	016F	0170	0171	00440	0120	0121	0122	0123	0124	0125	0126	0127
370	0172	0173	0174	0175	0176	0177	0178	0179	017A	017B	00450	0128	0129	012A	012B	012C	012D	012E	012F
380	017C	017D	017E	017F	0180	0181	0182	0183	0184	0185	00460	0130	0131	0132	0133	0134	0135	0136	0137
390	0186	0187	0188	0189	018A	018B	018C	018D	018E	018F	00470	0138	0139	013A	013B	013C	013D	013E	013F

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TABLE C-1. DECIMAL-HEXADECIMAL AND OCTAL-HEXADECIMAL CONVERSION (SHEET 2 OF 5)

CONVERSION TABLE

DECIMAL - HEXADECIMAL

OCTAL - HEXADECIMAL

	0	1	2	3	4	5	6	7	8	9		0	1	2	3	4	5	6	7
400	0190	0191	0192	0193	0194	0195	0196	0197	0198	0199	00500	0140	0141	0142	0143	0144	0145	0146	0147
410	019A	019B	019C	019D	019E	019F	01A0	01A1	01A2	01A3	00510	0148	0149	014A	014B	014C	014D	014E	014F
420	01A4	01A5	01A6	01A7	01A8	01A9	01AA	01AB	01AC	01AD	00520	0150	0151	0152	0153	0154	0155	0156	0157
430	01AE	01AF	01B0	01B1	01B2	01B3	01B4	01B5	01B6	01B7	00530	0158	0159	015A	015B	015C	015D	015E	015F
440	01B8	01B9	01BA	01BB	01BC	01BD	01BE	01BF	01C0	01C1	00540	0160	0161	0162	0163	0164	0165	0166	0167
450	01C2	01C3	01C4	01C5	01C6	01C7	01C8	01C9	01CA	01CB	00550	0168	0169	016A	016B	016C	016D	016E	016F
460	01CC	01CD	01CE	01CF	01D0	01D1	01D2	01D3	01D4	01D5	00560	0170	0171	0172	0173	0174	0175	0176	0177
470	01D6	01D7	01D8	01D9	01DA	01DB	01DC	01DD	01DE	01DF	00570	0178	0179	017A	017B	017C	017D	017E	017F
480	01E0	01E1	01E2	01E3	01E4	01E5	01E6	01E7	01E8	01E9	00600	0180	0181	0182	0183	0184	0185	0186	0187
490	01EA	01EB	01EC	01ED	01EE	01EF	01F0	01F1	01F2	01F3	00610	0188	0189	018A	018B	018C	018D	018E	018F
500	01F4	01F5	01F6	01F7	01F8	01F9	01FA	01FB	01FC	01FD	00620	0190	0191	0192	0193	0194	0195	0196	0197
510	01FE	01FF	0200	0201	0202	0203	0204	0205	0206	0207	00630	0198	0199	019A	019B	019C	019D	019E	019F
520	0208	0209	020A	020B	020C	020D	020E	020F	0210	0211	00640	01A0	01A1	01A2	01A3	01A4	01A5	01A6	01A7
530	0212	0213	0214	0215	0216	0217	0218	0219	021A	021B	00650	01A8	01A9	01AA	01AB	01AC	01AD	01AE	01AF
540	021C	021D	021E	021F	0220	0221	0222	0223	0224	0225	00660	01B0	01B1	01B2	01B3	01B4	01B5	01B6	01B7
550	0226	0227	0228	0229	022A	022B	022C	022D	022E	022F	00670	01B8	01B9	01BA	01BB	01BC	01BD	01BE	01BF
560	0230	0231	0232	0233	0234	0235	0236	0237	0238	0239	00700	01C0	01C1	01C2	01C3	01C4	01C5	01C6	01C7
570	023A	023B	023C	023D	023E	023F	0240	0241	0242	0243	00710	01C8	01C9	01CA	01CB	01CC	01CD	01CE	01CF
580	0244	0245	0246	0247	0248	0249	024A	024B	024C	024D	00720	01D0	01D1	01D2	01D3	01D4	01D5	01D6	01D7
590	024E	024F	0250	0251	0252	0253	0254	0255	0256	0257	00730	01D8	01D9	01DA	01DB	01DC	01DD	01DE	01DF
600	0258	0259	025A	025B	025C	025D	025E	025F	0260	0261	00740	01E0	01E1	01E2	01E3	01E4	01E5	01E6	01E7
610	0262	0263	0264	0265	0266	0267	0268	0269	026A	026B	00750	01E8	01E9	01EA	01EB	01EC	01ED	01EE	01EF
620	026C	026D	026E	026F	0270	0271	0272	0273	0274	0275	00760	01F0	01F1	01F2	01F3	01F4	01F5	01F6	01F7
630	0276	0277	0278	0279	027A	027B	027C	027D	027E	027F	00770	01F8	01F9	01FA	01FB	01FC	01FD	01FE	01FF
640	0280	0281	0282	0283	0284	0285	0286	0287	0288	0289	01000	0200	0201	0202	0203	0204	0205	0206	0207
650	028A	028B	028C	028D	028E	028F	0290	0291	0292	0293	01010	0208	0209	020A	020B	020C	020D	020E	020F
660	0294	0295	0296	0297	0298	0299	029A	029B	029C	029D	01020	0210	0211	0212	0213	0214	0215	0216	0217
670	029E	029F	02A0	02A1	02A2	02A3	02A4	02A5	02A6	02A7	01030	0218	0219	021A	021B	021C	021D	021E	021F
680	02A8	02A9	02AA	02AB	02AC	02AD	02AE	02AF	02B0	02B1	01040	0220	0221	0222	0223	0224	0225	0226	0227
690	02B2	02B3	02B4	02B5	02B6	02B7	02B8	02B9	02BA	02BB	01050	0228	0229	022A	022B	022C	022D	022E	022F
700	02BC	02BD	02BE	02BF	02C0	02C1	02C2	02C3	02C4	02C5	01060	0230	0231	0232	0233	0234	0235	0236	0237
710	02C6	02C7	02C8	02C9	02CA	02CB	02CC	02CD	02CE	02CF	01070	0238	0239	023A	023B	023C	023D	023E	023F
720	02D0	02D1	02D2	02D3	02D4	02D5	02D6	02D7	02D8	02D9	01100	0240	0241	0242	0243	0244	0245	0246	0247
730	02DA	02DB	02DC	02DD	02DE	02DF	02E0	02E1	02E2	02E3	01110	0248	0249	024A	024B	024C	024D	024E	024F
740	02E4	02E5	02E6	02E7	02E8	02E9	02EA	02EB	02EC	02ED	01120	0250	0251	0252	0253	0254	0255	0256	0257
750	02EE	02EF	02F0	02F1	02F2	02F3	02F4	02F5	02F6	02F7	01130	0258	0259	025A	025B	025C	025D	025E	025F
760	02F8	02F9	02FA	02FB	02FC	02FD	02FE	02FF	0300	0301	01140	0260	0261	0262	0263	0264	0265	0266	0267
770	0302	0303	0304	0305	0306	0307	0308	0309	030A	030B	01150	0268	0269	026A	026B	026C	026D	026E	026F
780	030C	030D	030E	030F	0310	0311	0312	0313	0314	0315	01160	0270	0271	0272	0273	0274	0275	0276	0277
790	0316	0317	0318	0319	031A	031B	031C	031D	031E	031F	01170	0278	0279	027A	027B	027C	027D	027E	027F

