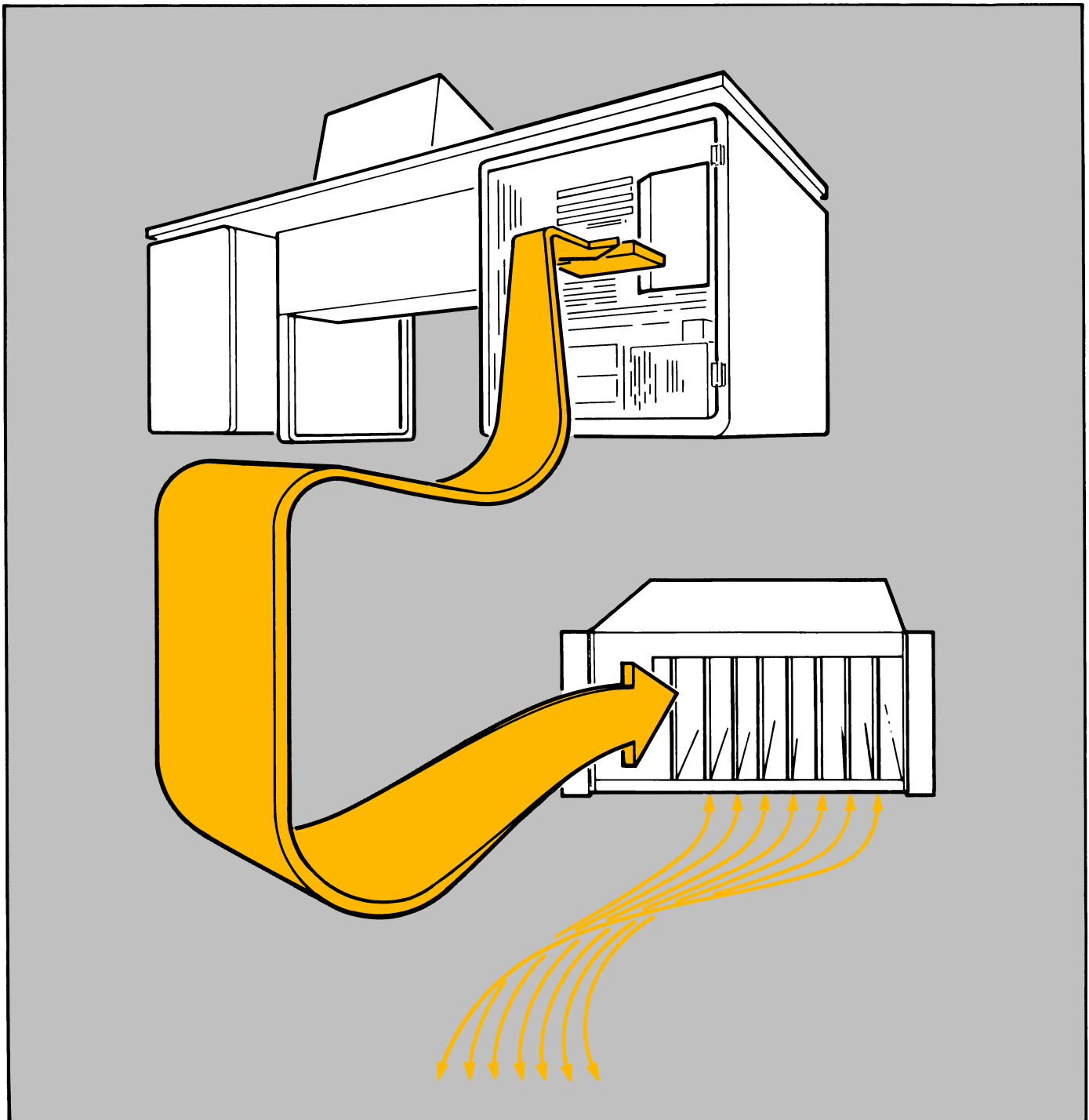


HP 12792B 8-Channel Asynchronous Multiplexer Subsystem Configuration Guide

For HP 1000 M/E/F-Series Computers



HP 12792B 8-Channel Asynchronous Multiplexer Subsystem

Configuration Guide



PRINTING HISTORY

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Chapter 1

Overview

The purpose of this Configuration Guide is to give the System Manager specific instructions for generating the HP 12792B Multiplexer (MUX) into an RTE-IVB or RTE-6/VM system. Also included are instructions on initializing the devices attached to the multiplexer and on troubleshooting if problems arise upon installation.

For more detailed information on the operation of the HP 12792B Multiplexer, the reader is referred to the HP 12792B 8-Channel Asynchronous Multiplexer Users Manual, part no. 5955-8867 and the 12792B 8-Channel Asynchronous Multiplexer Subsystem Installation and Reference Manual, part no. 12792-90020.

Chapter 2

System Planning

Software Modules

Software modules provided with the HP 12792B multiplexer are listed in Table 2-1 along with their approximate sizes.

Table 2-1. Software Modules for 12792B.

Module	Approx size (decimal bytes)	Description
%DVM00	3000	Interface card driver
%PVM00	150	Pre-driver
%DDV05	500	26XX terminal screen mode device driver
%DDV12	320	2631/2635/7310 printer device driver
\$\$DVTB	6	Device driver address table

%DVM00 and %PVM00 are always used in every system generation. \$\$DVTB is always used but if the user writes an additional device driver \$DVTB must be modified. %DDV05 and %DDV12 are used according to the needs of the user and the devices attached to the multiplexer interface. For more information on the tasks of these modules, refer to Chapter 4 of the 12792B users manual, part no. 5955-8867, covering Device Driver Writing.

Device Drivers

One of the features of the HP 12792B is its device driver capability. Users can write device drivers for RS-232-C or RS-423-A devices attached to the multiplexer to take care of special control required by the device. Device drivers are simply subroutines of the interface driver and use the interface driver to communicate with the CPU and devices. When writing device drivers, the user need only be concerned with adding the required character sequences to user data to control the devices.

