Learning to Use System/23
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Third Edition (April 1982)

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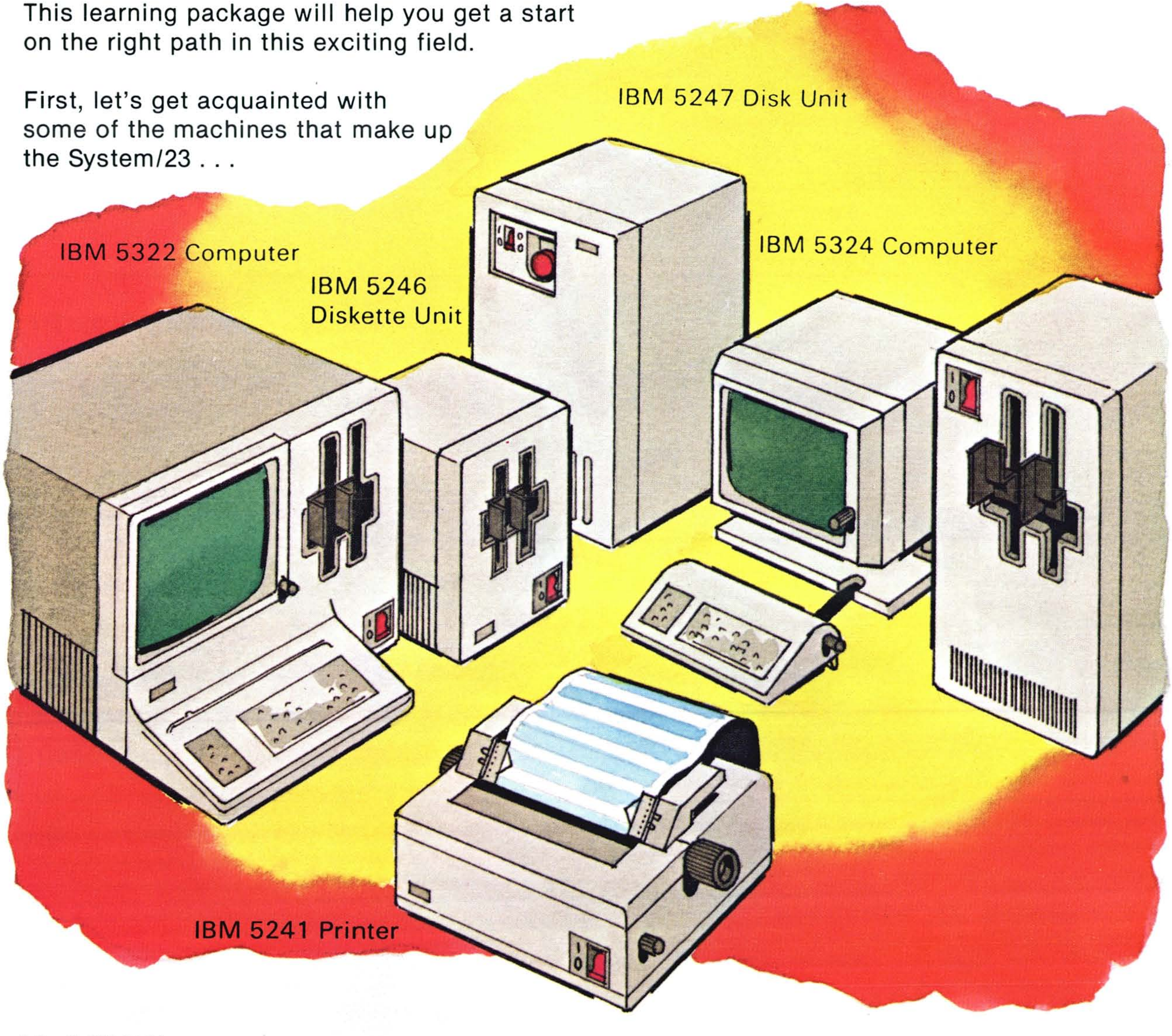
Introduction

Welcome to the world of computers!

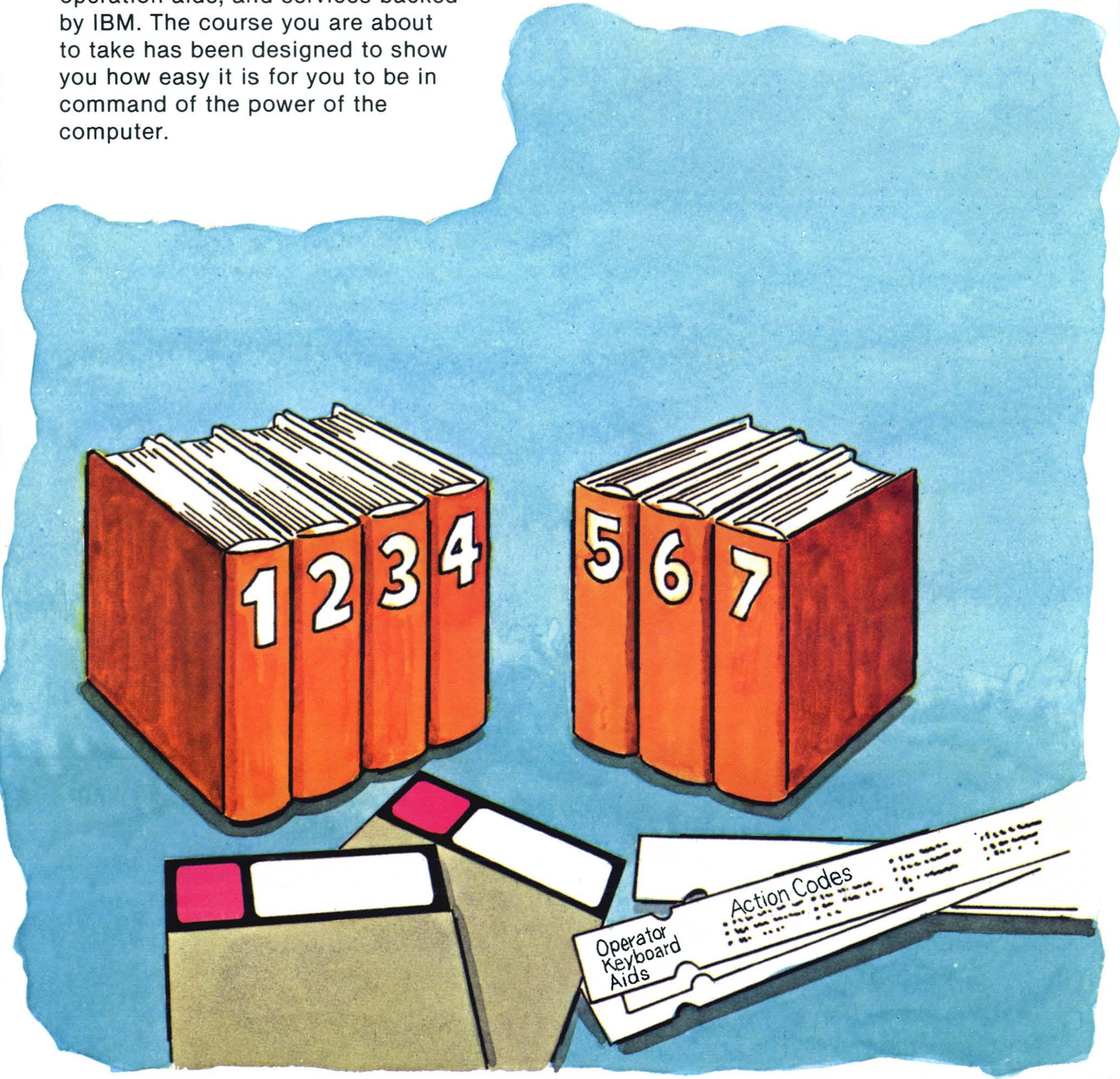
Your new System/23 has been designed to be used by someone with little or no knowledge of computers. As with any new venture, there will be things to be learned, questions to be answered, explorations and discoveries to be made.

This learning package will help you get a start on the right path in this exciting field.

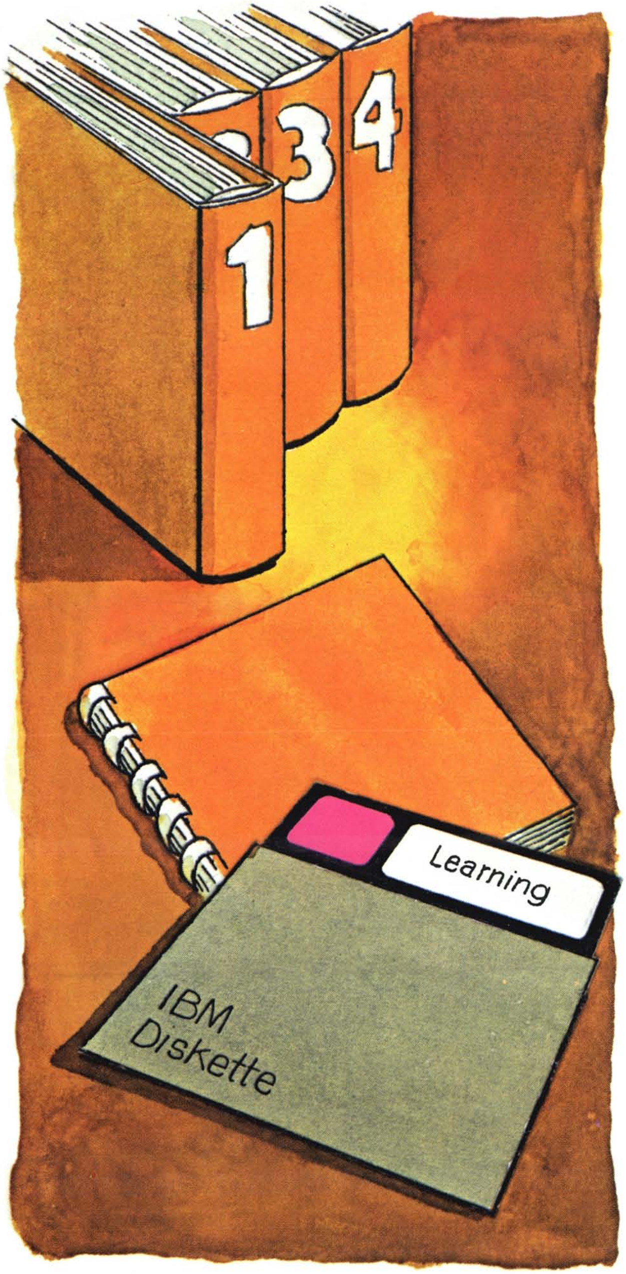
First, let's get acquainted with some of the machines that make up the System/23 . . .


IBM 5247 Disk Unit
IBM 5322 Computer
IBM 5246 Diskette Unit
IBM 5324 Computer
IBM 5241 Printer

More than a group of machines, System/23 includes books, programs, operation aids, and services backed by IBM. The course you are about to take has been designed to show you how easy it is for you to be in command of the power of the computer.


1
2
3
4
5
6
7
Action Codes
Operator Keyboard Aids

Introduction



Your System/23 includes the following:

Binder 1 -
The Learning binder is a learning package made up of the *Learning to Use System/23* book and the Learning diskette.

This book, *Learning to Use System/23,* will be your guide throughout this course. Each of the various exercises begins in this book and ends here with a summary and review of what you've learned. This book also contains visual aids and examples to help make some points clearer to you.

The Learning diskette is a thin, magnetic disk containing the computer programs that will guide you through this course.

A computer without a program is like a car without an engine. It might look good, but it can't do much. A computer needs a program to make it "go"! The Learning diskette contains some simple programs to make your computer "go" so that you can learn from it.

Binder 2 -
The Operation binder is a loose-leaf binder containing material you, the operator, will use on a daily basis.

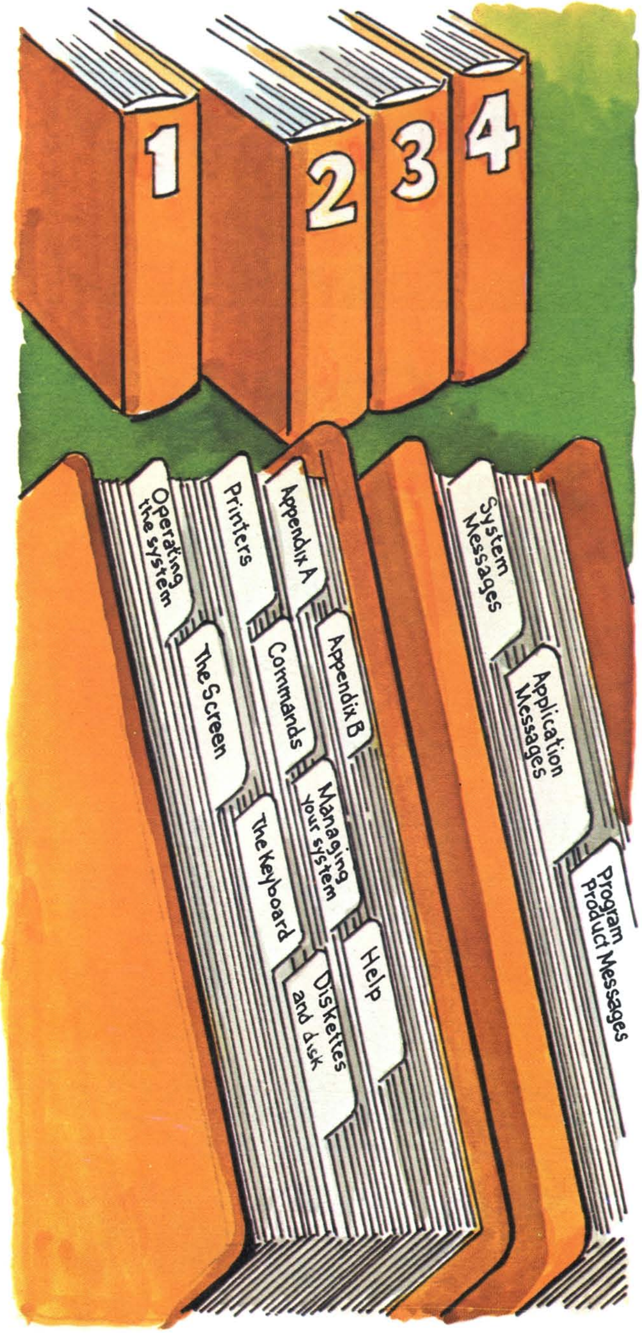
The Operation binder contains the:

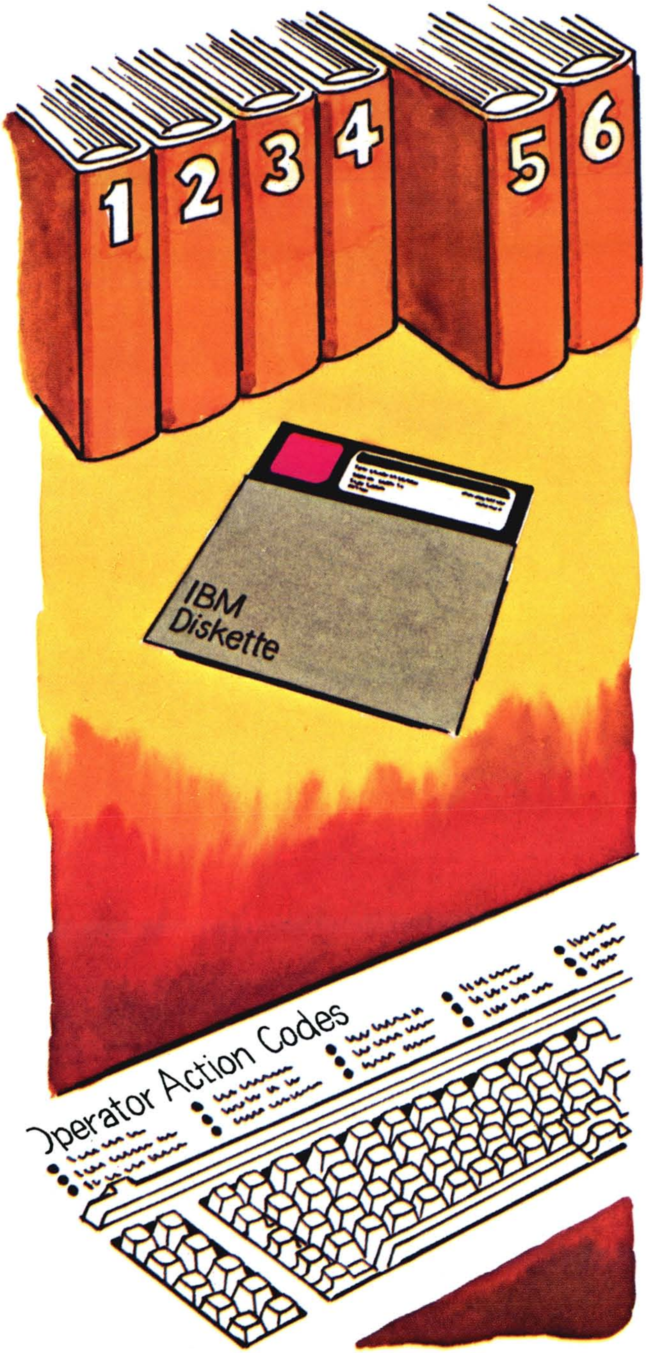
Operator Reference book. You can use this book to look up many of the day-to-day questions you will have about your system. What do all the keys on the keyboard do? How do you put paper in the printer? How do you handle and care for diskettes? This course will show you how to use the *Operator Reference* to find the answers.