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TABLE C-1. DECIMAL-HEXADECIMAL AND OCTAL-HEXADECIMAL CONVERSION (SHEET 3 OF 5)

CONVERSION TABLE

DECIMAL - HEXADECIMAL

OCTAL - HEXADECIMAL

DECIMAL - HEXADECIMAL											OCTAL - HEXADECIMAL								
	0	1	2	3	4	5	6	7	8	9		0	1	2	3	4	5	6	7
800	0320	0321	0322	0323	0324	0325	0326	0327	0328	0329	01200	0280	0281	0282	0283	0284	0285	0286	0287
810	032A	032B	032C	032D	032E	032F	0330	0331	0332	0333	01210	0288	0289	028A	028B	028C	028D	028E	028F
820	0334	0335	0336	0337	0338	0339	033A	033B	033C	033D	01220	0290	0291	0292	0293	0294	0295	0296	0297
830	033E	033F	0340	0341	0342	0343	0344	0345	0346	0347	01230	0298	0299	029A	029B	029C	029D	029E	029F
840	0348	0349	034A	034B	034C	034D	034E	034F	0350	0351	01240	02A0	02A1	02A2	02A3	02A4	02A5	02A6	02A7
850	0352	0353	0354	0355	0356	0357	0358	0359	035A	035B	01250	02A8	02A9	02AA	02AB	02AC	02AD	02AE	02AF
860	035C	035D	035E	035F	0360	0361	0362	0363	0364	0365	01260	02B0	02B1	02B2	02B3	02B4	02B5	02B6	02B7
870	0366	0367	0368	0369	036A	036B	036C	036D	036E	036F	01270	02B8	02B9	02BA	02BB	02BC	02BD	02BE	02BF
880	0370	0371	0372	0373	0374	0375	0376	0377	0378	0379	01300	02C0	02C1	02C2	02C3	02C4	02C5	02C6	02C7
890	037A	037B	037C	037D	037E	037F	0380	0381	0382	0383	01310	02C8	02C9	02CA	02CB	02CC	02CD	02CE	02CF
900	0384	0385	0386	0387	0388	0389	038A	038B	038C	038D	01320	02D0	02D1	02D2	02D3	02D4	02D5	02D6	02D7
910	038E	038F	0390	0391	0392	0393	0394	0395	0396	0397	01330	02D8	02D9	02DA	02DB	02DC	02DD	02DE	02DF
920	0398	0399	039A	039B	039C	039D	039E	039F	03A0	03A1	01340	02E0	02E1	02E2	02E3	02E4	02E5	02E6	02E7
930	03A2	03A3	03A4	03A5	03A6	03A7	03A8	03A9	03AA	03AB	01350	02E8	02E9	02EA	02EB	02EC	02ED	02EE	02EF
940	03AC	03AD	03AE	03AF	03B0	03B1	03B2	03B3	03B4	03B5	01360	02F0	02F1	02F2	02F3	02F4	02F5	02F6	02F7
950	03B6	03B7	03B8	03B9	03BA	03BB	03BC	03BD	03BE	03BF	01370	02F8	02F9	02FA	02FB	02FC	02FD	02FE	02FF
960	03C0	03C1	03C2	03C3	03C4	03C5	03C6	03C7	03C8	03C9	01400	0300	0301	0302	0303	0304	0305	0306	0307
970	03CA	03CB	03CC	03CD	03CE	03CF	03D0	03D1	03D2	03D3	01410	0308	0309	030A	030B	030C	030D	030E	030F
980	03D4	03D5	03D6	03D7	03D8	03D9	03DA	03DB	03DC	03DD	01420	0310	0311	0312	0313	0314	0315	0316	0317
990	03DE	03DF	03E0	03E1	03E2	03E3	03E4	03E5	03E6	03E7	01430	0318	0319	031A	031B	031C	031D	031E	031F
1000	03E8	03E9	03EA	03EB	03EC	03ED	03EE	03EF	03F0	03F1	01440	0320	0321	0322	0323	0324	0325	0326	0327
1010	03F2	03F3	03F4	03F5	03F6	03F7	03F8	03F9	03FA	03FB	01450	0328	0329	032A	032B	032C	032D	032E	032F
1020	03FC	03FD	03FE	03FF	0400	0401	0402	0403	0404	0405	01460	0330	0331	0332	0333	0334	0335	0336	0337
1030	0406	0407	0408	0409	040A	040B	040C	040D	040E	040F	01470	0338	0339	033A	033B	033C	033D	033E	033F
1040	0410	0411	0412	0413	0414	0415	0416	0417	0418	0419	01500	0340	0341	0342	0343	0344	0345	0346	0347
1050	041A	041B	041C	041D	041E	041F	0420	0421	0422	0423	01510	0348	0349	034A	034B	034C	034D	034E	034F
1060	0424	0425	0426	0427	0428	0429	042A	042B	042C	042D	01520	0350	0351	0352	0353	0354	0355	0356	0357
1070	042E	042F	0430	0431	0432	0433	0434	0435	0436	0437	01530	0358	0359	035A	035B	035C	035D	035E	035F
1080	0438	0439	043A	043B	043C	043D	043E	043F	0440	0441	01540	0360	0361	0362	0363	0364	0365	0366	0367
1090	0442	0443	0444	0445	0446	0447	0448	0449	044A	044B	01550	0368	0369	036A	036B	036C	036D	036E	036F
1100	044C	044D	044E	044F	0450	0451	0452	0453	0454	0455	01560	0370	0371	0372	0373	0374	0375	0376	0377
1110	0456	0457	0458	0459	045A	045B	045C	045D	045E	045F	01570	0378	0379	037A	037B	037C	037D	037E	037F
1120	0460	0461	0462	0463	0464	0465	0466	0467	0468	0469	01600	0380	0381	0382	0383	0384	0385	0386	0387
1130	046A	046B	046C	046D	046E	046F	0470	0471	0472	0473	01610	0388	0389	038A	038B	038C	038D	038E	038F
1140	0474	0475	0476	0477	0478	0479	047A	047B	047C	047D	01620	0390	0391	0392	0393	0394	0395	0396	0397
1150	047E	047F	0480	0481	0482	0483	0484	0485	0486	0487	01630	0398	0399	039A	039B	039C	039D	039E	039F
1160	0488	0489	048A	048B	048C	048D	048E	048F	0490	0491	01640	03A0	03A1	03A2	03A3	03A4	03A5	03A6	03A7
1170	0492	0493	0494	0495	0496	0497	0498	0499	049A	049B	01650	03A8	03A9	03AA	03AB	03AC	03AD	03AE	03AF
1180	049C	049D	049E	049F	04A0	04A1	04A2	04A3	04A4	04A5	01660	03B0	03B1	03B2	03B3	03B4	03B5	03B6	03B7
1190	04A6	04A7	04A8	04A9	04AA	04AB	04AC	04AD	04AE	04AF	01670	03B8	03B9	03BA	03BB	03BC	03BD	03BE	03BF

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TABLE C-1. DECIMAL-HEXADECIMAL AND OCTAL-HEXADECIMAL CONVERSION (SHEET 4 OF 5)