HP supplies two device drivers with the 12792B product DDV05 (26XX terminal screen mode device driver) and DDV12 (2631/2635/7310 printer device driver). These device drivers, along with the interface driver (DWM00), the pre-driver (PWM00) and \$DVTB can be relocated in a two page driver partition. Users adding their own device drivers may find that all of the software won't fit into a two page driver partition. There are several alternatives besides using a three page driver partition (which decreases maximum size of a user partition). Refer to Chapter 4 of the multiplexer users manual covering Device Driver Writing for the alternative locations of these modules.

The interface driver (DWM00) uses the device driver address table (\$DVTB) to find the appropriate device driver when the device driver is selected with a control 33B request. The device drivers are selected by numbers which are determined by the device driver's position in the device driver address table. Each device driver to be used with the interface driver must have an entry in the device driver address table. Thus, users writing their own device drivers must modify \$DVTB. \$DVTB need not be modified if only the HP-supplied device drivers or a subset thereof are used.

If one of the HP-supplied device drivers is not relocated (e.g., DDV05 is to be used for terminals but DDV12 is not) and it is to be selected by the HP-supplied device driver address table \$DVTB, an undefined external will result at system generation time. This will be the name of the device driver not used (e.g., DDV12).

The undefined external can be ignored, or it can be eliminated by recoding \$DVTB specifically for the applicable device drivers. (Refer Chapter 4 of the users manual for instructions on recoding \$DVTB.)

\$DVTB, revision 2226 and later, contains an entry for device driver DDV63. DDV63 is supplied with MRJE subsystem software. The device driver address table includes DDV63 for the convenience of MRJE users.

Supported Devices

This section describes the extent of Hewlett-Packard's support for terminals and devices not specifically called out as supported by the HP 12792B Multiplexer Subsystem. Hewlett-Packard's responsibility extends only to insuring that the HP 12792B performs according to the following specifications when correctly installed and commanded to perform according to the instructions in the HP 12792B documentation supplied to the user.

Interface Support Definition

Electrical: The HP 12792B provides connection for two twisted pair data lines per channel. One pair provides send data, the other provides receive data. Two of the wires may be connected together to form a signal common. The electrical specifications of the data lines are RS-423-A, which is backwards compatible with RS-232-C.

Line Speeds: The 12792B will transmit and receive data simultaneously on any combination of channels at the following baud rates, provided that the aggregate throughput of 76800 baud (total for all 8 channels) is not exceeded.

SUPPORTED BAUD RATES

50	150	2400
75	300	4800
110	1200	9600
134.5	1800	19200

In addition, the rate at which the interface driver/card can process read and write requests (including device driver read and write requests) may not exceed 128 requests per second. This request rate may be reduced by other system activity.

User data reproduction: The character size may be specified at 5, 6, 7, or 8 bits per character not including an optional parity bit. On transmit, the user data will be processed byte by byte passing the 5, 6, 7, or 8 least significant bits in each byte to the character depending on character size. A parity bit will be added by the interface if parity is enabled. On receive, the user data from each character will be passed to the user's buffer into the 5, 6, 7, or 8 least significant bits of each byte, with the unused bits defined as follows:

Receive 8 bits/char:

bits 0 - 7: data
parity bit: always stripped

Receive 7 bits/char :

bits 0 - 6: data
bit 7: always zero (parity bit is
always stripped)

Receive 6 bits/char :

bits 0 - 5: data
bit 6: parity bit or, if no parity
defined, is always 1
bit 7: always 0

Receive 5 bits/char :

bits 0 - 4: data
bit 5: parity bit or, if no parity
defined, is always 1
bit 6: always 1
bit 7: always 0

Character Insertion/Deletion: To support the broadest range of devices the HP 12792B may be configured to completely pass all user data in both directions. Character handshakes required by devices may be inserted or deleted from the user data with a user-written device driver. Devices using hardware handshaking between the multiplexer card and the device are not supported. XON/XOFF protocol and transmit handshaking controlled by the device (rather than the interface) are not supported.

Additionally, the interface driver/card has the capability to perform the following character-oriented functions when configured by control requests:

TRANSMIT: Send ENQ (ASCII 5) and wait 5 seconds for an ACK (ASCII 6) response after every 80 characters.

Add a CR LF after each record or, if the last character is an underscore, delete the underscore and don't add CR LF.

RECEIVE: End transfer on, and strip one or more of the following: CR, RS, EOT and DC2. Or, end transfer on count and strip nothing.

On BS, strip the BS and delete the last character entered.

On DEL, strip the DEL and delete all characters previously entered in the record, restarting the record.

Echo all characters received and, on CR or DEL, echo CR LF.

Interface Driver With/Without User Written Device Driver

The HP 12792B Multiplexer Subsystem will support any RS-232-C or RS-423-A asynchronous bit-serial character-mode device whose interface characteristics are compatible with the Electrical, Line Speed, and User Data Reproduction sections of the preceding Interface Support Definition. The user may be required to write a device driver for the device in order to obtain this support.

Interface Driver With DDV05

The HP-supplied device driver DDV05 supports character and block mode operation with the following HP terminals:

2621A/P	2640B
2645A	2647A
2648A	2649B/C/G
2626A	

DDV05 provides no support for EQT subchannels. This includes cartridge tape units, printers, etc.. A separate LU is required for a serial line printer, in which case it may be connected directly to the MUX via either DDV12 or a user-written device driver.

Interface Driver With DDV12

The HP-supplied DDV12 device driver supports write-only with optional lineprinter-like column one carriage control on the following HP devices:

2631A/B
2635A/B
7310

For more information on HP-supplied device drivers, refer to Appendix B of the multiplexer users manual.

Other HP Subsystems

Support of non-HP terminals and devices by the HP 12792B Multiplexer Subsystem does not imply support of the devices by other HP systems or subsystems communicating with these devices through the HP 12792B. Consult the specific subsystem documentation for devices supported by that subsystem.

Modems

The MUX will passively support asynchronous, full duplex modems. Passive support means the MUX does not recognize or supply any modem control or status lines. The RS-232-C connectors on the HP 12828A have modem "clear to send" connected back to "request to send" and "carrier detect" wired back to "data terminal ready." ("Data set ready" is pulled to +12v through a 1k ohm resistor for those terminals that require it.) Use of the HP 12828A or connectors similar to these allow the passive support of modems. The user should be aware that "line loss" or other "modem not ready" problems cannot be detected by the MUX or user software through the MUX.