Binder 3 -
The Messages binder is a loose-leaf binder containing the Messages books. One such book is:

System Messages. One of the ways your computer communicates with you is by displaying numbered messages on the screen When your computer wants to tell you something, numbers appear on the bottom line of the screen. You then look up these numbers in the *System Messages* book to find out what the computer is telling you.

Binder 4 -
This binder can be used to hold your *System/23 Setup Instructions* and your *Introducing System/23* book. It can also be used for setup instructions for any other special machines you purchased with your System/23.


1
2
3
4
Operating the system
Printers
Appendix A
The Screen
Commands
Appendix B
The Keyboard
Managing your system
Diskettes and disk
Help
System Messages
Application Messages
Program Product Messages



Binders 5, 6 -
The Support Functions binders are loose-leaf binders containing descriptions and directions for using a group of IBM-supplied programs called Customer Support Functions.

The material in binder 5 is designed to guide you, even if you have no computer experience, to use some of the IBM-supplied programs. This set of programs will help you perform some of your daily computer operations.

Some additional functions, which you will more than likely not need to do for a while, are described in binder 6. For that reason, they will not be treated in this course.

The programs you will need to perform the functions described in binders 5 and 6 are on Customer Support Functions diskettes.* Some frequently used Customer Support Functions will be covered in this course.

Keyboard aids are a series of slender, plastic cards that fit above the computer keyboard. The cards contain highlights of System/23 reference material and might save you the time of looking up certain items in your books.

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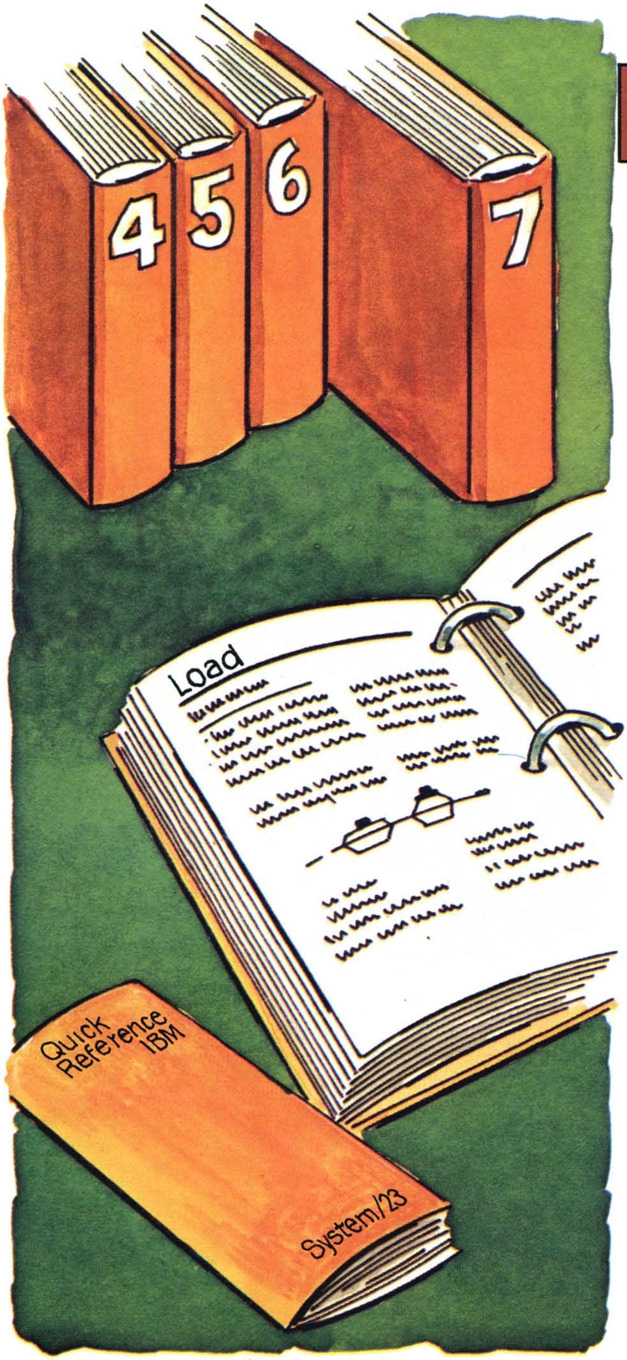
*You might have one or two Customer Support Functions diskettes, depending upon the model of computer you ordered.

Binder 7*
The BASIC Reference binder is a loose-leaf binder that holds materials used primarily in the writing of System/23 BASIC programs.

The BASIC Reference binder contains:

The *BASIC Language Reference* guide. This is an alphabetically arranged book of commands, statements, and terms used by BASIC, the language in which System/23 programs are written.

In addition to the contents of the BASIC Language Reference binder, you have a handy, pocket-sized *Quick Reference* booklet,* which summarizes the material contained in the *BASIC Language Reference* guide.



Note: The contents of binder 7 and the *Quick Reference* booklet are not required for the successful completion of this course. You may wish to put them aside until you have finished.

* Binder 7 and the *Quick Reference* booklet are only distributed in selected countries.

Introduction

A few words on what System/23 operator training is all about . . .

If you are new to computers, you may be asking yourself:

CAN I OPERATE A COMPUTER?

IS THIS GOING TO BE DIFFICULT?

WHAT IF I MAKE A MISTAKE?

Please, put yourself at ease. Although there is a lot to learn, it is not difficult. You are going to do just fine! We will do our best to make your training easy, maybe even *fun!* Of course, part of learning is making mistakes. We will do our best to predict those areas where they will be most likely to occur and warn you ahead of time what to watch for. You will also learn how to handle those unpredictable errors that always seem to pop up at the wrong time.

The books that come with your System/23 can be your best friends when you have a question.

We strongly recommend that you take your time going through the training . . . and . . . spend some time browsing through your books to get acquainted!

How does the System/23 operator training work?

This book guides you through the entire course. After completing the eight exercises in this book, you will be able to:

- Start up and switch off the System/23
- Use the keyboard and the display screen to communicate with the system
- Insert a diskette, start reading or writing, and remove a diskette
- Cause printing to appear on the printer (if you have one)

  —Change and align paper in your printer
  —Change a worn ribbon on your printer
- Use the books to help you run many of the Customer Support Functions that came with your System/23
- Follow the error recovery steps recommended in your books if an error should occur
- Follow any given procedures to start and stop a program

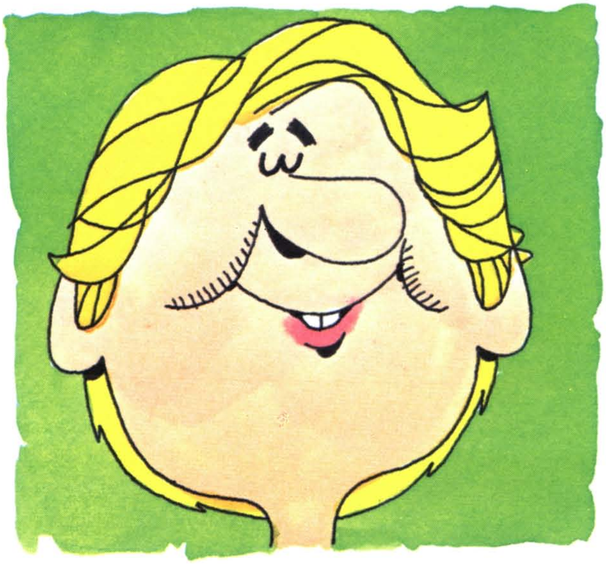
To get the most out of this course, take all of the eight exercises in order. This is important because each exercise is built upon what was learned in the exercise before. If you skip around, you could miss some information you might need later.

You should also read and perform each step in this book in order, unless you are told otherwise. Each step builds on the ones before it.

You might want to take a single exercise and stop for a while, or you might choose to take several before taking a break. It's completely up to you. We only ask that you take an exercise all the way to its end before stopping.

To start any exercise in this course, turn to the first page of the exercise in this book. Make sure that you have all the required materials at hand, sit down in front of your computer,

and have fun!



Exercise 1 - Getting started

Note: The information in this exercise is part of a structured learning package that has been designed to teach you how to operate your computer.

To gain maximum benefit from this course, you should:

- Take each exercise in order if this is your first time through the course.
- Follow all the directions in this book and on the screens.
- Read all the material presented in each exercise. (Don't skip any steps.)

In this exercise, you will learn:

- What units make up your System/23
  - —Computer
  - —Printer
  - —Diskette unit
- How to start up your System/23
- How to use the Learning diskette
- How to use a program menu
- How to switch off your System/23

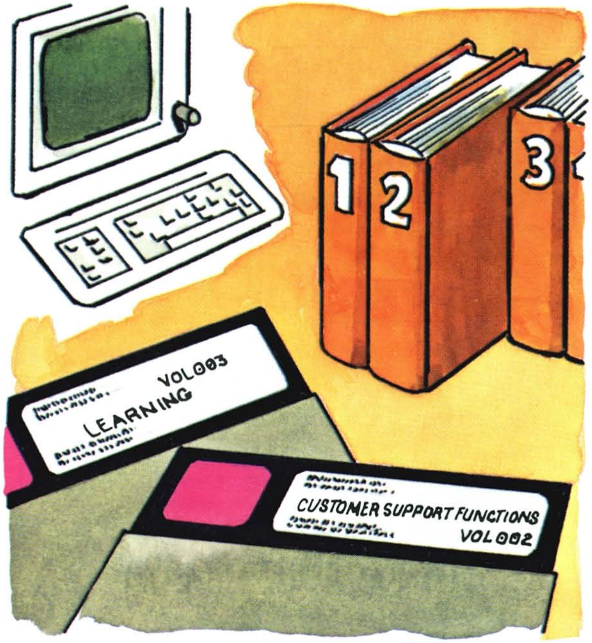
In this exercise, you will also be introduced to the "HELP" section. This is a separate section located at the end of most exercises and is designed to help you if you have a problem along the way. Directions referring you to "HELP" sections appear in orange-colored boxes. These are color-coded to match the box marked "HELP" at the end of each exercise which has a "HELP" section.

We suggest that you read through the "HELP" section at the end of this exercise to become acquainted with the way it is set up.

Exercise 1 - Getting started

In addition to this book, what do you need to complete Exercise 1?

- Your System/23 Computer, any model
- The Customer Support Functions diskette, marked VOL002
- The Learning diskette (marked VOL003) from binder 1
- The *Operator Reference* book from binder 2, Operation



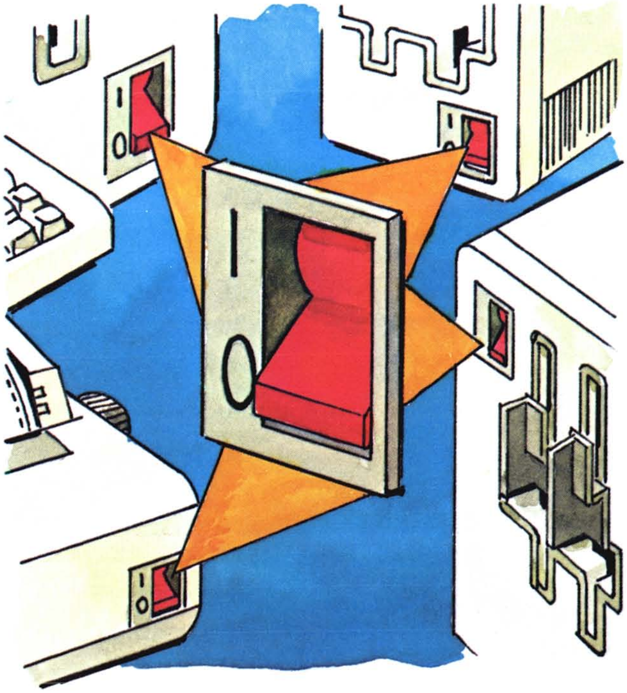
Since this exercise deals with starting up your System/23, make sure no one is using your system, all units are switched off, and there are no diskettes in any of the machines. (If your system is on, you might want to ask whoever switched on the system to help you.)