CONVERSION TABLE

DECIMAL - HEXADECIMAL

OCTAL - HEXADECIMAL

DECIMAL - HEXADECIMAL											OCTAL - HEXADECIMAL								
	0	1	2	3	4	5	6	7	8	9		0	1	2	3	4	5	6	7
1200	04B0	04B1	04B2	04B3	04B4	04B5	04B6	04B7	04B8	04B9	01700	03C0	03C1	03C2	03C3	03C4	03C5	03C6	03C7
1210	04BA	04BB	04BC	04BD	04BE	04BF	04C0	04C1	04C2	04C3	01710	03C8	03C9	03CA	03CB	03CC	03CD	03CE	03CF
1220	04C4	04C5	04C6	04C7	04C8	04C9	04CA	04CB	04CC	04CD	01720	03D0	03D1	03D2	03D3	03D4	03D5	03D6	03D7
1230	04CE	04CF	04D0	04D1	04D2	04D3	04D4	04D5	04D6	04D7	01730	03D8	03D9	03DA	03DB	03DC	03DD	03DE	03DF
1240	04D8	04D9	04DA	04DB	04DC	04DD	04DE	04DF	04E0	04E1	01740	03E0	03E1	03E2	03E3	03E4	03E5	03E6	03E7
1250	04E2	04E3	04E4	04E5	04E6	04E7	04E8	04E9	04EA	04EB	01750	03E8	03E9	03EA	03EB	03EC	03ED	03EE	03EF
1260	04EC	04ED	04EE	04EF	04F0	04F1	04F2	04F3	04F4	04F5	01760	03F0	03F1	03F2	03F3	03F4	03F5	03F6	03F7
1270	04F6	04F7	04F8	04F9	04FA	04FB	04FC	04FD	04FE	04FF	01770	03F8	03F9	03FA	03FB	03FC	03FD	03FE	03FF
1280	0500	0501	0502	0503	0504	0505	0506	0507	0508	0509	02000	0400	0401	0402	0403	0404	0405	0406	0407
1290	050A	050B	050C	050D	050E	050F	0510	0511	0512	0513	02010	0408	0409	040A	040B	040C	040D	040E	040F
1300	0514	0515	0516	0517	0518	0519	051A	051B	051C	051D	02020	0410	0411	0412	0413	0414	0415	0416	0417
1310	051E	051F	0520	0521	0522	0523	0524	0525	0526	0527	02030	0418	0419	041A	041B	041C	041D	041E	041F
1320	0528	0529	052A	052B	052C	052D	052E	052F	0530	0531	02040	0420	0421	0422	0423	0424	0425	0426	0427
1330	0532	0533	0534	0535	0536	0537	0538	0539	053A	053B	02050	0428	0429	042A	042B	042C	042D	042E	042F
1340	053C	053D	053E	053F	0540	0541	0542	0543	0544	0545	02060	0430	0431	0432	0433	0434	0435	0436	0437
1350	0546	0547	0548	0549	054A	054B	054C	054D	054E	054F	02070	0438	0439	043A	043B	043C	043D	043E	043F
1360	0550	0551	0552	0553	0554	0555	0556	0557	0558	0559	02100	0440	0441	0442	0443	0444	0445	0446	0447
1370	055A	055B	055C	055D	055E	055F	0560	0561	0562	0563	02110	0448	0449	044A	044B	044C	044D	044E	044F
1380	0564	0565	0566	0567	0568	0569	056A	056B	056C	056D	02120	0450	0451	0452	0453	0454	0455	0456	0457
1390	056E	056F	0570	0571	0572	0573	0574	0575	0576	0577	02130	0458	0459	045A	045B	045C	045D	045E	045F
1400	0578	0579	057A	057B	057C	057D	057E	057F	0580	0581	02140	0460	0461	0462	0463	0464	0465	0466	0467
1410	0582	0583	0584	0585	0586	0587	0588	0589	058A	058B	02150	0468	0469	046A	046B	046C	046D	046E	046F
1420	058C	058D	058E	058F	0590	0591	0592	0593	0594	0595	02160	0470	0471	0472	0473	0474	0475	0476	0477
1430	0596	0597	0598	0599	059A	059B	059C	059D	059E	059F	02170	0478	0479	047A	047B	047C	047D	047E	047F
1440	05A0	05A1	05A2	05A3	05A4	05A5	05A6	05A7	05A8	05A9	02200	0480	0481	0482	0483	0484	0485	0486	0487
1450	05AA	05AB	05AC	05AD	05AE	05AF	05B0	05B1	05B2	05B3	02210	0488	0489	048A	048B	048C	048D	048E	048F
1460	05B4	05B5	05B6	05B7	05B8	05B9	05BA	05BB	05BC	05BD	02220	0490	0491	0492	0493	0494	0495	0496	0497
1470	05BE	05BF	05C0	05C1	05C2	05C3	05C4	05C5	05C6	05C7	02230	0498	0499	049A	049B	049C	049D	049E	049F
1480	05C8	05C9	05CA	05CB	05CC	05CD	05CE	05CF	05D0	05D1	02240	04A0	04A1	04A2	04A3	04A4	04A5	04A6	04A7
1490	05D2	05D3	05D4	05D5	05D6	05D7	05D8	05D9	05DA	05DB	02250	04A8	04A9	04AA	04AB	04AC	04AD	04AE	04AF
1500	05DC	05DD	05DE	05DF	05E0	05E1	05E2	05E3	05E4	05E5	02260	04B0	04B1	04B2	04B3	04B4	04B5	04B6	04B7
1510	05E6	05E7	05E8	05E9	05EA	05EB	05EC	05ED	05EE	05EF	02270	04B8	04B9	04BA	04BB	04BC	04BD	04BE	04BF
1520	05F0	05F1	05F2	05F3	05F4	05F5	05F6	05F7	05F8	05F9	02300	04C0	04C1	04C2	04C3	04C4	04C5	04C6	04C7
1530	05FA	05FB	05FC	05FD	05FE	05FF	0600	0601	0602	0603	02310	04C8	04C9	04CA	04CB	04CC	04CD	04CE	04CF
											02320	04D0	04D1	04D2	04D3	04D4	04D5	04D6	04D7
											02330	04D8	04D9	04DA	04DB	04DC	04DD	04DE	04DF
											02340	04E0	04E1	04E2	04E3	04E4	04E5	04E6	04E7
											02350	04E8	04E9	04EA	04EB	04EC	04ED	04EE	04EF
											02360	04F0	04F1	04F2	04F3	04F4	04F5	04F6	04F7
											02370	04F8	04F9	04FA	04FB	04FC	04FD	04FE	04FF

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TABLE C-1. DECIMAL-HEXADECIMAL AND OCTAL-HEXADECIMAL CONVERSION (SHEET 5 OF 5)

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CONVERSION TABLE  
 DECIMAL - HEXADECIMAL                      OCTAL - HEXADECIMAL

DECIMAL	HEXADECIMAL	OCTAL	HEXADECIMAL
0	1	2	3
02400	0500	0501	0502
02410	0508	0509	050A
02420	0510	0511	0512
02430	0518	0519	051A
02440	0520	0521	0522
02450	0528	0529	052A
02460	0530	0531	0532
02470	0538	0539	053A
02500	0540	0541	0542
02510	0548	0549	054A
02520	0550	0551	0552
02530	0558	0559	055A
02540	0560	0561	0562
02550	0568	0569	056A
02560	0570	0571	0572
02570	0578	0579	057A
02600	0580	0581	0582
02610	0588	0589	058A
02620	0590	0591	0592
02630	0598	0599	059A
02640	05A0	05A1	05A2
02650	05A8	05A9	05AA
02660	05B0	05B1	05B2
02670	05B8	05B9	05BA
02700	05C0	05C1	05C2
02710	05C8	05C9	05CA
02720	05D0	05D1	05D2
02730	05D8	05D9	05DA
02740	05E0	05E1	05E2
02750	05E8	05E9	05EA
02760	05F0	05F1	05F2
02770	05F8	05F9	05FA