When using modems be aware that if the modem line (with auto answer) is disconnected, no provision is available to detect the condition. If the user was logged on under an RTE-IVB or RTE-6/VM session and the line is disconnected before the user logs off, anyone dialing in to that port will be re-connected to the session in progress at the time of the previous disconnect.

If the user wishes to have full modem capability, the HP 37214A Systems Modem subsystem should be used in place of the 12828A Multiplexer Panel. The system modem subsystem consists of the HP 37214A Card Cage having 8-slots to hold a modem controller card and seven optional cards as follows: the HP 37213A Modem Card, the HP External Modem Card (37215A), and the HP 37216A Terminal Interface Card. The modem card is compatible with Bell 212 and 103 modems. If your configuration will be communicating via telephone lines, the modem controller card (supplied with the 37214A) must always be plugged into port 7, and one modem card for each telephone line must be inserted into any of the other slots. Thus, it is possible to have up to seven modem lines (since one slot is taken by the modem controller card).

If the user supplied modems are to be used, they can be connected to the MUX either through the external modem cards or through terminal interface cards in the systems modem panel if terminal connections are desired.

Any combination of modem cards, external modem cards, or terminal interface cards (up to seven) can be included. If only terminal interface cards are installed, port 7 can also be used for a terminal interface card so that all eight ports contain terminal interface cards. However, if one or more modem cards (including the external modem card) is used, then the modem controller card must be inserted into port 7. Refer to the Systems Modem Installation Operating and Service Manual, part no. 37214-90000 for more information.

Chapter 3

System Generation

The following paragraphs outline the recommended procedure for generating the HP 12792B Multiplexer into an RTE Operating System. Examples of input at each of the relevant phases is shown. An example listing of the relevant generation phases is shown in Appendix A.

General Considerations

The generation of the HP 12792B multiplexer driver software into RTE is very similar to that of other terminal drivers. Each multiplexer card may be assigned up to eight EQTs (one EQT per port). Each EQT to be used with this driver is assigned to an interface card at generation time by the select code designated when EQTs are specified. Any EQT associated with a particular interface card can be used for any port on that card, but EQTs cannot be moved from one card to another after generation.

The size of an extent assigned to an EQT is determined by adding the size required by the interface driver (17 words) to the largest of the extents required by any device drivers attached to that EQT. The HP-supplied device drivers both require four word extents, so when using only HP-supplied software the extent size would be $17 + 4 = 21$ words.

A Device Reference Table (DRT) entry must be generated for each logical unit (LU) to be used. A different LU number must be assigned to each individual terminal or device.

On system boot-up, the WELCOM file should contain control requests needed to initialize the ports. It is at this time that the association between LU (and its EQT), and physical port (device) is made. The WELCOM file contents are covered in Chapter 4 (Initialization).

In the following examples the step numbers referred to in each phase refer to the steps in Section 2 of the RTE-IVB or RTE-6/VM On-Line Generator Reference Manual (part nos. 92068-90007 and 92084-90010, respectively).

Initialization Phase

Since the HP 12792B multiplexer driver is not privileged (as opposed to the HP 12920B multiplexer product), nothing related to the MUX needs to be done in this phase.

Program Input Phase

Step 16C (refer to the applicable On-Line Generator Reference Manual) specifies the modules to be relocated by their relocatable file names with optional security code and disc cartridge specification. Relocate %DVM00, %PVM00, %\$DVTB, and all HP- and User-supplied device drivers to be included. Refer to Figure 3-1 which shows the HP-supplied software to be relocated.

16c Enter the RELOCATE commands (with optional MAP, LINKS IN, and DISPLAY commands)

REL _____, %DVM00 _____ (REL [(name)] ,filename [: sc [: cartridge label]])

(RT4GN responds with a — after each user input)

REL _____, %PVM00 _____

REL _____, %DDV05 _____

REL _____, %DDV12 _____

REL _____, %\$DVTB _____

Figure 3-1. Relocating HP-Supplied Software.

Parameter Input Phase

In step 17 the user is required to change the program type of module PWM00 to 13. This forces PWM00 to reside in Table Area II. Refer to Figure 3-2.

Parameter Input Phase	(modify type, priority, and execution interval, or the ENT (entry) record of any of the programs specified during the Program Input Phase)
①7 PARAMETERS	(output by generator at start of Parameter Input Phase)
-	(generator prompt)
PWM00, 13, _____, _____	(name, Type [,priority [,execution interval]])
-	
_____, _____, _____, _____	(terminate your final entry with a /E)
-	

Figure 3-2. Changing PWM00 Parameter.

Table Generation Phase

Equipment Table Entries

In step 19, the user specifies the EQT entries for the multiplexer. All EQTs associated with devices on one interface card use that card's select code number. Each EQT may specify buffering (B), and should have an EQT extent as described at the beginning of this chapter (17 + largest extent required by device drivers). When using only HP-supplied device drivers, the extent will be 21. A timeout value may optionally be specified. Do not specify DMA usage ("D" option). Refer to Figure 3-3. Note that EQTs shown here are contiguous, but they need not be. Also, "SC" refers to the code of the multiplexer card.

19

EQUIPMENT TABLE ENTRY

EQT XX?

SC, DVM00, B, X=21, T=32767, , , ,

(oct. select code, driver [,B] [,D] [,S] [,M] [,T= ttttt] [,X = xxx])

EQT XX+1?

SC, DVM00, B, X=21, T=32767, , , ,

(do not specify SDA for system disc driver)

EQT XX+2?

SC, DVM00, B, X=21, T=32767, , , ,

(terminate your final entry with a /E)

EQT XX+3?

SC, DVM00, B, X=21, T=32767, , , ,

EQT XX+4?

SC, DVM00, B, X=21, T=32767, , , ,

EQT XX+5?

SC, DVM00, B, X=21, T=32767, , , ,

EQT XX+6?

SC, DVM00, B, X=21, T=32767, , , ,

EQT XX+7?