CHECK:

☐ *All diskettes removed*

☐ *All diskette drive handles up*

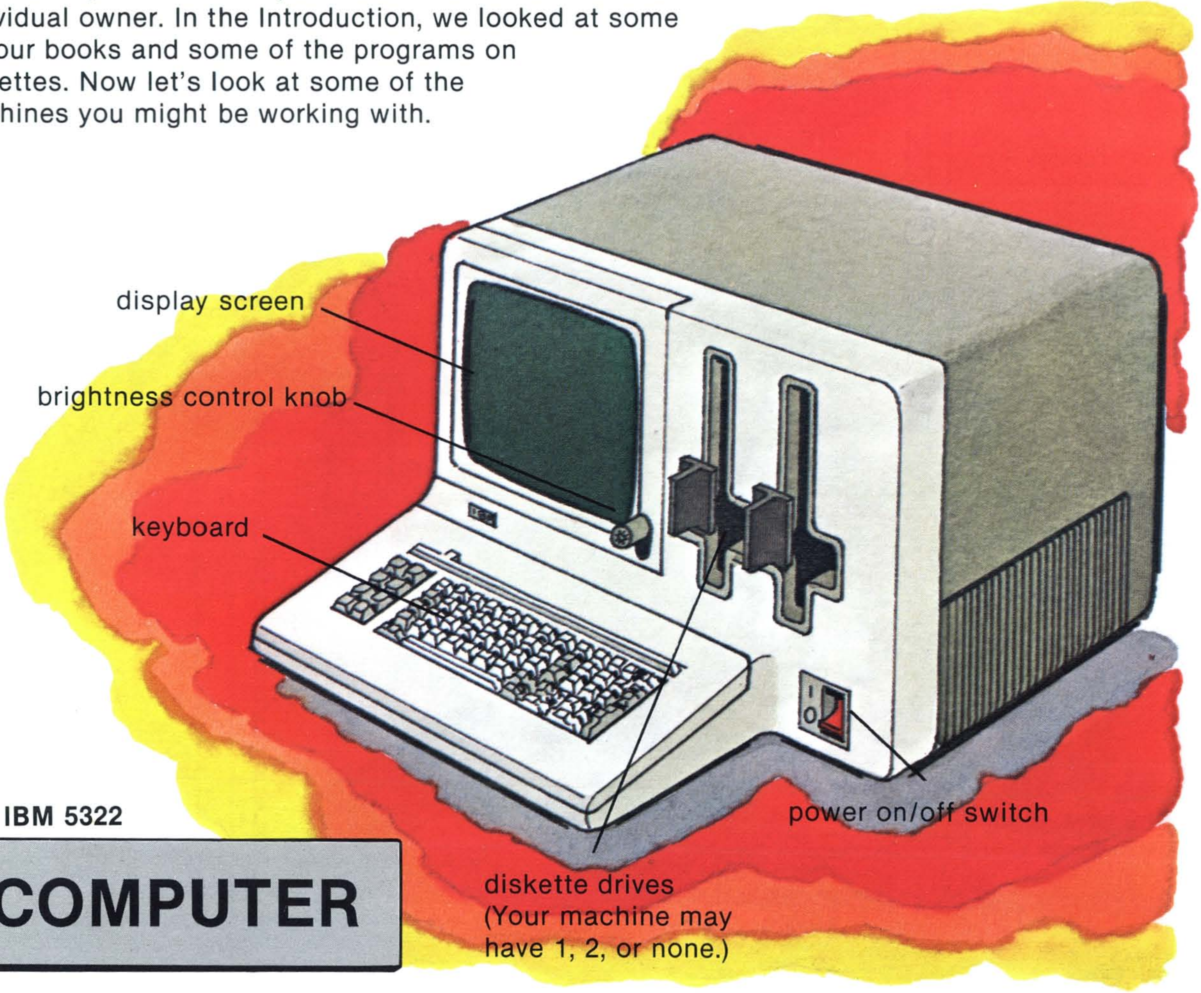
☐ *All power switches in off position (0)*



To begin the exercise . . . sit down in front of your computer and make yourself comfortable.

Let's look at some of the items you will become familiar with.

Your System/23 is the sum of many books, machines, and programs. Not all System/23s are the same. Each is tailored to perform some particular kind of work for the individual owner. In the Introduction, we looked at some of your books and some of the programs on diskettes. Now let's look at some of the machines you might be working with.

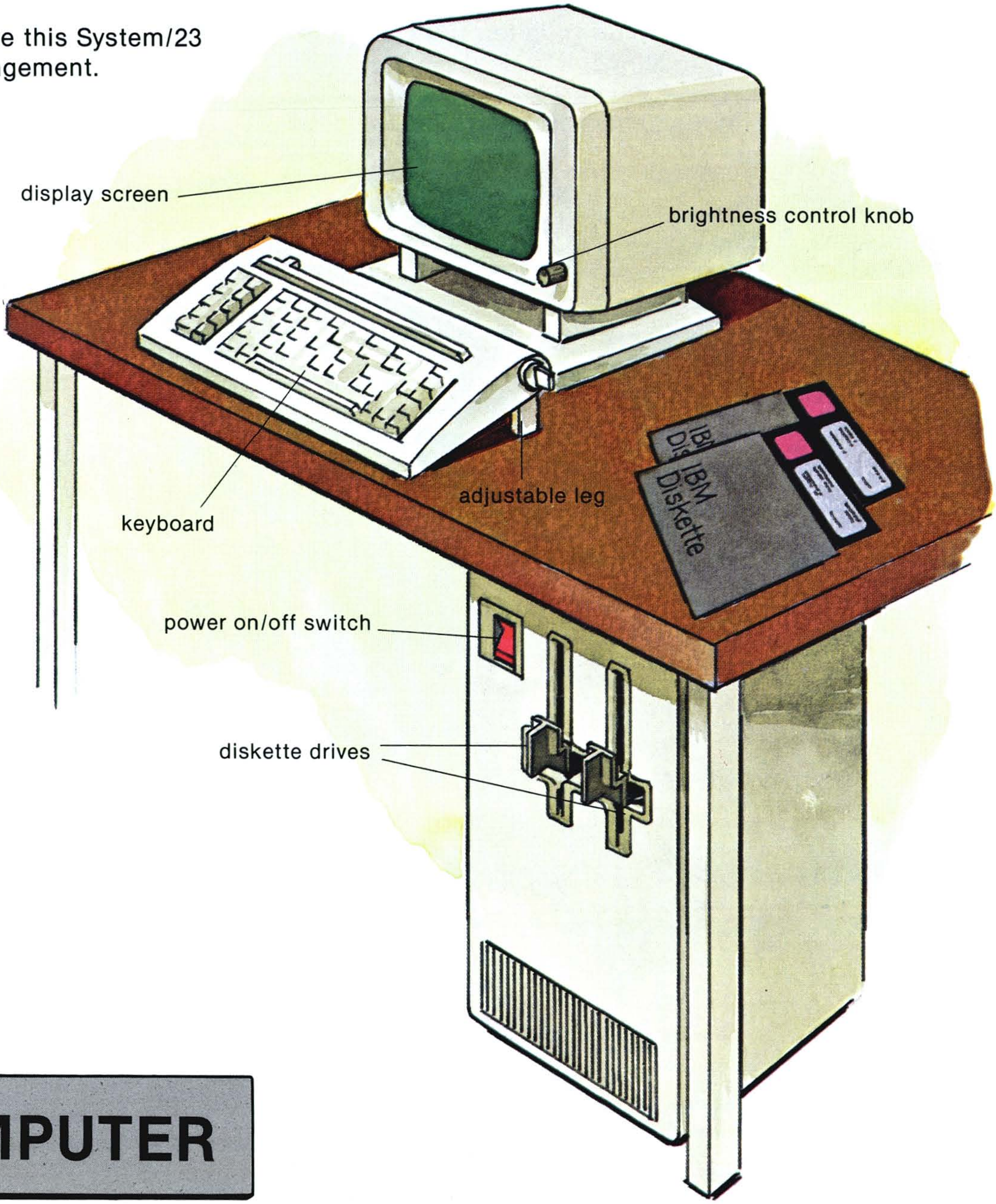

display screen
brightness control knob
keyboard
power on/off switch
diskette drives
(Your machine may
have 1, 2, or none.)

The IBM 5322

COMPUTER

Exercise 1 - Getting started

You might have this System/23 machine arrangement.


display screen
brightness control knob
keyboard
adjustable leg
IBM Diskette
IBM Diskette
power on/off switch
diskette drives

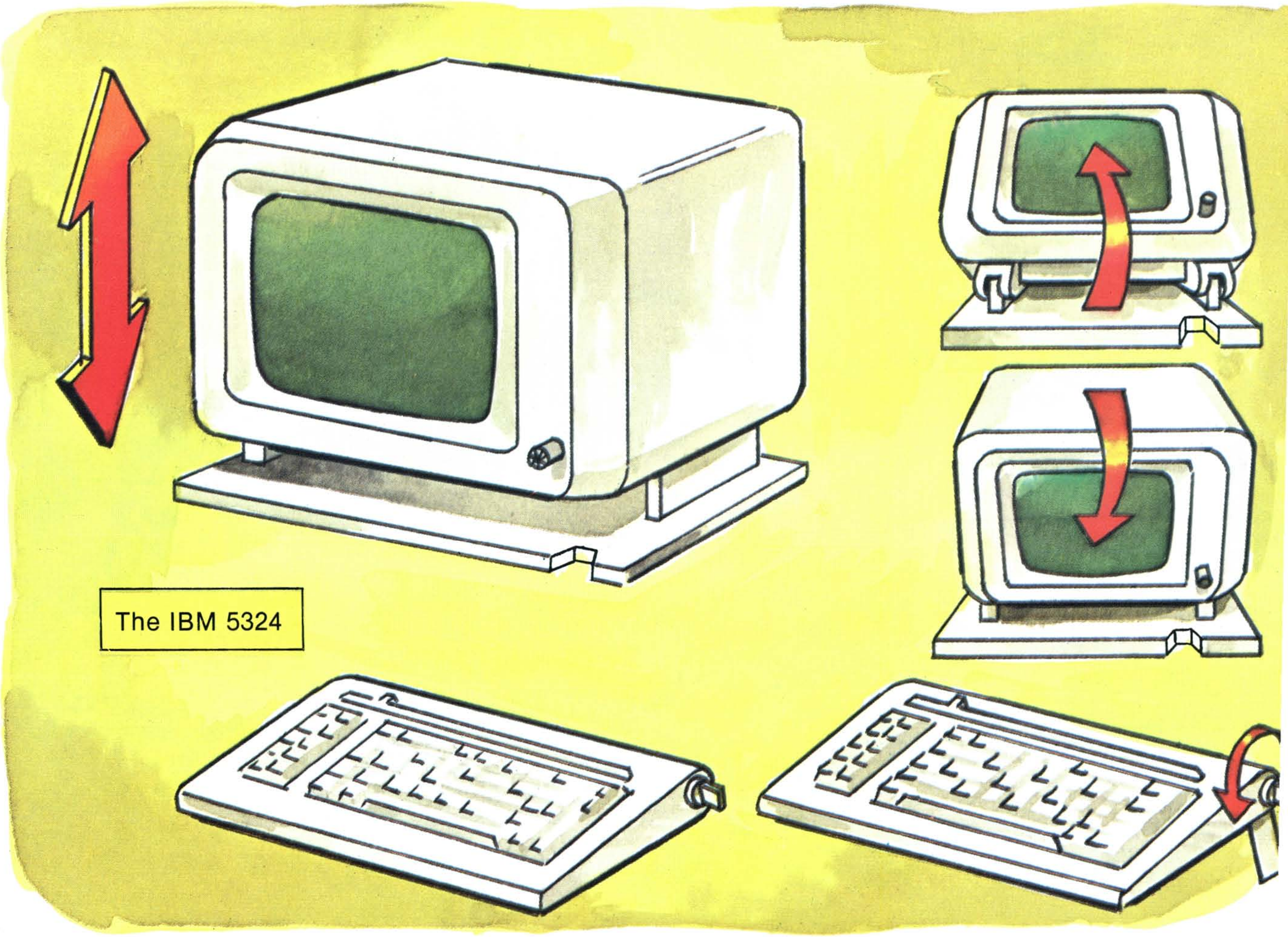
The IBM 5324

COMPUTER

One more thing . . .

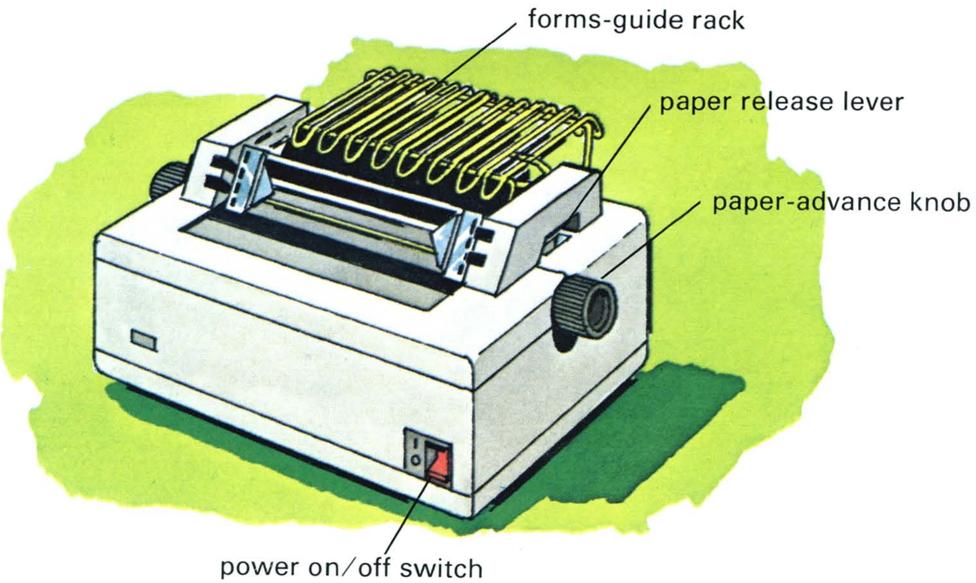
If you have the 5324 computer, you can adjust the display screen by raising it or lowering it (by grasping it with both hands) or by tilting it forward or backward.

The keyboard can also be raised or lowered by means of its adjustable legs.



The IBM 5324

This is a typical printer, one of several models available for the System/23.


forms-guide rack
paper release lever
paper-advance knob
power on/off switch

The IBM 5241

PRINTER

Note: It is OK if you don't have paper in the printer now since you won't need it for this exercise.

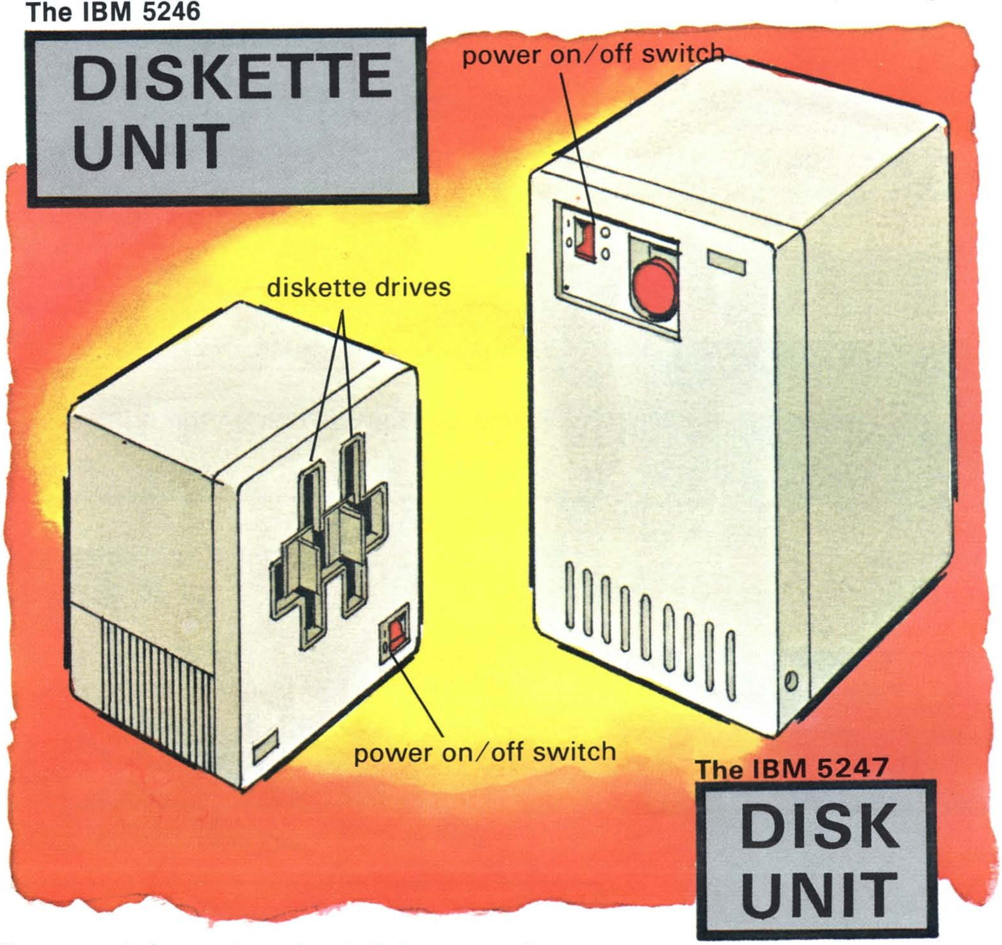
Detailed descriptions and operating procedures for most printer models can be found in the "Printers" chapter of *Operator Reference* in binder 2. If you have the 5217 Printer, however, you should refer to *Using Your 5217 Printer.*

The 5246 unit is a table-top diskette unit.