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## TERMINAL SUBSYSTEM INSTALLATION OPTIONS SHEETS

Refer to Installation and Checkout paragraph heading in section 3 (volume 2) for instructions for filling in the Terminal Subsystem Installation Options Sheet which follows. A copy of this sheet should be used as a fill-in worksheet at each/every terminal subsystem location, regardless of whether initial installation or a service call is taking place. Two copies of this worksheet are provided for convenience. Duplications of these may be made as required. The final information recorded on the worksheet must always be filled in and checked for accuracy on the corresponding sheet in the user's operators guide for the terminal subsystem.

### CAUTION

Proper knowledge of and use of the various supplemental functions (otherwise termed options) and switch settings are the most important item in achieving and maintaining proper terminal subsystem operation.

## TERMINAL SUBSYSTEM INSTALLATION OPTIONS SHEET

The following list is to be completed by the customer engineer who installs this terminal at your site. Please review this list before operating the terminal. Knowledge of the options installed and of the internal switch setting is necessary to terminal operation. If this list has not been completed, ask your site supervisor to have someone complete it.

A check mark indicates the installed option or switch setting for your site. Options or switch functions that represent alternative choices are listed side-by-side.

### OPTIONS INSTALLED

- |  |   |
|--|---|
| <input type="checkbox"/> Multidrop Option with _____ Protocol<br><input type="checkbox"/> Current Loop Option<br><input type="checkbox"/> Extended Memory Option (24-line display)<br><input type="checkbox"/> Highlighting Option<br><input type="checkbox"/> Edit Option<br><input type="checkbox"/> Supplementary Power Supply Option<br><input type="checkbox"/> Tape Cassette Control Option<br><input type="checkbox"/> Printer Control Option | <input type="checkbox"/> or <input type="checkbox"/> Auto Answerback Option<br><input type="checkbox"/> or <input type="checkbox"/> External Modem Option<br><br><input type="checkbox"/> or <input type="checkbox"/> Paging Option |
|--|---|

### INTERNAL SWITCH SETTINGS

- |   |  |
|---|--|
| <input type="checkbox"/> EOT Disconnect Enable<br><input type="checkbox"/> 60-Hz Refresh<br><input type="checkbox"/> Scroll Enable<br><input type="checkbox"/> EOT Termination Code Enabled<br><input type="checkbox"/> Constant Request To Send (RTS)<br><input type="checkbox"/> ETX Termination Code Enabled<br><input type="checkbox"/> Constant DTR Enabled<br><input type="checkbox"/> Null Background Character<br><input type="checkbox"/> Termination Code Transmission Enabled<br><input type="checkbox"/> Circuit Assurance Enabled<br><input type="checkbox"/> Protected Field Transmission Enabled<br><input type="checkbox"/> X-Y Positioning Enabled<br><input type="checkbox"/> Batch Mode Enabled<br><input type="checkbox"/> Wraparound Enabled<br><input type="checkbox"/> Mark Parity<br>Terminal Baud Rate Setting: High ___ Low ___<br>Printer Baud Rate Setting: ___<br><input type="checkbox"/> Printer Parity Enabled<br><input type="checkbox"/> Printer Parity Even<br><input type="checkbox"/> Auto Print Enabled<br><input type="checkbox"/> Device Control Codes Enabled<br>Multidrop SIC/SCC ___ ___<br><input type="checkbox"/> Switched Carrier<br><input type="checkbox"/> Test Poll<br><input type="checkbox"/> SIC Response Enabled<br><input type="checkbox"/> Poll Acknowledge Enabled<br><input type="checkbox"/> Stop on ETX Enabled<br><input type="checkbox"/> Stop on STX Enabled<br><input type="checkbox"/> Stop on SOH Enabled<br><input type="checkbox"/> Unblind on SOH Enabled | <input type="checkbox"/> or <input type="checkbox"/> EOT Disconnect Disabled<br><input type="checkbox"/> or <input type="checkbox"/> 50-Hz Refresh<br><input type="checkbox"/> or <input type="checkbox"/> Scroll Disabled<br><input type="checkbox"/> or <input type="checkbox"/> EOT Termination Code Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Switched Request To Send<br><input type="checkbox"/> or <input type="checkbox"/> ETX Termination Code Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Switched DTR Enabled<br><input type="checkbox"/> or <input type="checkbox"/> Space Background Character<br><input type="checkbox"/> or <input type="checkbox"/> Termination Code Transmission Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Circuit Assurance Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Protected Field Transmission Disabled<br><input type="checkbox"/> or <input type="checkbox"/> X-Y Positioning Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Batch Mode Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Wraparound Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Space Parity<br><br><input type="checkbox"/> or <input type="checkbox"/> Printer Parity Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Printer Parity Odd<br><input type="checkbox"/> or <input type="checkbox"/> Auto Print Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Device Control Codes Disabled<br><br><input type="checkbox"/> or <input type="checkbox"/> Unswitched Carrier<br><input type="checkbox"/> or <input type="checkbox"/> Ready to Send<br><input type="checkbox"/> or <input type="checkbox"/> SIC Response Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Poll Acknowledge Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Stop on ETX Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Stop on STX Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Stop on SOH Disabled<br><input type="checkbox"/> or <input type="checkbox"/> Unblind on SOH Disabled |
|---|--|

### INSTALLATION DATA

Terminal Serial Number \_\_\_\_\_ Terminal Configuration Code \_\_\_\_\_  
 (Test Mode Display)

Terminal Installed by \_\_\_\_\_ Date \_\_\_\_\_



TERMINAL SUBSYSTEM INSTALLATION OPTIONS SHEET

The following list is to be completed by the customer engineer who installs this terminal at your site. Please review this list before operating the terminal. Knowledge of the options installed and of the internal switch setting is necessary to terminal operation. If this list has not been completed, ask your site supervisor to have someone complete it.