SC, DVM00, B, X=21, T=32767, , , ,

Figure 3-3. Equipment Table Entries

Device Reference Table Entries

Step 20 specifies the Device Reference Table (DRT) entries for the MUX. There should be one entry for each port utilized by a terminal or device.

Each entry in the DRT is the EQT number of the equipment table entry for a port. The DRT entries are in LU number order. The terminal on that port will be referred to by the LU number of the current DRT entry.

No support is provided for EQT subchannels in the HP-supplied device drivers or interface drivers (these drivers will ignore any subchannel specification although for compatibility with future products it should be set to zero). This includes cartridge tape units, printers, etc.. Users may write their own device drivers which will use EQT subchannels. Refer to Chapter 4 of the multiplexer users manual (part no. 5955-8867) covering Device Driver Writing.

Refer to Figure 3-4 for the format of DRT entries, where XX refers to the EQT number and YY refers to the LU number. Note that these entries are sequential, but need not be.

20	DEVICE REFERENCE TABLE
	YY = EQT #? <u>XX</u> , _____
	YY+1 = EQT #? <u>XX+1</u> , _____
	YY+2 = EQT #? <u>XX+2</u> , _____
	YY+3 = EQT #? <u>XX+3</u> , _____
	YY+4 = EQT #? <u>XX+4</u> , _____
	YY+5 = EQT #? <u>XX+5</u> , _____
	YY+6 = EQT #? <u>XX+6</u> , _____
	YY+7 = EQT #? <u>XX+7</u> , _____

Figure 3-4. DRT Entries For The MUX.

Interrupt Table Entries

Step 21 specifies the interrupt table entries for the HP 12792B Multiplexer. One entry is required for each interface card generated into the system. On systems using up to eight terminals. on the MUX, users will want to specify:

sc, PRG, PRMPT

to enable scheduling of PRMPT on unsolicited interrupts. Unsolicited interrupts are caused by striking a key on a terminal which does not have a read request pending on it. If a user-written program is to be scheduled upon receipt of an unsolicited interrupt, include that program's name in place of PRMPT. Note that the program specified is used for all channels on that card unless overridden on-line via a user request. If unsolicited interrupts are to be ignored, use:

sc, EQT, eqt#

where sc is the select code of the card and eqt# is the number of any one of the EQT's specified for that card. This will still allow communication with each port's EQT the only effect it has is to ignore unsolicited interrupts. This can be overridden via an on-line request.

Refer to your operating system's On-Line Generator Reference Manual for more details. Figure 3-5 shows the entry used when devices are connected to the MUX.

<p>②1 INTERRUPT TABLE</p> <p>— <u>SC</u> , <u>PRG</u> , <u>PRMPT</u> — ____ , ____ , ____ — ____ , ____ , ____ — ____ , ____ , ____ — ____ , ____ , ____ — ____ , ____ , ____</p>	<p>(enter octal select codes in ascending order)</p> <p>(generator prompt)</p> <p>(select code, option, destination)</p> <p>(terminate your final entry with a /E)</p> <p>NOTE: SC= OCTAL SELECT CODE OF MUX CARD ENTER OCTAL SELECT CODES IN ASCENDING ORDER</p>
--	---

Figure 3-5. Interrupt Table Entries.

Partition Definition Phase — System Available Memory

Step 33 allows the system manager to increase the size of System Available Memory (SAM) by moving the starting page of the first user partition to a higher location in memory.

The system manager should keep in mind that since terminals on the MUX may be buffered, SAM will be required for programs to communicate with terminals. If there is not enough SAM, programs communicating with terminals may be suspended waiting for System Available Memory.

Chapter 4

Initialization

Initialization of the HP 12792B Multiplexer Subsystem is typically performed at boot-up in the WELCOM file by a sequence of control requests. Three requests are performed on each port:

```
control 30B: Set port ID
control 33B: Configure driver responses, if needed
control 20B: Enable schedule, if needed
              (schedule a program on
              unsolicited interrupts)
```

These control functions must be given in the above order, and are defined in detail in the multiplexer users manual part no. 5955-8867.

The HP 12792B multiplexer interface card contains two baud rate generators. When employing the HP 12828A Multiplexer Panel with the standard cable, baud rate generator 0 (BRG0) is wired to port 0, and baud rate generator 1 (BRG1) is wired to ports 1-7. Typically, the printer port is port 0 (running at, say, 2400 baud) while the other seven ports are terminals running at 9600 baud. Note that these two baud rate generators can be split in other ways (2 or 3 or 4 ports on one baud rate generator and the rest on the other). Refer to the HP 12792B Multiplexer Subsystem Installation and Reference Manual for more information.

It is important to remember that devices must be configured to agree with the values specified in the control 30B request in the WELCOM file. For example, for a HP 7310 line printer, the switches on the back of it should be set for the baud rate and parity option at which it is to be used. All other switches should be in their normal positions.

Using the Default Device Driver

All ports must be associated with a device driver. For devices which do not require request processing beyond what the interface driver performs, a defaultdevice driver is included as part of the interface driver. Upon being sent a request by the interface driver, the default device driver simply passes the request back to the interface driver without performing any processing on the request.

The default device driver is selected by specifying device driver number one when issuing a control 33B request.

Enabling a DDV12 Device

The following could be used to initialize a line printer attached to port 0:

```
:CN,lu,30B,142310B * Port 0, 2400 baud, ENQ/ACK enabled, no parity,  
                    1 stop bit, BRG 0, 8 bits char.  
  
:CN,lu,33B,2 * Attach device driver number 2, DDV12 (in the  
              HP-supplied $DVTB, DDV12 is device driver  
              number 2).  
  
:CN,lu,21B * Disable schedule (see below).
```

The last request (control 21B, disable schedule) is included so that the device driver is entered before any user request is given. This gives the driver a chance to set the port's driver type to 12B in case a user inquires driver type before any other request is given. Any reasonable control request may be given 21B was chosen since it also ensures that extraneous noise will not cause program scheduling.

Note that a control 20B is not used for a line printer since there will be no read requests or unsolicited interrupts from the printer.