You will need one for this course only if your computer does not have its own diskette drives.

The 5247 Disk Unit is a large capacity, disk storage device.

If your System/23 came with this unit, you don't need to worry about it for now. For this course, it won't matter if the unit is on or off. After this course, you will refer to *Using Your 5247 Disk* for operating instructions.


The IBM 5246
DISKETTE UNIT
power on/off switch
diskette drives
power on/off switch
The IBM 5247
DISK UNIT

For more information about diskettes and disks, see the "Diskettes and disk" chapter of *Operator Reference* in binder 2.

Exercise 1 - Getting started

Starting up

To ensure a high level of reliability, your System/23 performs a number of internal tests each time it is started up.

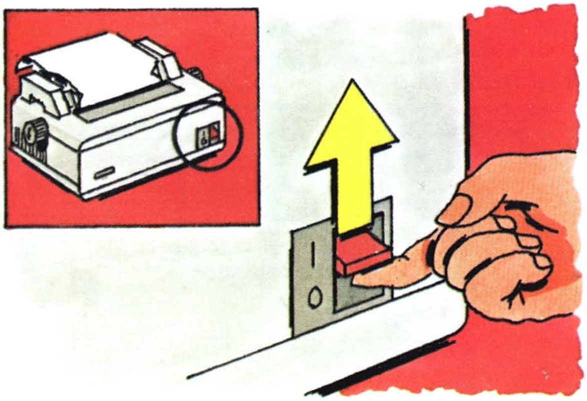
For these tests to be effective, it is necessary that you start up your system as described in this exercise.

Make sure that PROC SETUP 1 was done when your System/23 was first set up. If it wasn't, refer to your System/23 *Setup Instructions* for those procedures and do them before you begin step 1 here.

Perform these steps now:

Starting up

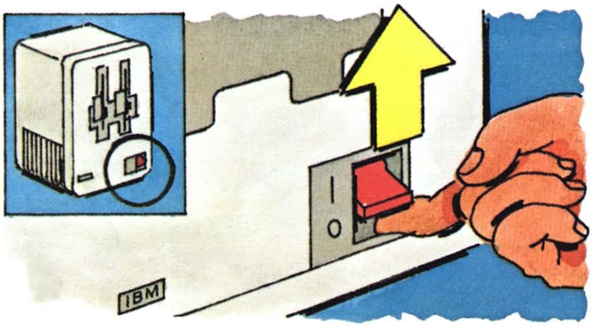
1 **If your System/23 has one or more printers, switch on printer power as shown.**



Note: Always switch on the printer before the computer.

You might hear a click from your printer.

2 **If your System/23 has a diskette unit, switch on diskette unit power as shown.**



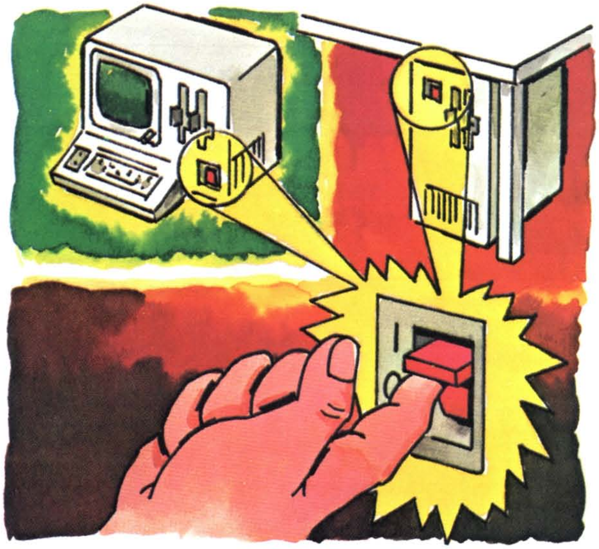
Note: Always switch on the diskette unit before the computer.

You might be able to hear the cooling fans within the diskette unit.

3 **After you have switched on your printer and diskette unit, switch on the computer power as shown.**

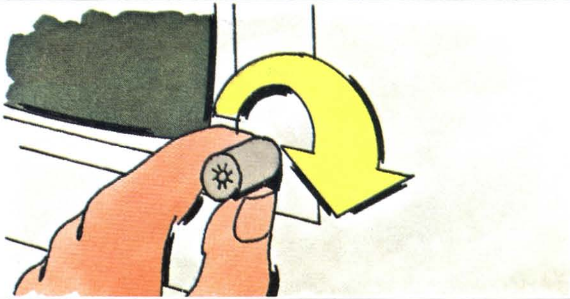
You might hear the computer's cooling fans start.

For the next 15 seconds or so, the computer performs various internal diagnostic tests.



Note: Always switch on the computer last. (If you have the 5324, your computer is the floor unit as shown in the upper right of this picture.)

4 **To adjust the brightness of the display screen, turn the brightness knob to the right.**



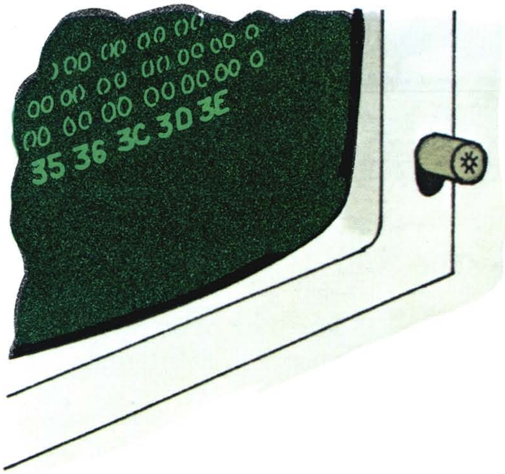
Note: As information appears on the display screen, you may adjust the brightness knob so that the screen brightness is at a comfortable level.

Exercise 1 - Getting started

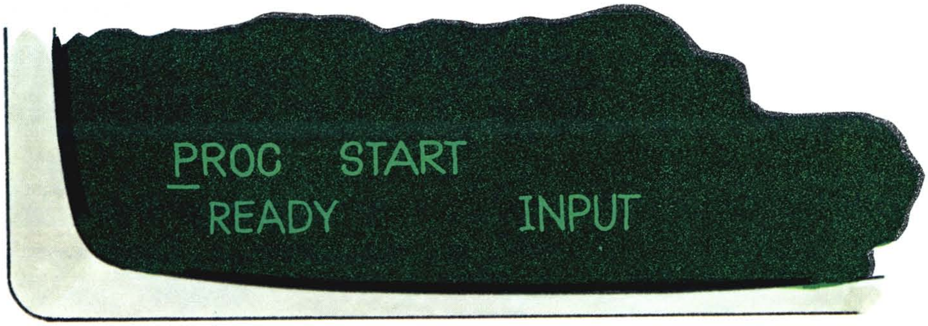
Starting up (continued)

5 **Observe the display screen.**

First you should see a series of numbers appearing on the screen . . .


00 00 00 00
00 00 00 00 00 00 0
00 00 00 00 00 00 0
00 00 00 00 00 00
35 36 3C 3D 3E

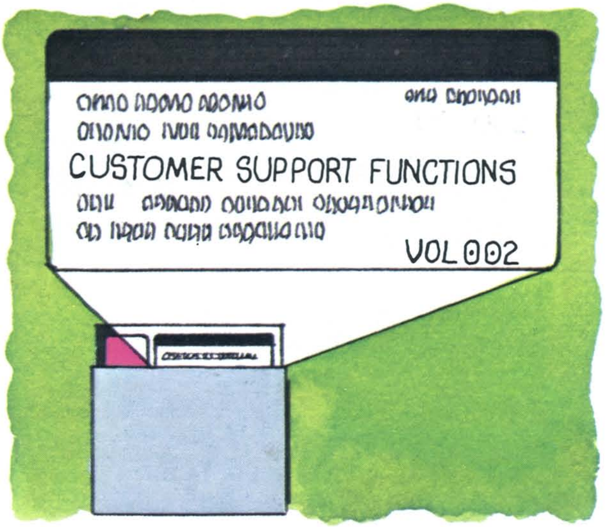
. . . then in a few seconds, the screen should look like this.



```
PROC   START
  READY          INPUT
```

If, within a minute, you do not see this information on your screen, go to the "HELP" section at the end of this exercise.

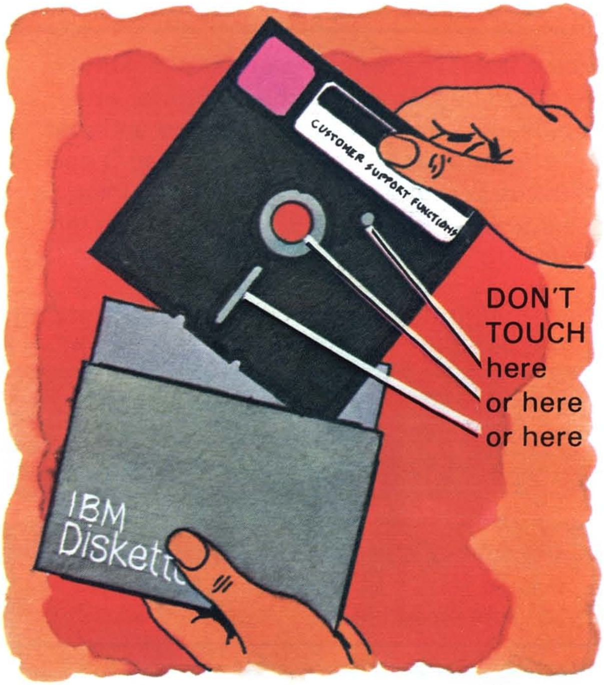
Note: You will use the diskette labeled Customer Support Functions, VOL002, in this exercise.


CUSTOMER SUPPORT FUNCTIONS
VOL002

6 **Locate the diskette sent with your System/23 with Customer Support Functions, VOL002, on the label.**

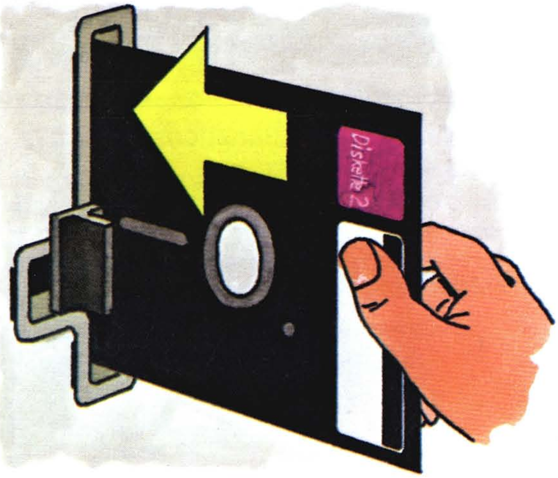
Note: At this time, read "Handling and storing diskettes" in the Diskettes and disk" chapter of *Operator Reference* in binder 2.

7 **Remove the diskette from its envelope, being careful not to touch any areas where the diskette surface is exposed.**


CUSTOMER SUPPORT FUNCTIONS
DON'T TOUCH here
or here
or here
IBM Diskett

Starting up (continued)

8 **Insert your diskette into the left diskette drive of your computer, as shown, until it stops.**



Note: If your computer has no diskette drives of its own, insert your diskette into the left drive of your diskette unit.

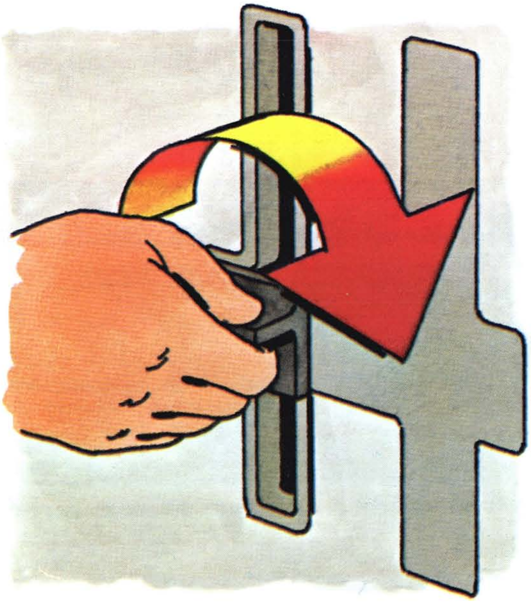
If you use a diskette unit, additional characters will be displayed on the bottom line of your screen. Refer to "Status line fields" in "The screen" chapter of *Operator Reference* in binder 2 for additional information.

IMPORTANT: Your diskettes must be inserted facing just as shown. If your diskette is not facing the right direction, the computer will indicate an error when it tries to use the diskette.

Notice the large numbers on your diskette drive handles. Drives in the computer are numbered 1 and 2. (If you have the optional diskette unit, its drives are numbered 3 and 4.) In the future, you will be asked to insert a diskette into drive 1 (or 3) instead of the left drive.

(The small numbers, 1D or 2D, also appearing on the handles, will be explained in Exercise 5.)