A check mark indicates the installed option or switch setting for your site. Options or switch functions that represent alternative choices are listed side-by-side.

OPTIONS INSTALLED

- Multidrop Option with \_\_\_\_\_ Protocol
- Current Loop Option
- Extended Memory Option (24-line display)
- Highlighting Option
- Edit Option
- Supplementary Power Supply Option
- Tape Cassette Control Option
- Printer Control Option
- or  Auto Answerback Option
- or  External Modem Option
- or  Paging Option

INTERNAL SWITCH SETTINGS

- EOT Disconnect Enable
- 60-Hz Refresh
- Scroll Enable
- EOT Termination Code Enabled
- Constant Request To Send (RTS)
- ETX Termination Code Enabled
- Constant DTR Enabled
- Null Background Character
- Termination Code Transmission Enabled
- Circuit Assurance Enabled
- Protected Field Transmission Enabled
- X-Y Positioning Enabled
- Batch Mode Enabled
- Wraparound Enabled
- Mark Parity
- Terminal Baud Rate Setting: High \_\_\_\_\_ Low \_\_\_\_\_
- Printer Baud Rate Setting: \_\_\_\_\_
- Printer Parity Enabled
- Printer Parity Even
- Auto Print Enabled
- Device Control Codes Enabled
- Multidrop SIC/SCC \_\_\_\_\_
- Switched Carrier
- Test Poll
- SIC Response Enabled
- Poll Acknowledge Enabled
- Stop on ETX Enabled
- Stop on STX Enabled
- Stop on SOH Enabled
- Unblind on SOH Enabled
- or  EOT Disconnect Disabled
- or  50-Hz Refresh
- or  Scroll Disabled
- or  EOT Termination Code Disabled
- or  Switched Request To Send
- or  ETX Termination Code Disabled
- or  Switched DTR Enabled
- or  Space Background Character
- or  Termination Code Transmission Disabled
- or  Circuit Assurance Disabled
- or  Protected Field Transmission Disabled
- or  X-Y Positioning Disabled
- or  Batch Mode Disabled
- or  Wraparound Disabled
- or  Space Parity
- or  Printer Parity Disabled
- or  Printer Parity Odd
- or  Auto Print Disabled
- or  Device Control Codes Disabled
- or  Unswitched Carrier
- or  Ready to Send
- or  SIC Response Disabled
- or  Poll Acknowledge Disabled
- or  Stop on ETX Disabled
- or  Stop on STX Disabled
- or  Stop on SOH Disabled
- or  Unblind on SOH Disabled

INSTALLATION DATA

Terminal Serial Number \_\_\_\_\_ Terminal Configuration Code \_\_\_\_\_  
 (Test Mode Display)

Terminal Installed by \_\_\_\_\_ Date \_\_\_\_\_



This appendix supplements the 62962300 Hardware Maintenance 751-10 Terminal Subsystem manual by describing the 70-LPM Impact Printer. Information given here parallels the present manual breakdown of printer information. Any material not covered in this appendix can be found in the Field Service and Reference manual 95445028 (Parts Identification Manual is 95445025).

Here follows the arrangement of this appendix:

#### GENERAL DESCRIPTION

- o 70-LPM Impact Printer
  - o Print Mechanism
  - o Interface and Control Logic Chassis
  - o Power Supply

#### 70-LPM IMPACT PRINTER PHYSICAL AND ELECTRICAL SPECIFICATIONS

- o Physical
- o Electrical

#### THEORY OF OPERATION

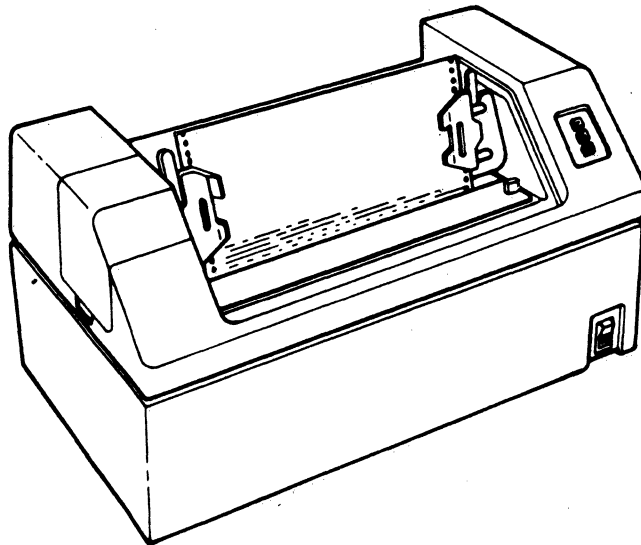
DDLT's and Procedures for the 70-LPM Impact Printer are available in Vol. 2 of this manual. See appendix E in Vol. 2. Also see appendix F of Vol. 2 for printer supplies information and format tape punching information.