As with all devices, when using an HP 7310line printer, an HP 2631 terminal, or an HP 2635 terminal, be sure the switches are set for whatever baud rate and parity option is to be used. These must agree with the values specified using the control 30B request in the WELCOM file.

Enabling a DDV05 Device

The control requests that could be used to initialize a terminal port are shown below. Typically these are running off of baud rate generator one (BRG1).

```
:CN,lu,30B,152334B * Port 4, 9600 baud, ENQ/ACK enabled, no parity,  
                    1 stop bit, BRG 1, 8 bits per character.  
  
:CN,lu,33B,3 * Attach device driver 3, DDV05 (in the  
              HP-supplied $DVTB, DDV05 is device driver 3).  
  
:CN,lu,20B * Enable scheduling (schedule program on unsoli-  
            cited interrupt).
```


Be sure that the terminal strapping configuration switches agree with the commands given in the control request. Refer to the appropriate terminal/device instruction manual.

Example

The following is a sample part of a WELCOM file which initializes each port to 9600 baud, no parity, one stop bit, ENQ/ACK handshake enabled, attaches device driver 3 (the 26XX screen mode terminal device driver), and puts the port in type-ahead mode with cancel on break. Port 7 on the second card is configured for an HP 7310 line printer (device driver 2). Note that the default (hardwired) baud rate configuration is used (port 0 uses baud rate generator 0, ports 1-7 use baud rate generator 1). With the HP 12828A Multiplexer Panel, port 0 uses BRG0 and ports 1-7 use BRG1 unless the user modifies the hood connector.

```
:*
:* SET PORT ID'S ON CARD 1
:*
:CN, 19, 30B, 142330B
:CN, 20, 30B, 152331B
:CN, 21, 30B, 152332B
:CN, 22, 30B, 152333B
:CN, 23, 30B, 152334B
:CN, 24, 30B, 152335B
:CN, 25, 30B, 152336B
:CN, 26, 30B, 152337B
:*
:* SET PORT ID'S ON CARD 2
:*
:CN, 27, 30B, 142330B
:CN, 28, 30B, 152331B
:CN, 29, 30B, 152332B
:CN, 30, 30B, 152333B
:CN, 31, 30B, 152334B
:CN, 32, 30B, 152335B
:CN, 33, 30B, 152336B
:CN, 34, 30B, 152337B
:*
:* CONFIGURE DRIVER RESPONSES ON ALL PORTS
:*
:CN, 19, 33B, 23003B
:CN, 20, 33B, 23003B
.
.
```

```
.
etc
.
.
.
:CN, 33, 33B, 23003B
:CN, 34, 33B, 2
:*
:* ENABLE SCHEDULING ON ALL PORTS
:*
:CN, 19, 20B
:CN, 20, 20B
.
.
.
etc
.
.
.
:CN, 33, 20B
:CN, 34, 21B
```

Chapter 5

Troubleshooting

When your system has been generated, booted up, and the multiplexer terminals are initialized according to the instructions in the preceding sections of this manual, your multiplexer terminals should respond to pressing of any key in a manner similar to that of any DVR05 or DVR00 terminal. If a multiplexer terminal fails to respond properly, the following checklist may help to correct the problem.

- o Verify that the baud rate of the terminal matches the baud rate expected by the software.
- o Verify that the Baud Rate Generator specified for each port during initialization agrees with the BRG strapped for that port on the edge connector.
- o If one port is not working, verify that the baud rate for the BRG on the port has not been changed. This could have happened by changing the baud rate of another port using the same BRG.
- o Check that the terminal strap switches are set according to the terminal instruction manual.
- o Verify that the cables are connected properly according to the HP 12792B Multiplexer Subsystem Installation and Reference Manual and the terminal and/or modem instruction manual.
- o Verify that the MUX board is in the appropriate select code.
- o Verify that PWM00 was set to type 13 in the parameter input phase of the system generation.
- o Check power-up echo. The card "comes up" in a state where it echoes everything that comes in and sends CR LF on CR. Rubout echoes CR LF. The default (power-up) baud rates are 2400 baud for BRG0 and 9600 baud for BRG1. If the terminal is attached to port 0, set the baud rate to 2400 and check to see if it echoes (set terminals connected to BRG1 to 9600 baud). This verifies that the card, terminal, and cable are operating. If this doesn't work, try the other seven terminals to determine if it is the cable or terminal.
- o Run the on-line or off-line diagnostics. Refer to the HP 12792B Multiplexer Subsystem Installation and Reference Manual for a detailed explanation.

Appendix A

Partial Sample System Generation

Below is listed some relevant sections of a system generation listing which includes the HP 12792B Multiplexer. Some irrelevant portions have been omitted due to space considerations.

RTE-6/VM GENERATOR MODEL 92084A 1:56 PM, 19 NOV., 1982

ECHO?

YES * ECHO ON

OUTPUT FILE NAMR?

MXENSY::50::3500 * 800819

.
.
.

PRIV. INT. SELECT CODE?

0 * NO PRIV. INT.

MEM. RES. ACCESS TABLE AREA II?

YES * MR ACCESS TA II

RT MEMORY LOCK?

YES * RT MEMORY LOCK

BG MEMORY LOCK?

YES * BG MEMORY LOCK

SWAP DELAY?

50 * SWAP DELAY

MEM SIZE?

96 * MEM SIZE

BOOT FILE NAMR?

0 * NO BOOT FILE

PROG INPUT PHASE:

-
MAP GLOBALS, MODULES, LINKS
-
LINKS IN CURRENT

.
.
.
*
-
REL, %DVM00 * MUX DRIVER
-
REL, %PVM00 * MUX PRE-DRIVER
-
REL, %DDV05 * 26XX DEVICE DRIVER
-
REL, %DDV12 * DEVICE DRIVER FOR 7310 LINE PRINTER
-
REL, %\$DVTB * DEVICE DRIVER ADDRESS TABLE

-
*
-
*
-
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R\$PN\$, 1, 10
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MEM, 1, 9000
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AUTOR, 1, 1
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PVM00, 13
-
/E

CHANGE ENTS?
-

.MW,RP,105777

-

.MBT,RP,105765

-

.LBT,RP,105763

-

.