9 **Close the diskette drive handle by turning it to the right until it is horizontal.**

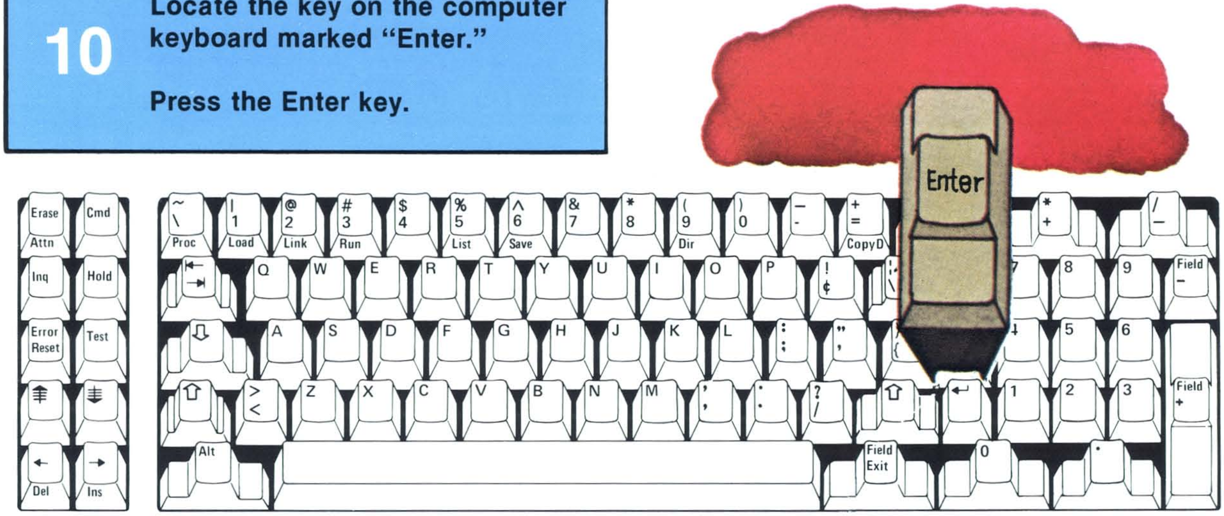


Problems inserting the diskette? Go to the "HELP" section at the end of this exercise.

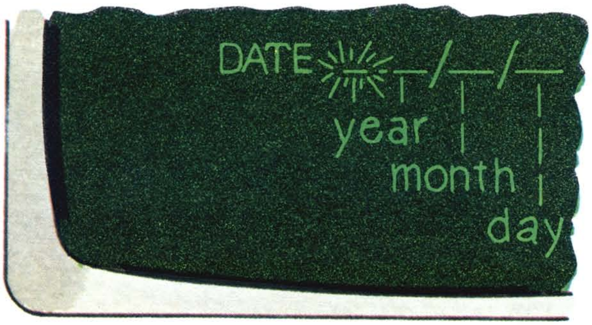
10

Locate the key on the computer keyboard marked "Enter."

Press the Enter key.



You might hear sounds coming from the diskette drive as the computer reads a program from the diskette.



11

Observe the display screen.

At this time, you have caused technical updates to be read from the Customer Support Functions diskette, VOL002, into the computer. These updates must be read when you start up your computer. To make sure they are, each time you start up your System/23, insert your VOL002 diskette into a drive, close the handle, and press the Enter key after PROC START appears on your screen.

The information now on the screen allows you to record today's date.

If your display screen doesn't look like this, turn to the "HELP" section at the end of this exercise.

Note: You might see numbers following the word DATE, and that is OK.

Starting up (continued)

To set the date:

12 **First, type the last two digits of the current year.**

For example, if the year is 1982, type: 82
(If numbers are already there, you
can type over them.)

13 **Next, type a two-digit number, from 01 to 12, which represents the month.**

For example, if the month is January,
you should type: 01

14 **Then, type a two-digit number, from 01 to 31, which represents the day of the month.**

For example, to store the date

January 20, 1982

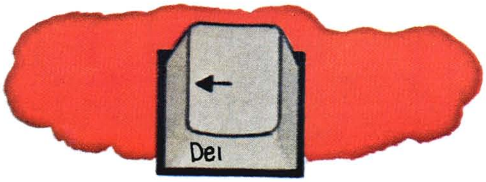
you would type: 82
then: 01
then: 20

The screen would show:

82 / 01 / 20

Note: Be careful not to type a small "L" instead of the number "1". Also, do not type a letter "O" instead of the number "0".

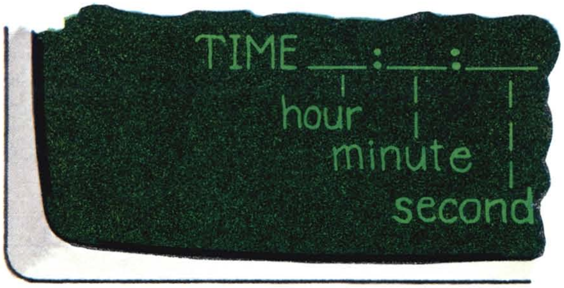
If you make a typing mistake . . . locate this key on the lower left section of the keyboard:



and press it until the little flashing line on the screen is under the mistake. Then, simply type the correct digit.

15 **Press the Enter key.**

You should see this screen.



If you do not see this screen, go to the "HELP" section at the end of this exercise.

Note: You might see numbers following the word TIME, and that is OK.

This is the *set time* screen. It is similar to the *set date* screen that you just completed.

Once you set the correct time into the computer, it will accurately maintain the time until it is switched off.

Exercise 1 - Getting started

Starting up (continued)

To set the time:

16 **First, type two digits for the hour (from 00 to 23).**

For example, if the present time is 10:45 p.m., you should type: 22

17 **Next, type a two-digit number that represents minutes (from 00 to 59).**

If it is 10:45, you should then type: 45

18 **Then, type a two-digit number representing the nearest second (from 00 to 59).**

For example, to set the computer clock for exactly 10:45 p.m., you should type: 22
then: 45
then: 00

The screen would show 22:45:00

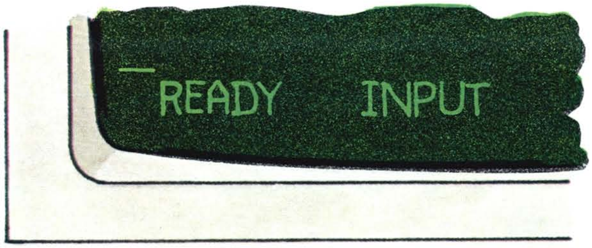
19 **To start the computer clock, press the Enter key.**

You should see the READY INPUT screen.

If you do not see this screen, go to the "HELP" section at the end of this exercise.

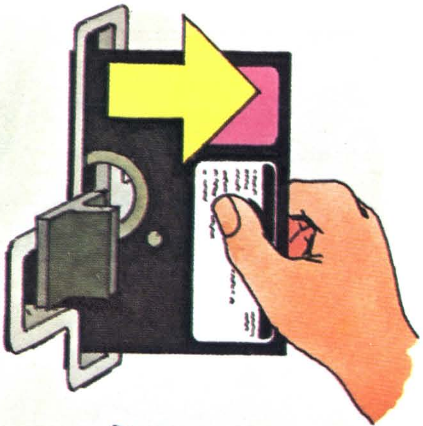
The 24-hour clock

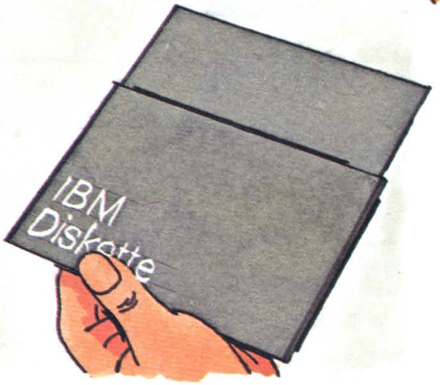
For this a.m. time,	type this:	For this p.m. time,	type this:
12 a.m.	00	12 p.m.	12
1 a.m.	01	1 p.m.	13
2 a.m.	02	2 p.m.	14
3 a.m.	03	3 p.m.	15
4 a.m.	04	4 p.m.	16
5 a.m.	05	5 p.m.	17
6 a.m.	06	6 p.m.	18
7 a.m.	07	7 p.m.	19
8 a.m.	08	8 p.m.	20
9 a.m.	09	9 p.m.	21
10 a.m.	10	10 p.m.	22
11 a.m.	11	11 p.m.	23



Note: Any time you see the display screen with the words READY INPUT at the bottom, the system is waiting for you to give it something to do.

20 **Open the diskette drive handle. Remove the Customer Support Functions diskette, VOL002, and put it back into the envelope.**





IMPORTANT: Anytime you start up your system, you must follow all the steps, 1 through 20, to ensure proper operation.

You have now completed all the steps to start up your System/23. You have caused various internal tests to be performed, loaded technical update data, and set the date and the time.

Your system is now started up and ready for you to perform useful work. The System/23 is designed for continuous operation. In fact, once you start it, it may be left on all day without any harm. If it does get turned off, there are starting up instructions located throughout the book to help you get it started again.

Note: After finishing this course, you should use the starting up procedure contained in the "Operating the system" chapter of *Operator Reference* in binder 2.

Switching off

Now we will show you how to switch off your System/23 . . .

21 **Check that no program is running on your system.**

Note: If no program is running, you should see READY INPUT at the bottom (status line) of your screen.

22 **Check that all diskettes have been removed, and all diskette drive handles are up in the open position.**

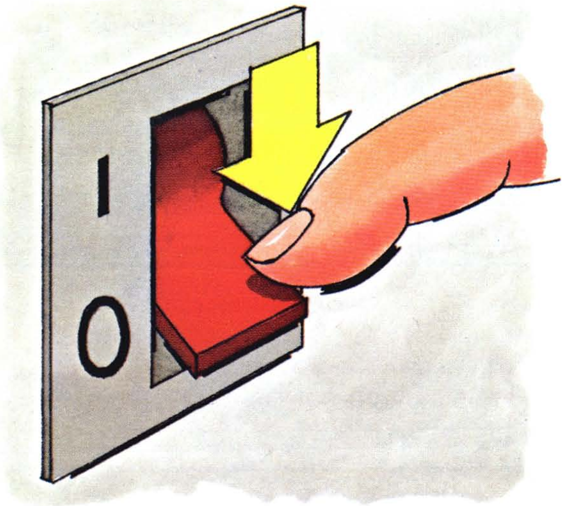
23 **Switch off printer, diskette unit, and computer power switches (in any order).**

Note: After finishing this course, you should use the switching off procedure found in the "Operating the system" chapter of *Operator Reference* in binder 2.

Switching off

Note: Your System/23 is designed so that once started up, it may be left on all day without harm.

After the system is switched off and you want to restart it, it will be necessary to perform the full starting up procedure (all steps from 1 through 20) to ensure correct operation.



Using the Learning diskette

24 **Go to the "Operating the system" chapter of *Operator Reference* in binder 2. Perform the starting up procedure using that book, and then return here to start your operator training using the Learning diskette.**

From this point on, most of your training will be from the computer. Although computers are very fast and very efficient, they really must be told what to do in every situation. The instructions that tell the computer what to do and how to do it are called a *program.*

Programs are not normally stored inside the computer because they take up too much of the computer's storage space. Programs for this computer are stored on diskettes.

You will see in this exercise how convenient it is to insert a diskette into a diskette drive so that it may be read by the computer. In fact, you are about to insert the Learning diskette now.

The Learning diskette contains programs that will be used to familiarize you with the operation of the System/23. It does not contain the program used in starting up the system. That program is on the diskette marked VOL002.

25 **When you see READY INPUT on your screen, remove the diskette marked VOL002 and go to step 26 to continue.**

Learning diskette

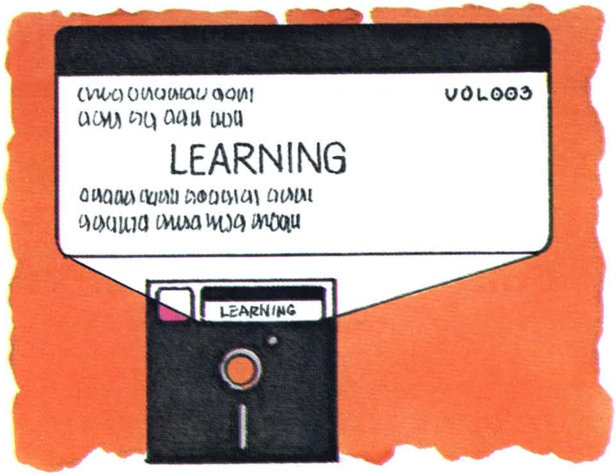
Operating the System

If you do not see READY INPUT on your screen in a minute or so, check to see that you have properly performed the starting up steps with the Customer Support Functions diskette, VOL002. If you still have a problem, check the "HELP" section at the end of this exercise (for step 5).

Exercise 1 - Getting started

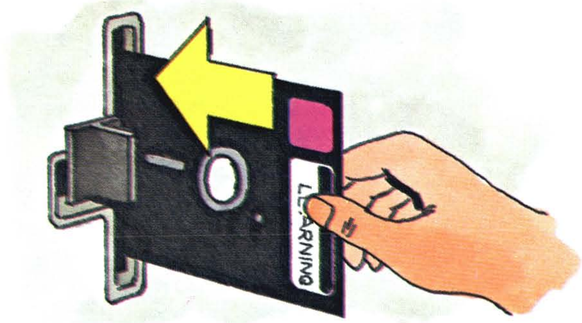
Using the Learning diskette (continued)

26 Drive 1 handle should be open. (Use diskette drive 3 in the diskette unit if your computer is a model without diskette drives.)

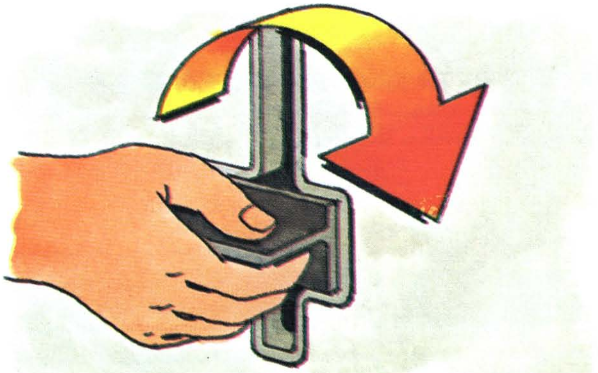


27 Locate the Learning diskette. Remove it from its envelope. Insert it into diskette drive 1 (or 3 if your computer has no diskette drives).

Note: The diskette must be inserted facing just as shown.



28 Close the diskette drive handle.



29 **To tell the computer which program you want from this diskette:**

Type: proc learning

Note: You may type capital letters (uppercase) or small letters (lowercase), but you must leave a space between proc and learning.

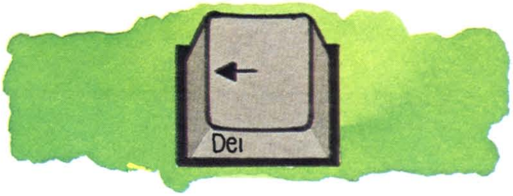
Step 30 will tell you to press the Enter key. At that time, you will hear your computer make some funny noises as it reads the Learning program from the diskette. Then, you should *follow directions on your screen until you are told by a screen to return to step 31.*

30 **Press the Enter key. Watch the screen. Follow directions on the screens until told to return to step 31.**

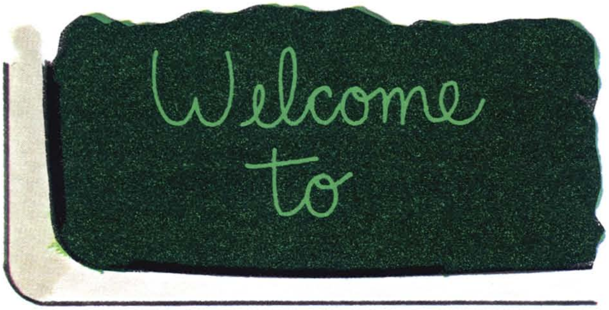
If you don't see a series of screens starting with this one, go to the "HELP" section at the end of this exercise.

Did you make a typing mistake?

Locate this key in the lower left section of your keyboard. (It is the Cursor Left key.)