## GENERAL DESCRIPTION

### EQUIPMENT DESCRIPTION FOR 70-LPM PRINTER

This section describes features and equipment specifications of the 70-LPM impact printer.

The 70-LPM printer (figure D-1) is a single head bidirectional printer. It has a print rate of 70 lines per minute (50/60 Hz) and prints a full line of 132 (7- by 9-dot pattern) characters, with a maximum short line print rate of 200 lines per minute. The standard character pitch is 10 characters per inch, with an operator selectable compressed pitch of 16.5 characters per inch. The printer has position seeking capability for increased speed throughout.



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Figure D-1. 70-LPM Impact Printer

## 70-LPM IMPACT PRINTER

The printer cabinet contains the following major functional components:

- Print mechanism
- Interface and control logic chassis
- Power supply

These components appear in figure D-2 and are briefly described in the following paragraphs.

### PRINT MECHANISM

The following are features of the print mechanism.

- Prints bidirectionally — the printhead alternately prints a line in one direction and the following line in the opposite direction, with the printhead moving just far enough to accomplish printing.
- An operator-replaceable printhead.
- Because of automatic printhead movement, printer motion control code CR (carriage return) only ends printline character accumulation in the line buffer and does not effect printhead movement after the characters are printed.

### INTERFACE AND CONTROL LOGIC CHASSIS

A printer online operation is initiated when the Data Set raises the Data Set Ready line and the Received Line Signal Detect line and starts transmitting bit serial data on the Received Data line. The printer uses a UART logic chip to assemble the bit serial data into parallel words. After assembly, the character is stored in the adapter memory located on the RS-232-C interface board. The adapter memory acts as a buffer between the interface and the printer. The interface writes into it, and the printer reads out of it. Read operations are performed between write operations. During read, the character stored in the adapter memory is transferred to the printer memory. After transfer to the printer memory, operation of the buffered printer is identical to the unbuffered printer.

There are eight interface lines plus a logic ground and a protective ground between the modem and the printer. The eight interface lines are Received Data, Request To Send, Data Set Ready, Data Terminal Ready, Received Line Signal Detector, Reverse Channel, Secondary Request To Send, and Ring Indicator.

The logic chassis is located at the rear of the printer and houses all the printed circuit boards with the exception of the needle driver board assembly, vertical transducer board assembly, horizontal transducer board assembly, and control panel board assembly.

All the boards in the logic chassis are hinged at the bottom and swing down for easy access.