.

.

IFIX,RP,105100

-

FLOAT,RP,105120

-

/E

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EQUIPMENT TABLE ENTRY

EQT 01?

.

.

.

EQT 06?

13,DVM00,B,X=2 1

* EQT 6 - MUX PORT

EQT 07?

13,DVM00,B,X=2 1

* EQT 7 - MUX PORT

EQT 08?

13,DVM00,B,X=2 1

* EQT 8 - MUX PORT

EQT 09?

13,DVM00,B,X=2 1

* EQT 9 - MUX PORT

EQT 10?

13,DVM00,B,X=2 1

* EQT 10 - MUX PORT

EQT 11?

13,DVM00,B,X=2 1

* EQT 11 - MUX PORT

EQT 12?

13,DVM00,B,X=2 1

* EQT 12 - MUX PORT

EQT 13?

13, DVM00, B, X=21

* EQT 13 - MUX PORT

EQT 14?

/E

DEVICE REFERENCE TABLE

001 = EQT #?

2,0

* LU 1 - CONSOLE

.

:

.

012 = EQT #?

6

* LU 12 - MUX PORT

013 = EQT #?

7

* LU 13 - MUX PORT

014 = EQT #?

8

* LU 14 - MUX PORT

015 = EQT #?

9

* LU 15 - MUX PORT

016 = EQT #?

10

* LU 16 - MUX PORT

017 = EQT #?

11

* LU 17 - MUX PORT

018 = EQT #?

12

* LU 18 - MUX PORT

019 = EQT #?

13

* LU 19 - MUX PORT

020 = EQT #?

/E

INTERRUPT TABLE

-
4, ENT, \$POWR * POWER FAIL
-
.
.
.
13, PRG, PRMPT * MUX
-
.
.
.
17, PRG, PRMPT * DVR05
-
/E

TABLE AREA I MODULES

\$\$TB1(0099)03011 03152 92084-1X481 REV.2121 810613
*\$ERAB 03021
*\$PVCN 03023
*\$EXEC 03013
*\$XLUEX 03016
*\$LIBR 03025
*\$LIBX 03032
*\$PVS T 03024
.
.
.

DRIVR PART 00002
CHANGE DRIVR PART?
2 * CHANGE DP SIZE

DP 01 <<PAGE 00005>>:
.
.
.

.
. .
SUBSYSTEM GLOBAL AREA <<PAGE 00007>>:

.
. .
TABLE AREA II <<PAGE 00010>>:

OF I/O CLASSES?

40 * # OF I/O CLASSES

OF LU MAPPINGS?

5 * # OF LU MAPPINGS

OF RESOURCE NUMBERS?

30 * # OF RESOURCE NUMBERS

BUFFER LIMITS (LOW, HIGH)?

100,400 * BUFFER LIMITS

0024 LONG ID SEGMENTS USED

OF BLANK LONG ID SEGMENTS?

50 * # OF BLANK ID SEGMENTS

0012 SHORT ID SEGMENTS USED

OF BLANK SHORT ID SEGMENTS?

41 * # OF BLANK SHORT ID SEGMENTS

0000 ID EXTENSIONS USED

OF BLANK ID EXTENSIONS?

5 * # OF BLANK ID EXTENSIONS

MAXIMUM # OF PARTITIONS?

20 * MAX NUMBER OF PARTITIONS

TABLE AREA II MODULES

\$\$TB2(0099)33547 33653 92084-1X482 REV.2121 810519

*\$MATA 33547

*\$MCHN 33550

*\$MBGP 33551

*\$MRTP 33552

*\$DLTH 33553

*\$DVPT 33554

*\$TIME 33555

*\$BATM 33560

*\$DLP 33562
*\$PLP 33563
*\$SSCT 33602
*\$STRK 33601
*\$ENDS 33564
*\$MPFT 33567
*\$BGR 33570
*\$RTR 33571
*\$IDEX 33572
*\$MRMP 33573
*\$MPS2 33575
*\$EMRP 33607
*\$MPSA 33574
*\$SDA 33576
*\$SDT2 33577
*\$CMST 33600
*\$CML 33603
*\$CFR 33604
*\$MNP 33605
*\$DVP 33606
*\$RLB 33610
*\$RLN 33611
*\$SBTB 33612
*\$OTAT 33565
*\$OPRI 33566
*\$SPCR 33620
*\$ELTB 33621
*\$PNTI 33631
*\$MAXI 33632
*\$SALI 33633
*\$SRTI 33634
*\$CES 33652
*\$LMES 33637
*\$SMEM 33635
BP LINKAGE 01420

PVM00(0099)33654 33765 12792-16001 REV. 2032 800605 V. 03
*PM00 33654
BP LINKAGE 01420

\$\$SUB2(0099)33766 33766 92084-1X052 REV. 2226 820302

SYSTEM <<PAGE 00013>>:

\$CR61(0099)33767 33766 92084-12024 REV.2226 820504
BP LINKAGE 00100

DISP6(0099)33770 41521 92084-1X471 REV.2121 811218
*\$RENT 34617
*\$BRED 41222
*\$ZZZZ 41322

.
.
.

*\$NPGQ 70004
*\$GDPG 72565
*\$SAVE 65335
BP LINKAGE 01322

PARTITION DRIVERS

DP 02 <<PAGE 00030>>:

DVA05(0099)12102 15164 92084-16607 REV. CODE 2121 811020
*\$IA05 12102
*\$CA05 12200
BP LINKAGE 01367

DP 03 <<PAGE 00032>>:

DVM00(0099)12056 14566 12792-16002 REV.2301 821007 V.38
*\$IM00 12117
*\$CM00 12255
BP LINKAGE 01357
\$DVTB 14636 14640 12792-16005 REV.2226 820413 V.06
*\$DVTB 14636
BP LINKAGE 01356
DDV05 14641 15174 12792-16003 REV.2301 820630 V.04
*\$DDV05 14654
BP LINKAGE 01356
DDV12 15175 15430 12792-16004 REV.2140 810821 V.09
*\$DDV12 15206
BP LINKAGE 01356

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.
.
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Configuration Guide**