Press it until the little flashing line on the screen is under the mistake. Then, simply type the correct letter.

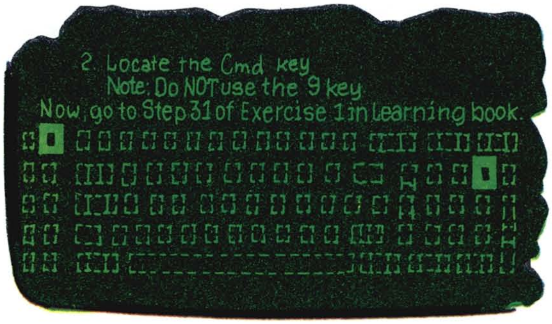


This is the first Learning diskette screen.

Using the Learning diskette (continued)

31 **Observe the screen.**

You have been taking Exercise 1 on the computer and should now have a screen showing a picture of the keyboard with the Cmd key and the 9 key on the numeric key pad.



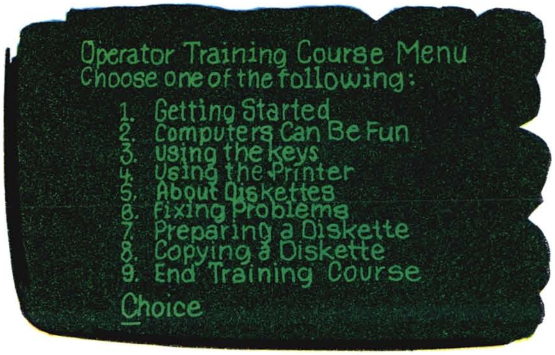
```
  2. Locate the Cmd key
     Note: Do NOT use the 9 key
Now, go to Step 31 of Exercise 1 in Learning book.
```

32 **To go back to a menu:**
Press and hold the Cmd key,
Type: 9
Release both keys.

Note: Do not use the 9 on the top row of keys.

Note: When you are using the Learning diskette, you can go back to a menu anytime you want by pressing and holding the Cmd key and then pressing the 9 key.

You should now be looking at the Course menu screen. Later in the course, you will be asked to make the selection of your choice from the menu, but right now we'd like to show you how you would end a learning session in case you'd like to take a break.



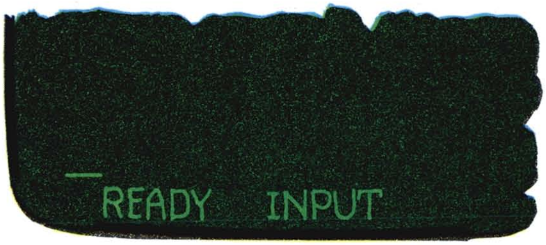
```
Operator Training Course Menu
Choose one of the following:
     1. Getting Started
     2. Computers Can Be Fun
     3. Using the Keys
     4. Using the Printer
     5. About Diskettes
     6. Fixing Problems
     7. Preparing a Diskette
     8. Copying a Diskette
     9. End Training Course
     Choice
```

This is the Course menu screen.

33 **To end learning,**
Type: 9
Press the Enter key.

34 **Observe the screen.**

You should see READY INPUT.



```
_
  READY   INPUT
```

35 **Open the drive handle and remove the Learning diskette. Return it to its envelope.**

Note: If you want to stop now, do steps 36 and 37. If you want to continue, skip step 36 and do step 37.

36 **Follow the switching off procedure shown in steps 21 through 23. When you have completed the switching off, return here to step 37.**

37 **Read the summary on the next page.**

You will be surprised at how much you've learned. To make sure you are ready for Exercise 2 (which is really fun), when you finish the summary, answer the review questions which follow:

Exercise 1 - Getting started

Summary

Summary

In this exercise, you learned:

- How to identify your computer, printer, and diskette unit

- How to start up your System/23:

    1. Switch on the printer.
    2. Switch on the diskette unit.
    3. Switch on the computer.
    4. Adjust screen brightness.
    5. Check that the screen is displaying PROC START.
    6. Insert the Customer Support Functions diskette, VOL002, into a diskette drive.
    7. Close the diskette drive handle.
    8. Press the Enter key.
    9. Enter the date and time.
    10. Remove the Customer Support Functions diskette, VOL002, when READY INPUT is on the screen.

- How to use the Learning diskette:

    1. Locate the Learning diskette.
    2. Insert the Learning diskette when READY INPUT is on the screen.
    3. Close the diskette drive handle.
    4. Type: proc learning.
    5. Press the Enter key.

- How to use the "HELP" section if problems occur

- How to select an exercise from the Course menu

- How to switch off your System/23:

    1. Stop the program.
    2. Remove all diskettes.
    3. Switch off all units.

Review

Please write the answers to the following questions on a
piece of paper. Compare your answers to ours.
Our answers follow the questions.

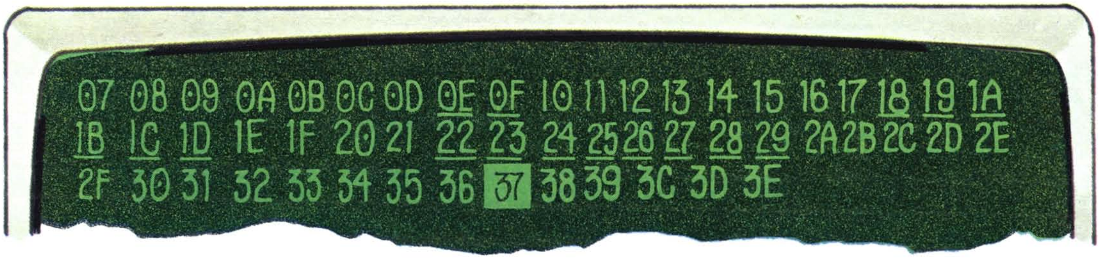
Question 1. To start up your System/23 properly, you must always switch on the computer last.

True or false?

Question 2. You are starting up your computer, and PROC START appears on the screen. What should you do?

a. Insert the Learning diskette and press the Enter key.
b. Insert the Customer Support Functions diskette, VOL001, and press the Enter key.
c. Insert the Customer Support Functions diskette, VOL002, and press the Enter key.
d. Press the Enter key.

Question 3. You are starting up your System/23, and the computer stops with this screen. Using the "HELP" section at the end of this exercise, find the problem.



```
07 08 09 0A 0B 0C 0D 0E 0F 10 11 12 13 14 15 16 17 18 19 1A
1B 1C 1D 1E 1F 20 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E
2F 30 31 32 33 34 35 36 37 38 39 3C 3D 3E
```

a. The diskette unit is not switched on.
b. The printer is not switched on.
c. You have inserted the wrong diskette.
d. There is no problem.

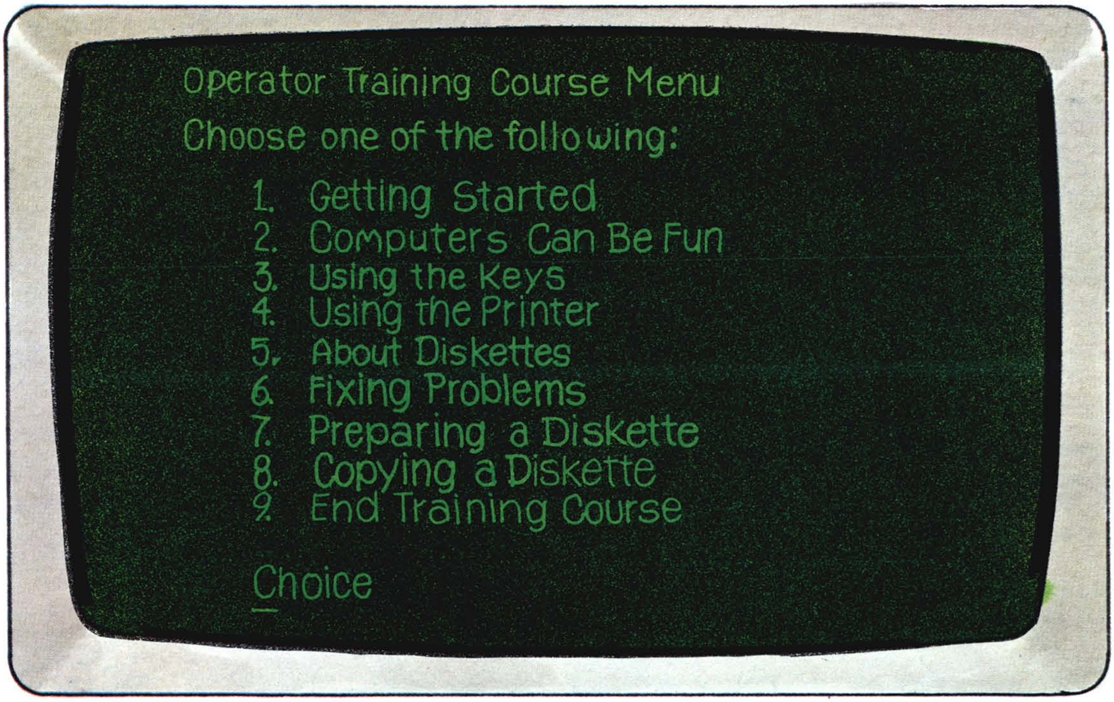
Review (continued)

Question 4. If you touch the exposed surface of a diskette, you might damage it.

True or false?

Question 5. You have the following menu on your screen. What should you type to have READY INPUT displayed on the bottom line of the screen?

a. 9 and press the Enter key
b. proc learning
c. the date and time
d. PROC START



Operator Training Course Menu

Choose one of the following:

1. Getting Started
2. Computers Can Be Fun
3. Using the Keys
4. Using the Printer
5. About Diskettes
6. Fixing Problems
7. Preparing a Diskette
8. Copying a Diskette
9. End Training Course

Choice _

Answers

Question 1. The *correct* answer is: True.

You must always switch on the computer last. When you switch on the computer, the internal diagnostic tests start. If the other units are not on when the internal diagnostic tests run, the computer stops with an error.

This question is covered in step 3 of "Starting up."

Question 2. The *correct* answer is: c.

When PROC START appears, the diagnostic tests are finished, and the computer is ready to load the technical updates. These updates are called "machine updates." They are on the Customer Support Functions diskette, VOL002.

The other answers are *incorrect* because:

Answer a: You must always insert the Customer Support Functions diskette, VOL002, when PROC START is displayed. If you don't, the technical updates won't be read into the computer. The machine updates *must* be read into the computer every time the system is started up.

Answer b: You should have inserted VOL002. Then press the Enter key to continue.

Answer d: You must insert the diskette before you press the Enter key.

This question is covered in steps 5 through 8 of "Starting up."

Answers (continued)

Question 3. The *correct* answer is: b.

During the start up diagnostic tests, the computer detected that the printer wasn't switched on.

The other answers are *incorrect* because:

Answer a: If the diskette unit is not switched on, the bottom line on the screen will display OPTION 21 6009.

Answer c: Inserting the wrong diskette will not cause the screen to stop with 37 in black against a green square (highlighted). The computer is not reading information from the diskette at this time.

Answer d: Yes, there is a problem. Anytime the screen stops with a number in black against a green square (highlighted), a problem has been detected.

This question is covered in step 5 of "Starting up."

Question 4. The *correct* answer is: True.

The exposed recording surface is a very thin layer of magnetic recording material. If you touch it or cause a scratch on the recording surface, the surface might be damaged, and information might be lost.

This question is covered in steps 6 and 7 of "Starting up."

Question 5. The *correct* answer is: a.

You must type 9 and press the Enter key to return to READY INPUT from the menu.

The other answers are *incorrect* because:

Answer b: Proc learning starts the Learning diskette.

Answer c: You type the date and time when you insert Customer Support Functions diskette, VOL002.

Answer d: The screen displays PROC START after the computer performs the internal checks in ''Starting up.''

This question is covered in step 33.

HELP

HELP

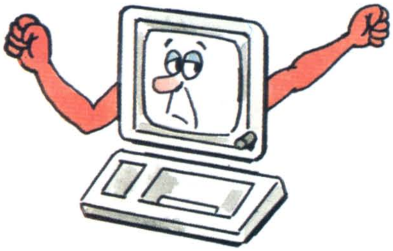
On the next few pages, we have tried to provide some helpful hints to guide you through situations that might occur during the "Getting started" exercise.

If you have a problem, read through these pages for help. If you still have a problem, call IBM for technical support.

You can locate the instructions for correcting your problem by noting the number of the step at which you had the problem, then looking for that step number in this HELP section.

IMPORTANT: If you have a problem at a step not included here, the error correction procedures listed on page 1-38 might be useful to you.

You are trying to start the system. You follow the "Starting up" steps to step 5 and . . .



1. Nothing happens . . .

   Wait a few moments. The computer might take more time than you think it should before it displays anything on the screen.

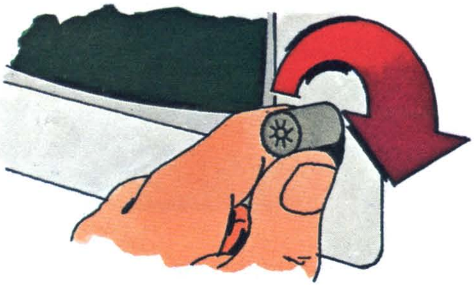
   Check the brightness control knob. Is it turned all the way to the right?

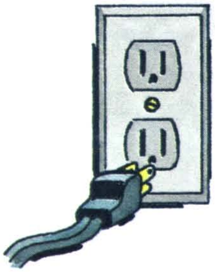
   Check the power plug. Make sure it is pushed in all the way.

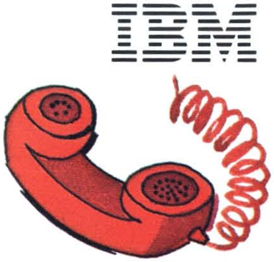
   Check the outlet. Is it "dead"? Try another outlet.

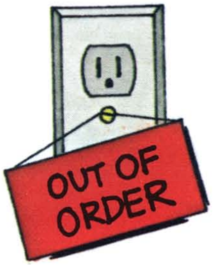
   Check the power cords on the back of the machines. Are they plugged in tightly? You might want to check the *System/23 Setup Instructions* in binder 4. Review the setup instructions to make sure that your system has been set up properly.

   It still doesn't work? Call your service representative.





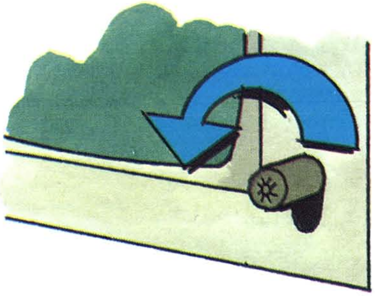




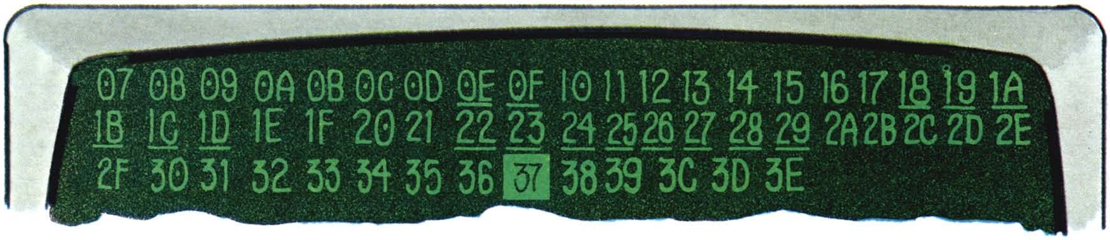
HELP (continued)

2. The screen is too bright . . .

   The brightness knob is turned too far to the right. Turn it back to the left until the brightness is comfortable for viewing.