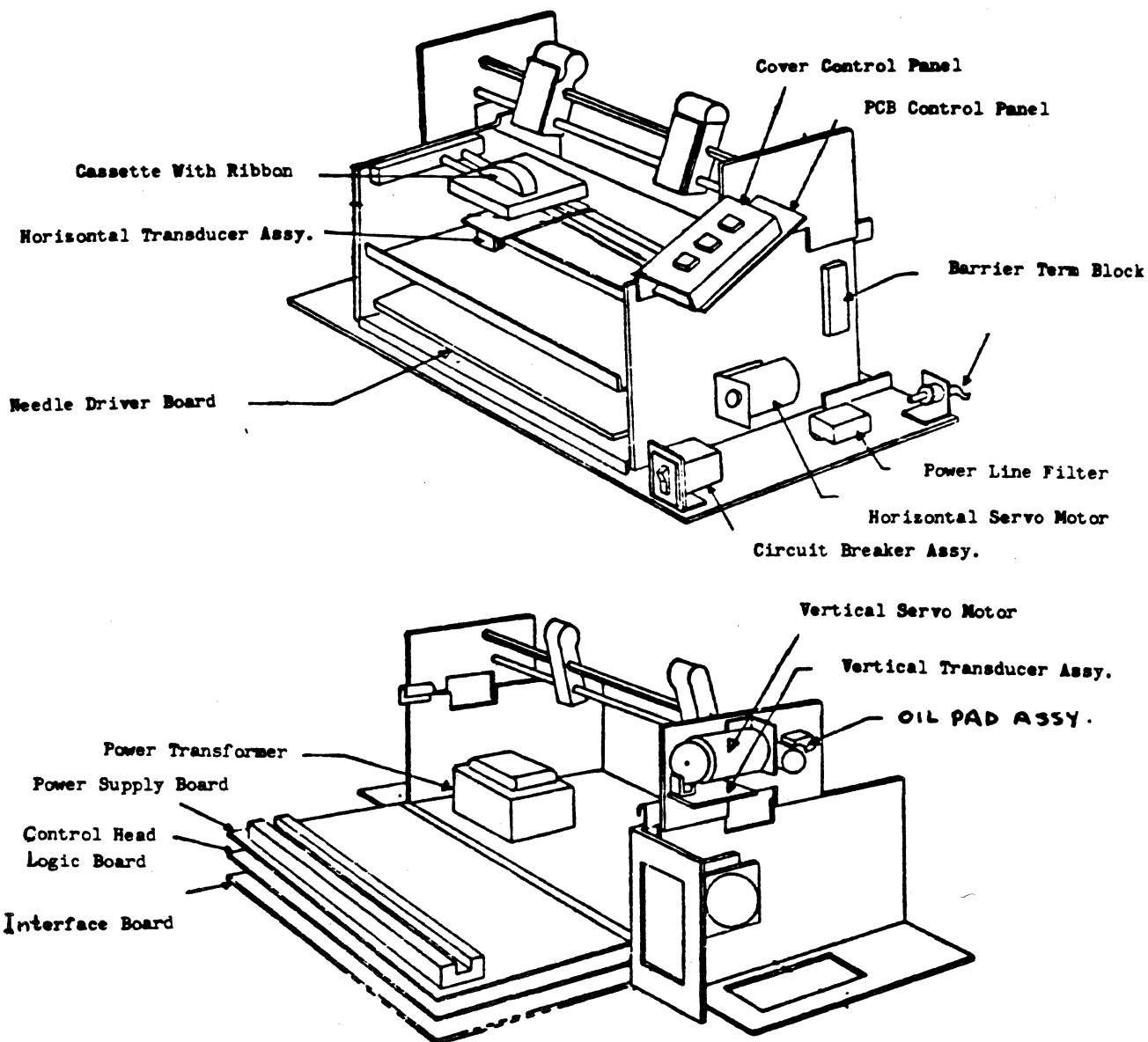


Figure D-2. 70-LPM Impact Printer Components

## POWER SUPPLY

The input voltage to the transformer is stepped down to four ac output voltages. The four voltage outputs are: +30 V ac, +55 V ac, and two separate +16 V ac. The four ac output voltages then enter the power supply board where they are converted into dc voltages. The dc distribution is initiated on the power supply board.

The power supply develops six dc voltages: +36 V dc, -36 V dc, +5 V dc, -5 V dc, +12 V dc, and -12 V dc. The +36 V dc and the -36 V dc are used to supply power to the vertical (paper motion) and horizontal (printhead transport) servo linear power amplifiers, which in turn supplies power to the drivehead transport and paper motion servo motors; +36 V dc also provides power to the needle driver coils.

The +12 V dc and -12 V dc are used to power the servo linear control circuits. The +5 V dc and -5 V dc are used to power the controller circuits. The +5 V dc also supplies power to the servo digital control circuits.

## 70-LPM IMPACT PRINTER PHYSICAL AND ELECTRICAL SPECIFICATIONS

The following paragraphs describe the physical characteristics, electrical data, and environmental specifications for the 70-LPM printer.