5955-8868

January 1983

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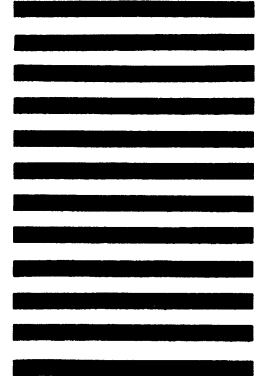
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SF-90140-14 **OULU**
Tel: (981) 338785
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FRANCE

Hewlett-Packard France
Z.I. Mercure B
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F-13763 Les Milles Cedex
AIX-EN-PROVENCE
Tel: 16 (42) 59-41-02
Telex: 410770F
A,CH,E,MS,P*

Hewlett-Packard France
64, rue Marchand Saillant
F-61000 **ALENCON**
Tel: 16 (33) 29 04 42

Hewlett-Packard France
Boite Postale 503
F-25026 **BESANCON**
28 rue de la Republique
F-25000 **BESANCON**
Tel: 16 (81) 83-16-22
CH,M

Hewlett-Packard France
13, Place Napoleon III
F-29000 **BREST**
Tel: 16 (98) 03-38-35

Hewlett-Packard France
Chemin des Mouilles
Boite Postale 162
F-69130 **ECULLY Cedex (Lyon)**
Tel: 16 (78) 833-81-25
Telex: 310617F
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Hewlett-Packard France
Tour Lorraine
Boulevard de France
F-91035 **EVRY Cedex**
Tel: 16 6 077-96-60
Telex: 692315F
E

Hewlett-Packard France
Parc d'Activite du Bois Briard
Ave. du Lac
F-91040 **EVRY Cedex**
Tel: 16 6 077-8383
Telex: 692315F
E

Hewlett-Packard France
5, avenue Raymond Chanas
F-38320 **EYBENS (Grenoble)**
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Telex: 980124 HP GRENOB EYBE
CH

Hewlett-Packard France
Centre d'Affaire Paris-Nord
Bâtiment Ampère 5 étage
Rue de la Commune de Paris
Boite Postale 300
F-93153 **LE BLANC MESNIL**
Tel: 16 (1) 865-44-52
Telex: 211032F
CH,CS,E,MS

Hewlett-Packard France
Parc d'Activités Cadera
Quartier Jean Mermoz
Avenue du Président JF Kennedy
F-33700 **MERIGNAC (Bordeaux)**
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CH,E,MS

Hewlett-Packard France
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Nouveau Chemin de la Garde
ZAC de Bois Briard
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Avenue des Tropiques
F-91947 Les Ulis Cedex ORSAY
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15, Avenue de L'Amiral Bruix
F-75782 PARIS CEDEX 16
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Telex: 613663F
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124, Boulevard Tourasse
F-64000 PAU
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Hewlett-Packard France
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Hewlett-Packard France
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CH** ,CS

Hewlett-Packard France
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Boîte Postale 56
F-67033 STRASBOURG Cedex
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Telex: 890141F
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F-31083 TOULOUSE Cedex
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F-26000 VALENCE
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F-57640 VIGY (Metz)
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Hewlett-Packard GmbH
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Kostas Karayannis S.A.
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Telex: 215962 RKAR GR
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G. Gerardos
24 Stournara Street
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P

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GUATEMALA CITY
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Telex: 4192 TELTRO GU
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Telex: 66678 HEWPA HX
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E,CH,CS,P

CET Ltd.
1402 Tung Wah Mansion
199-203 Hennessy Rd.
Wanchia, HONG KONG
Tel: 5-729376
Telex: 85148 CET HX
CM

Schmidt & Co. (Hong Kong) Ltd.
Wing On Centre, 28th Floor
Connaught Road, C.
HONG KONG
Tel: 5-455644
Telex: 74766 SCHMX HX
A,M

ICELAND

Elding Trading Company Inc.
Hafnarvöli-Tryggvagotu
P.O. Box 895
IS-REYKJAVIK
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INDIA

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Computer Maintenance Corp.

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Sabri Complex II Floor
24 Residency Rd.
BANGALORE 560 025
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Telex: 0845-430
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Band Box House
Prabhadevi
BOMBAY 400 025
Tel: 422-3101
Telex: 011-3751
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A,M

Blue Star Ltd.
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414/2 Vir Savarkar Marg
Prabhadevi
BOMBAY 400 025
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Telex: 011-4093
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Alkapuri, BORODA, 390 005
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Telex: 021-7655
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Telex: 041-379
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NEW DELHI 110 024
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Tel: 22775
Cable: BLUE STAR
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SECUNDERABAD 500 003
Tel: 72057
Telex: 0155-459
Cable: BLUEFROST
A,E

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T.C. 7/603 Poornima
Maruthankuzhi
TRIVANDRUM 695 013
Tel: 65799
Telex: 0884-259
Cable: BLUESTAR
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Computer Maintenance Corporation
Ltd.
115, Sarojini Devi Road
SECUNDERABAD 500 003
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Telex: 031-2960
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Jl. Abdul Muis 62
JAKARTA
Tel: 21-373009
Telex: 46748 BERSAL IA
Cable: BERSAL JAKARTA P

BERCA Indonesia P.T.
P.O.Box 2497/Jkt
Antara Bldg., 17th Floor
Jl. Medan Merdeka Selatan 17
JAKARTA-PUSAT
Tel: 21-344-181
Telex: BERSAL IA
A,CS,E,M

BERCA Indonesia P.T.
P.O. Box 174/SBY.
Jl. Kutei No. 11
SURABAYA
Tel: 68172
Telex: 31146 BERSAL SB
Cable: BERSAL-SURABAYA
A*,E,M,P

IRAQ

Hewlett-Packard Trading S.A.
Service Operation
Al Mansoor City 9B/3/7
BAGHDAD
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Telex: 212-455 HEPARAQ IK
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Cardiac Services Ltd.
Kilmore Road
Artane
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Telex: 30439
M

ISRAEL

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P.O.Box 1270
JERUSALEM 91000
16, Ohaliav St.
JERUSALEM 94467
Tel: 533 221, 553 242
Telex: 25231 AB/PAKRD IL
A