3. The computer stops with numbers on the screen . . .

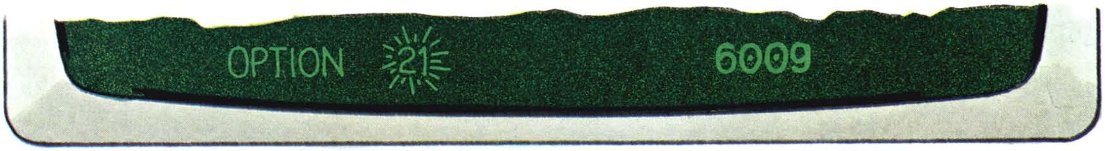


```
07 08 09 0A 0B 0C 0D 0E 0F 10 11 12 13 14 15 16 17 18 19 1A
1B 1C 1D 1E 1F 20 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E
2F 30 31 32 33 34 35 36 37 38 39 3C 3D 3E
```

Is the number 37 shaded as shown above? If so, switch off the computer. Switch on the printer. Then, switch on the computer again.

If either 3D or 3E is shaded, press the Error Reset key and continue. If any of the other numbers are shaded, refer to the "HELP" chapter in binder 2.

4. The computer stops with the number 21 flashing at the bottom of the screen.



```
OPTION 21          6009
```

Switch on your diskette unit. Then press the Error Reset key.

For more information about the number 21 flashing at the bottom of the screen, look up action code 21 in your *System Messages* book.

You are trying to insert a diskette into the diskette drive in either:

"Starting up" step **8**

or,

"Using the Learning diskette" step **27**

but . . .

1. **This diskette won't go into the diskette drive.**

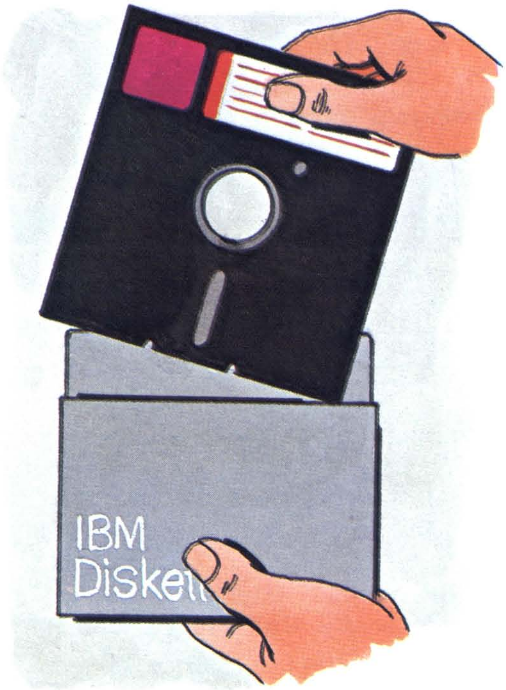
   Remove the diskette from the outer envelope. The diskette should look like this:

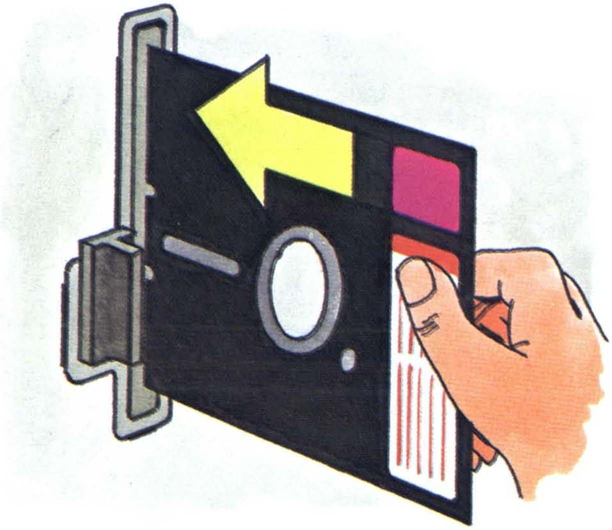
   If the handle is closed (in the horizontal position), open it by turning the handle counterclockwise to the vertical position.

   If there is another diskette in the drive, remove it. Only one diskette to a drive, please.

2. **The diskette sticks out of the drive.**

   Push it in until it touches the back of the drive.





Exercise 1 - Getting started

HELP (continued)

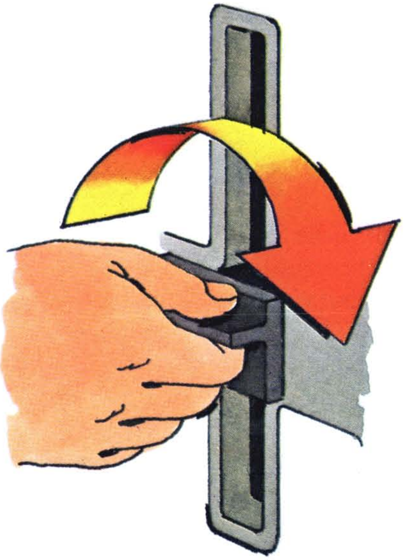
You are trying to insert a diskette and are at

“Starting up” step **9**

or,

“Using the Learning diskette” step **28**

but . . .



1. **You can’t close the handle.**

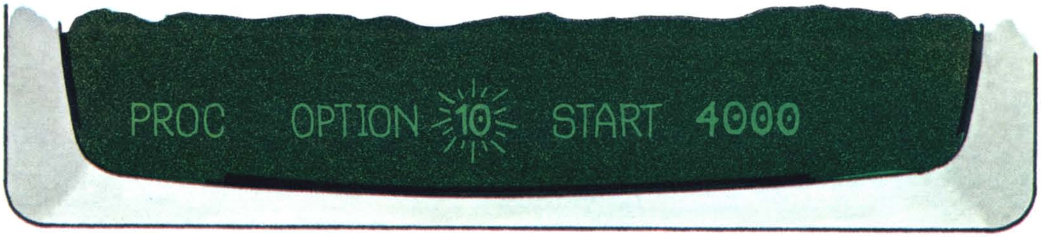
   Push the diskette in all the way.
   Try the handle again.

   If the handle is stuck, *don’t* force it. Call your service representative.

You are at "Starting up" step 11

You have just inserted the Customer Support Functions diskette, VOL002, into the diskette drive and pressed Enter.

This screen appears:



```
PROC   OPTION 10   START  4000
```

This screen will appear for one of the following reasons:

- You have not inserted the Customer Support Functions diskette, VOL002, into the diskette drive.
- The diskette is inserted incorrectly.
- You have not closed the handle on the diskette drive.
- You have inserted the wrong diskette.

After you have fixed the problem, press the Error Reset key.

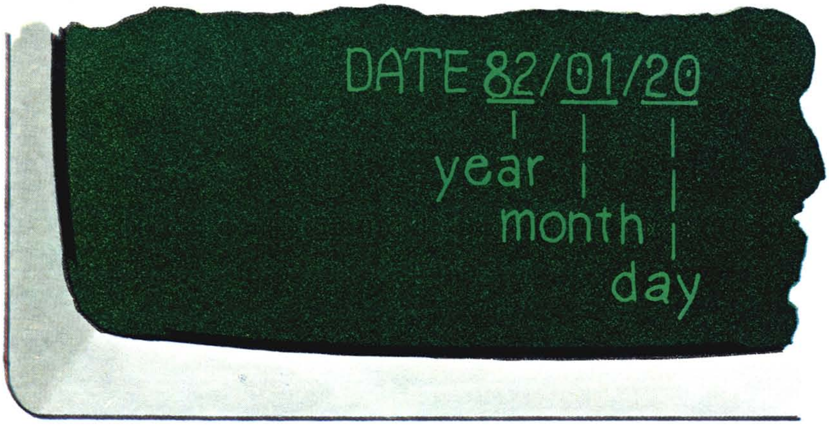
Exercise 1 - Getting started

HELP (continued)

You are at "Starting up" step **15**

You have just typed the date and pressed the Enter key.

This screen appears instead of the set time screen.



```
DATE 82/01/20
```

Note: The numbers on your screen might be different from the numbers shown on this page.

The numbers you will see on your screen are those that were set the last time the computer was started.

This screen will appear for one of the following reasons:

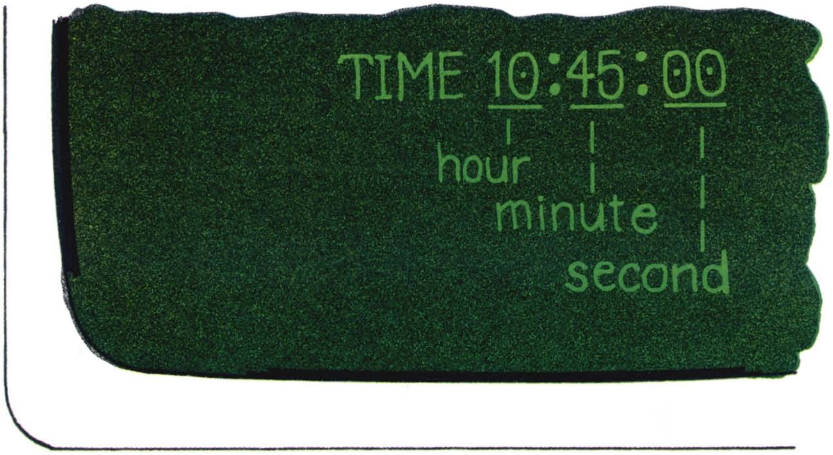
- You have typed something other than 00 through 99 in the year position (the first position).
- You have typed something other than 01 through 12 in the month position (the middle position).
- You have typed something other than 01 through 31 in the day of the month position (the last position).

When you are ready to try to set the date, repeat "Starting up" steps 12 through 15.

You are at "Starting up" step **19**

You have just typed the time and pressed the Enter key.

This screen appears instead of the READY INPUT screen.



This screen will appear for one of the following reasons:

- You have typed something other than 00 through 23 in the hour position.
- You have typed something other than 00 through 59 in the minutes position.
- You have typed something other than 00 through 59 in the seconds position.

When you are ready to try to set the time, repeat the "Starting up" steps 16 through 19.

Note: The numbers on your screen might be different from the numbers shown on this page.

The numbers you will see on your screen are those that were set the last time the computer was started.

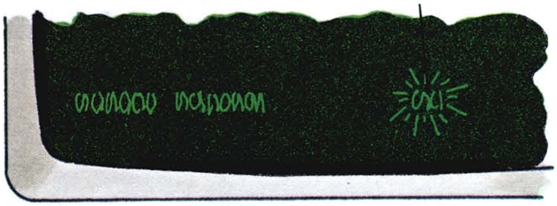
Exercise 1 - Getting started

HELP (continued)

You are trying to start the Learning diskette and are at:

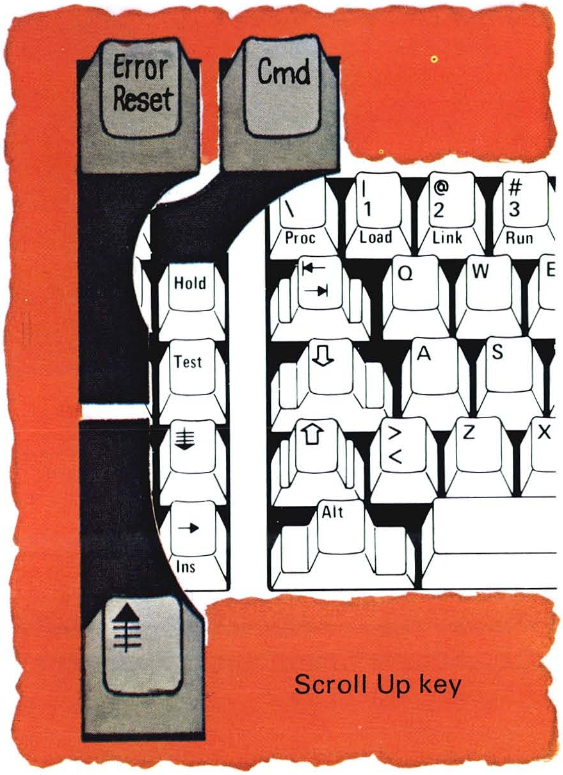
"Using the Learning diskette" step **30**

This screen appears.



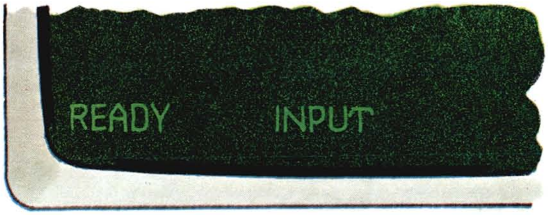
Flashing numbers

1. Press and hold the Cmd key on the left side of the keyboard.
2. While still holding the Cmd key, press the Error Reset key.
3. Release both keys.
4. Press the Error Reset key only and release it.
5. Press the Scroll Up key only and release it.



Scroll Up key

The READY INPUT screen will appear.



This procedure may be used when any unpredictable error occurs. It can be used until later in the course when you will learn more about specific error conditions and the best way to deal with them.

If the Learning diskette is in the diskette drive, and the handle is closed,

type: proc learning

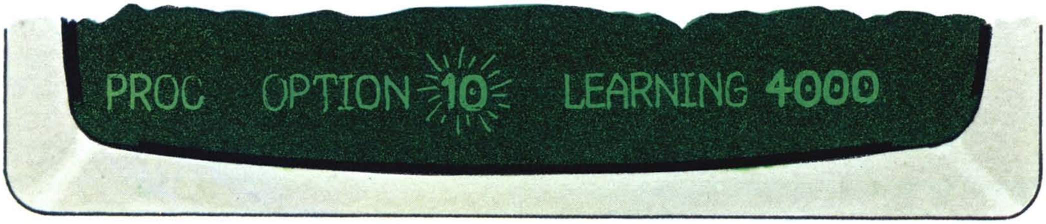
Then, press the Enter key.

Your System/23 learning will start again from the beginning. When you get to the Course menu, type the number of the exercise you were taking when the error occurred.

You are at "Using the Learning diskette" step **30**

You have just typed proc learning and pressed Enter.

This screen appears.



This screen will appear for one of the following reasons:

- You have not inserted the Learning diskette into the diskette drive.
- The diskette is inserted incorrectly.
- You have not closed the handle on the diskette drive.
- You have inserted the wrong diskette.

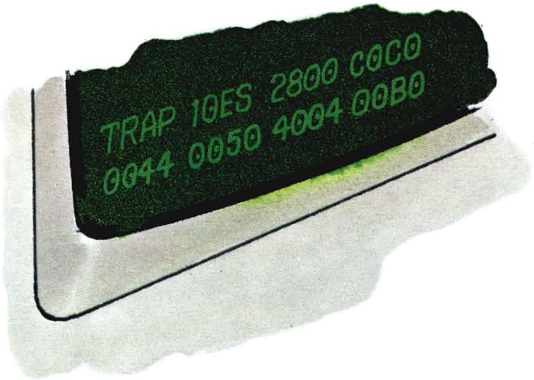
After you have fixed the problem, press the Error Reset key.