### PHYSICAL CHARACTERISTICS

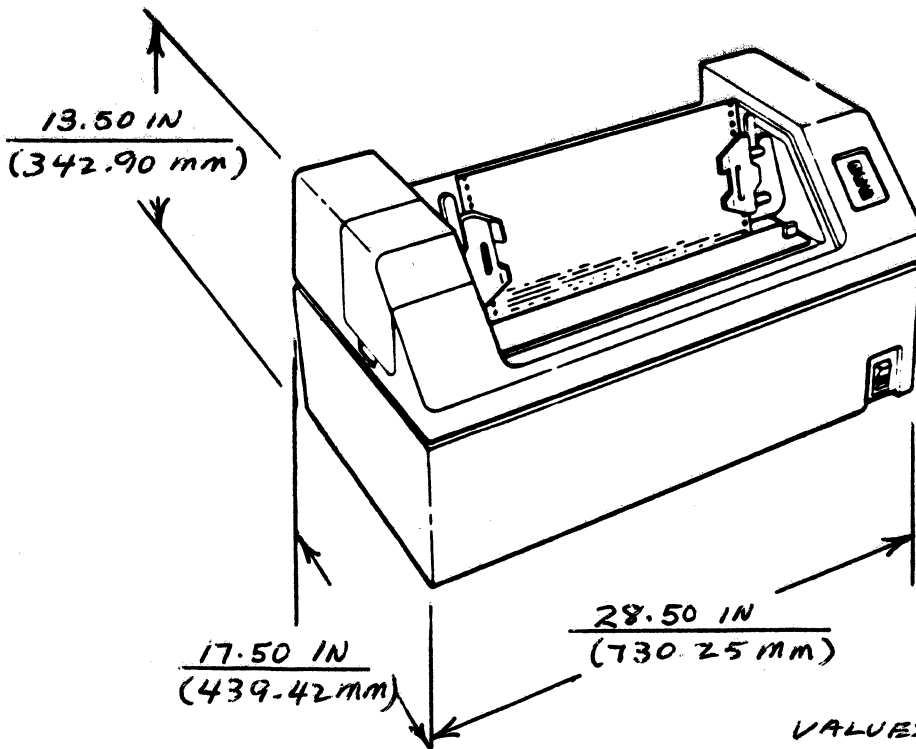
The 70-LPM printer (figure D-3) has the following dimensions and weight.

Height: 13.5 in (34.29 cm)

Width: 28.5 in (73.03 cm)

Depth: 17.5 in (43.94 cm)

Weight: 98 lb (44.5 kg)



VALUES GIVEN ARE  
MAXIMUM DIMENSIONS

Figure D-3. 70-LPM Impact Printer Dimensions

#### ELECTRICAL DATA

The 70-LPM printer has the following electrical power requirements.

59 to 60.6 Hz, single-phase, 2.8 A

49 to 50.5 Hz, single-phase, 1.5 A

with tap selectable ranges:



<u>Nominal V ac</u>	<u>Voltage Range (V ac)</u>
100	90 to 107
120	104 to 127
200	180 to 213
220	198 to 235
230	207 to 246
240	216 to 257
260	234 to 278

Power use of the printer is 243 watts operating and heat dissipation is 829 Btu/h.

## THEORY OF OPERATION

### 70-LPM IMPACT PRINTER

The 70-LPM impact printer reference and field service manual (see preface for publication number) contains theory of operation for the impact printer. Since that publication is intended to be a companion manual to this one at a customer site, this appendix provides no further theory of operation description beyond that in section 1, General Description of existing manual.