Electronics Engineering Division
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16 Kremenetski Street
P.O. Box 25016
TEL-AVIV 67899
Tel: 3 88 388
Telex: 33569 Motil IL
Cable: BASTEL Tel-Aviv
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ITALY

Hewlett-Packard Italiana S.p.A
Traversa 99C
Via Giulio Petroni, 19
I-70124 **BARI**
Tel: (080) 41-07-44
M

Hewlett-Packard Italiana S.p.A.
Via Martin Luther King, 38/III
I-40132 **BOLOGNA**
Tel: (051) 402394
Telex: 511630
CH,E,MS

Hewlett-Packard Italiana S.p.A.
Via Principe Nicola 43G/C
I-95126 **CATANIA**
Tel: (095) 37-10-87
Telex: 970291
C,P

Hewlett-Packard Italiana S.p.A.
Via G. Di Vittorio 9
I-20063 **CERNUSCO SUL NAVIGLIO**
(Milano)
Tel: (02) 923691
Telex: 334632
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Hewlett-Packard Italiana S.p.A.
Via C. Colombo 49
I-20090 **TREZZANO SUL NAVIGLIO**
(Milano)
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Telex: 322116
C,M

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Via Nuova San Rocco a
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I-16156 **GENOVA PEGLI**
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Telex: 215238
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Telex: 430315
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I-00144 **ROMA EUR**
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Telex: 610514
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Via di Casellina 57/C
I-50018 **SCANDICCI-FIRENZE**
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Corso Svizzera, 185
I-10144 **TORINO**
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Telex: 221079
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JAPAN

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ATSUGI, Kanagawa, 243
Tel: (0462) 28-0451
CM,C*,E

Yokogawa-Hewlett-Packard Ltd.
Meiji-Seimei Bldg. 6F
3-1 Hon Chiba-Cho
CHIBA, 280
Tel: 472 25 7701
E,CH,CS

Yokogawa-Hewlett-Packard Ltd.
Yasuda-Seimei Hiroshima Bldg.
6-11, Hon-dori, Naka-ku
HIROSHIMA, 730
Tel: 82-241-0611

Yokogawa-Hewlett-Packard Ltd.
Towa Building
2-3, Kaigan-dori, 2 Chome Chuo-ku
KOBE, 650
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C,E

Yokogawa-Hewlett-Packard Ltd.
Kumagaya Asahi 82 Bldg
3-4 Tsukuba
KUMAGAYA, Saitama 360
Tel: (0485) 24-6563
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Yokogawa-Hewlett-Packard Ltd.
Asahi Shinbun Daiichi Seimei Bldg.
4-7, Hanabata-cho
KUMAMOTO, 860
Tel: (0963) 54-7311
CH,E

Yokogawa-Hewlett-Packard Ltd.
Shin-Kyoto Center Bldg.
614, Higashi-Shiokoji-cho
Karasuma-Nishiru
Shiokoji-dori, Shimogyo-ku
KYOTO, 600
Tel: 075-343-0921
CH,E

Yokogawa-Hewlett-Packard Ltd.
Mito Mitsui Bldg
4-73, Sanno-maru, 1 Chome
MITO, Ibaraki 310
Tel: (0292) 25-7470
CH,CM,E

Yokogawa-Hewlett-Packard Ltd.
Sumitomo Seimei 14-9 Bldg.
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Yokogawa-Hewlett-Packard Ltd.
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SAGAMIHARA Kanagawa, 229
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Yokogawa-Hewlett-Packard Ltd.
Daiichi Seimei Bldg.
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CH,E

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CH,CM,E

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AMMAN
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Telex: 21456 SABCO JO
CH,E,M,P

KENYA

ADCOM Ltd., Inc., Kenya
P.O.Box 30070
NAIROBI
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G.M. Dolmadjian
Achrafieh
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Kuching, SARAWAK
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Col. del Valle
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M

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CASABLANCA
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Telex: 23051, 22822
E

Gerep
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NL1180 AR **AMSTELVEEN**
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Bongerd 2
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P.O. Box 2342
NL 5600 CH **EINDHOVEN**
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A,CH*,E,M

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Cable: HEWPACK Auckland
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Courtenay Place, **WELLINGTON 3**
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Cable: HEWPACK Wellington
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AUCKLAND
Tel: 794-091
Telex: 60605
A,M

Northrop Instruments & Systems Ltd.
110 Mandeville St.
P.O. Box 8388
CHRISTCHURCH
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Telex: 4203
A,M

Northrop Instruments & Systems Ltd.
Sturdee House
85-87 Ghuznee Street
P.O. Box 2406
WELLINGTON
Tel: 850-091
Telex: NZ 3380
A,M

NORTHERN IRELAND

See United Kingdom

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N-5033 FYLLINGSDALEN (Bergen)
Tel: 0047/5/16 55 40
Telex: 16621 hpnas n
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N-1345 **ÖSTERÅS**
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OMAN

Khimjil Ramdas
P.O. Box 19
MUSCAT
Tel: 722225, 745601
Telex: 3289 BROKER MB MUSCAT
P
Suhail & Saud Bahwan
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MUSCAT
Tel: 734 201-3
Telex: 3274 BAHWAN MB

PAKISTAN

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Mushko & Company Ltd.
Oosman Chambers
Abdullah Haroon Road
KARACHI 0302
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Telex: 2894 MUSKO PK
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A,E,M,P*

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Calle Samuel Lewis, Ed. Alfa
Apartado 4929
PANAMA 5
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Telex: 3483 ELECTRON PG
A,CM,E,M,P

PERU

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Los Flamencos 145, San Isidro
Casilla 1030
LIMA 1
Tel: 41-4325, 41-3703
Telex: Pub. Booth 25306
CM,E,M,P

PHILIPPINES

The Online Advanced Systems Corporation
Rico House, Amorsolo Cor. Herrera Street
Legaspi Village, Makati
P.O. Box 1510
Metro MANILA
Tel: 85-35-81, 85-34-91, 85-32-21
Telex: 3274 ONLINE
A,CH,CS,E,M
Electronic Specialists and Proponents Inc.
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Cubao, **QUEZON CITY**
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