Exercise 1 - Getting started

HELP (continued)

You are taking *any* of the exercises. Suddenly, you see TRAP followed by groups of numbers and letters at the bottom of the screen.

The computer is stopped. There is *nothing* you can do to revive it.



```
TRAP 10ES 2800 C0C0
0044 0050 4004 00B0
```

1 **Write down the groups of numbers and letters that follow the word TRAP.**

2 **If the first number after the word TRAP is a 0 or a 4, call IBM for technical assistance.**

For any other number, you may restart the exercise. If the TRAP occurs again, call your service representative.

To restart the exercise after a TRAP, switch off the system and perform the "Starting up" and "Learning diskette" steps described in Exercise 1 until you arrive at the Course menu. You may then type the number of the exercise you wish to take.

Exercise 2 - Computers can be fun

This exercise has three games you can play against your computer.

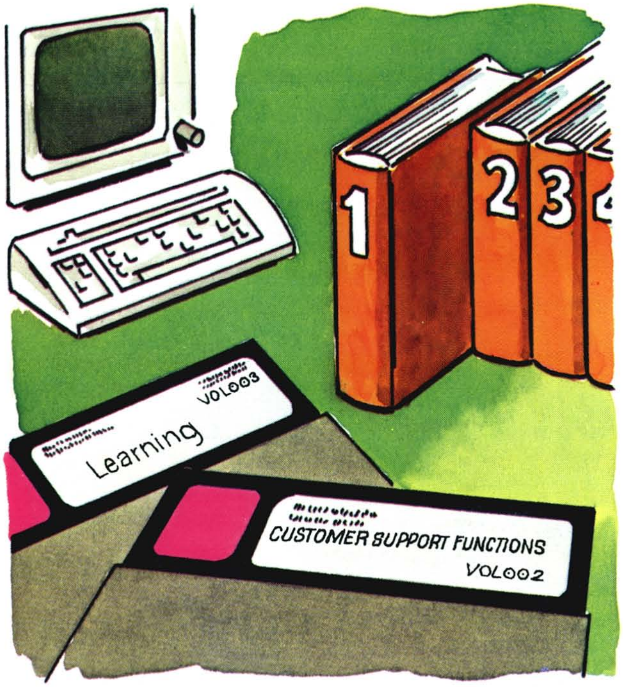
By playing these games and answering the questions the computer asks you, you should become familiar with the number keys.

See if you can beat System/23!

Exercise 2 - Computers can be fun

In addition to this book, what do you need to complete Exercise 2?

- Your System/23 Computer, any model
- The Customer Support Functions diskette marked VOL002 (You will use this diskette if you have to start up the system.)
- The Learning diskette (marked VOL003) from binder 1



About this exercise . . .

Exercise 2 gives you the chance to challenge your computer to some games designed to show you how to communicate with your system.

Spend as much time as you like with this exercise. Enjoy yourself, and when you are ready to move on to "Using the keys," continue with the next exercise.

To begin Exercise 2, your System/23 should be started, the Learning diskette should be in diskette drive 1, and the Course menu should be on the screen.

Now you have the opportunity to have some fun with the computer while getting acquainted.

1

Read the Course menu.
To take Exercise 2,

Type: 2
Press the Enter key.

The remainder of Exercise 2 is guided by your computer.

Good luck! (By the way, you can beat the computer.)

If your computer is switched off . . .

Starting up steps reminder

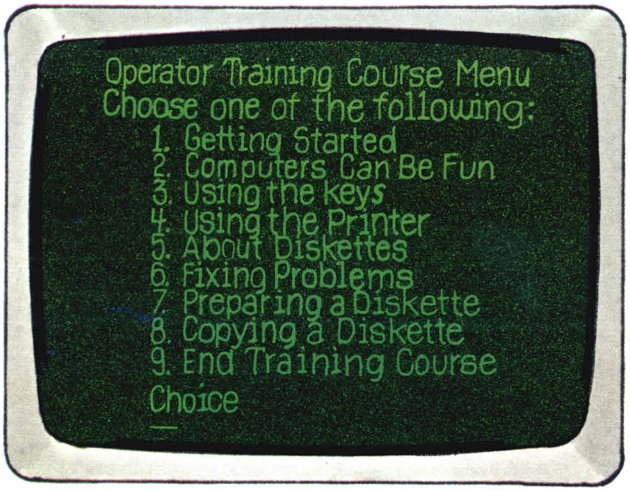
1. Switch on printer, diskette unit, and computer (last).
2. When PROC START appears on the screen, insert Customer Support Functions diskette marked VOL002 and close handle.
3. Press Enter.
4. Set date and time.
5. Remove Customer Support Functions diskette, VOL002, when READY INPUT appears on the screen.

If READY INPUT is on your screen . . .

Learning diskette reminder

1. With READY INPUT on the screen, insert your Learning diskette and close the handle.
2. Type: proc learning
3. Press Enter.

(Follow directions on screens until Course menu appears.)



```
Operator Training Course Menu
Choose one of the following:
   1. Getting Started
   2. Computers Can Be Fun
   3. Using the keys
   4. Using the Printer
   5. About Diskettes
   6. Fixing Problems
   7. Preparing a Diskette
   8. Copying a Diskette
   9. End Training Course
   Choice
   _
```

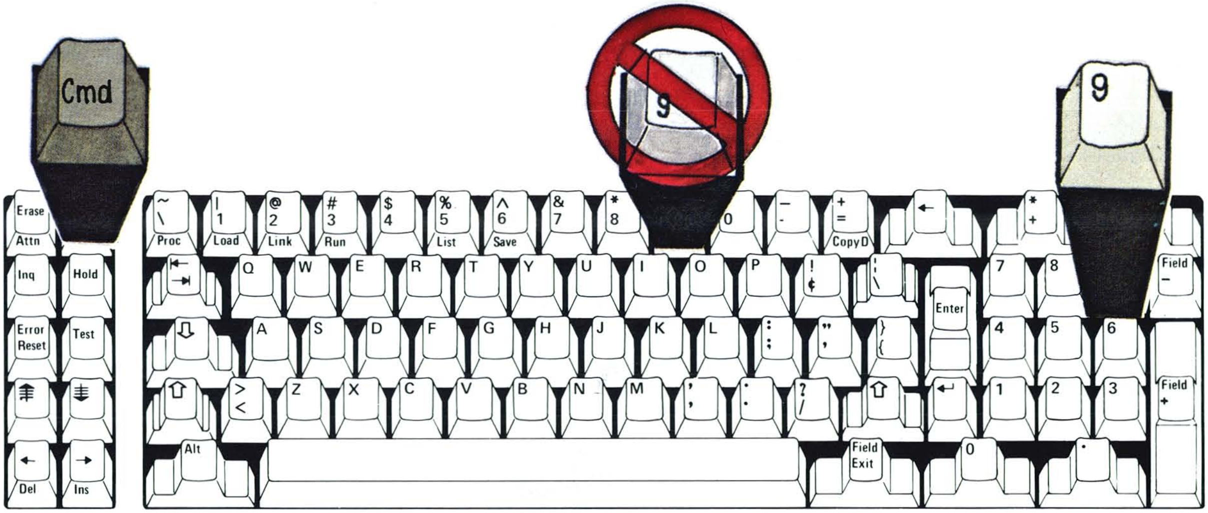
Exercise 2 - Computers can be fun

HELP

HELP

You want to select a different game but can't get the Game menu on the screen.

- You have to press and hold the Cmd key, then press the number 9 key that is at the **RIGHT** of the alphabetic keys.



If you press the number 9 key that is above the alphabetic keys, the screen won't display the Game menu.

Exercise 3 - Using the keys

Note: The information in this exercise is part of a structured learning package that has been designed to teach you how to operate your computer.

To gain maximum benefit from this course, you should:

- Take each exercise in order if this is your first time through the course.
- Follow all directions in this book and on the screens.
- Read all the material presented in each exercise. (Don't skip any steps.)

Hint: The keys on the numeric key pad can be used whether you are in uppercase or lowercase.

In this exercise, you will:

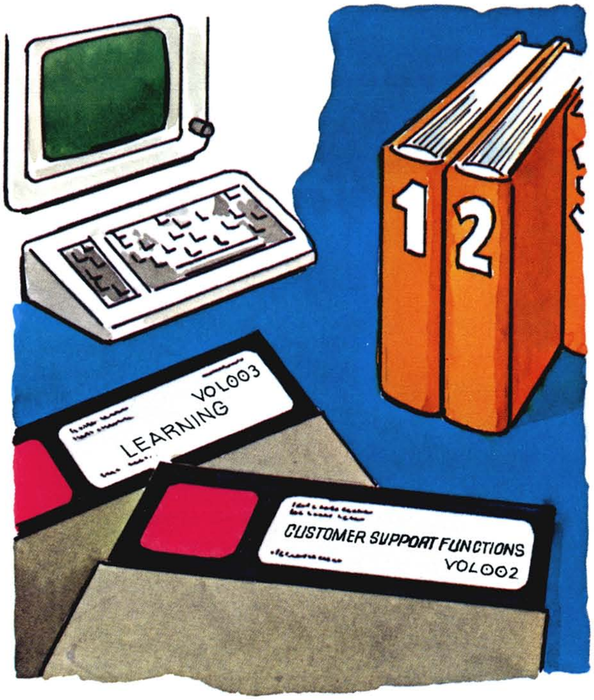
- Identify the purpose of the cursor
- Learn about the status line
- Set the keyboard in uppercase (ABCDEF) and lowercase (abcdef) letters
- Tell when the keyboard is set for uppercase or lowercase
- Lock the keyboard in uppercase and change it back to lowercase
- Correct typing errors by using these keys:

  —Space bar
  —Backspace
  —Cursor Left
  —Cursor Right
  —Erase
  —Command (Cmd) and Insert (Ins)
  —Command (Cmd) and Delete (Del)
- Move the cursor
- Learn the functions of all keys on the keyboard
- Display the alphabets of other languages (optional)

Exercise 3 - Using the keys

In addition to this book, what do you need to complete Exercise 3?

- Your System/23 Computer, any model
- The Customer Support Functions diskette marked VOL002
- The Learning diskette (marked VOL003) from binder 1
- *Operator Reference* in binder 2


1
2
LEARNING
VOL003
CUSTOMER SUPPORT FUNCTIONS
VOL002

Some new words . . .

Well, it's time you learned to speak "computer." In this exercise you will learn the meaning of two important items:

- cursor
- status line

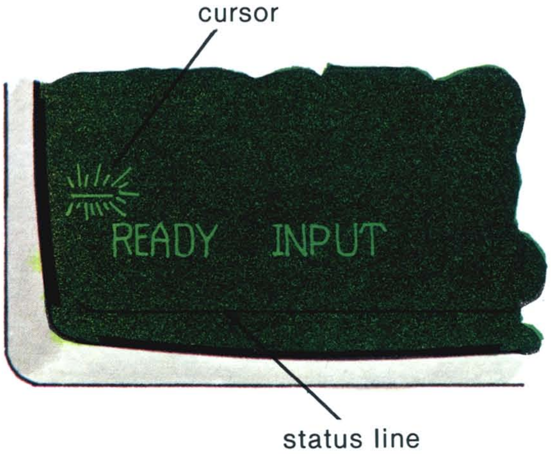
The little blinking line you have seen on your screen is called a *cursor.*

The cursor shows you where the next character you type will be displayed on your screen.

The *status line* is the very bottom line of information on the screen. The letters and numbers on that line are put there by the computer when it wants to tell you something.

For example, remember when you completed the "Starting up" steps? The computer put READY INPUT on the status line as an indication to you that it is ready for you to provide it with input or work.

You will learn much more about the status line when you get to Exercise 6. Information about the status line can also be found by referring to the Index in binder 2.



Exercise 3 - Using the keys

To begin Exercise 3 on your computer, the computer should be started up, the Learning diskette should be in diskette drive 1 (or 3), and the Course menu should be on the screen.

1

Locate binder 2 and open it to "Keyboard layout" in "The keyboard" chapter.

Refer to this page for information about each key as you follow the directions on the screen.

2

Read the Course menu. Then, to start Exercise 3,

Type: 3
Press the Enter key.

The remainder of Exercise 3 is guided by your computer.

If your computer is switched off . . .

Starting up steps reminder

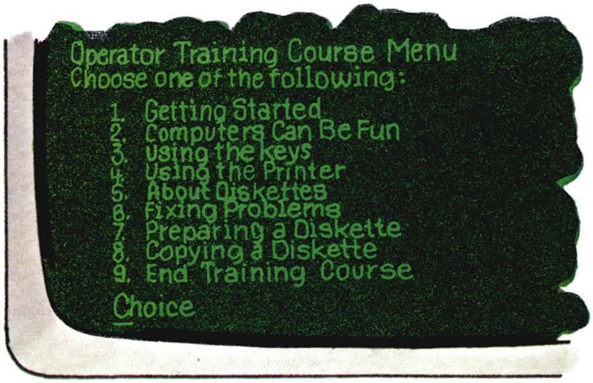
1. Switch on printer, diskette unit, and computer (last).
2. When PROC START appears on the screen, insert Customer Support Functions diskette marked VOL002 and close handle.
3. Press Enter.
4. Set date and time.
5. Remove Customer Support Functions diskette, VOL002, when READY INPUT appears on the screen.

If READY INPUT is on your screen . . .

Learning diskette reminder

1. With READY INPUT on the screen, insert your Learning diskette and close the handle.
2. Type: proc learning
3. Press Enter.

   (Follow directions on screens until Course menu appears.)



Operator Training Course Menu
Choose one of the following:
1. Getting Started
2. Computers Can Be Fun
3. Using the Keys
4. Using the Printer
5. About Diskettes
6. Fixing Problems
7. Preparing a Diskette
8. Copying a Diskette
9. End Training Course

Choice

Summary

In this exercise, you learned to:

- Identify and move the cursor
- Identify the status line and the meaning of the numbers in the display character set field and the shift status field
- Use the Shift and Shift Lock keys
- Correct typing errors with these keys:

  —Space bar
  —Backspace
  —Cursor Left
  —Cursor Right
  —Erase
  —Command (Cmd) and Insert (Ins)
  —Command (Cmd) and Delete (Del)
- Identify all the keys on the keyboard
- Use special keys to display the alphabets of other languages (optional)

Summary

Use *Operator Reference* in binder 2 to review the functions of the keys.

If you forget what some of the keys do, you can look them up in "The keyboard" chapter of *Operator Reference* in binder 2.

The manual shows the position of each key on the keyboard. It also tells how to use each one.

Exercise 3 - Using the keys

Review

Please write the answers to the questions on a piece of paper. Compare your answers to ours.

Question 1. When you press and release the Shift Lock key, the keyboard remains in uppercase.

True or false?

Question 2. When the keyboard is set to uppercase, the number in the last position on the status line is 1.

True or false?

Question 3. You have typed 10 characters on your screen and see that the fourth character you typed is wrong. What key can you press to position the cursor under the error?

a. the Backspace key
b. the Cursor Right key
c. the Cursor Left key
d. the space bar

Question 4. To type $, you should:

a. Press and hold the Cmd key; then press the key with the symbol $ on it.
b. Press and hold the Shift Lock key; then press the key with the $ symbol on it.
c. Press and hold one of the shift keys; then press the key with the $ symbol on it.
d. Press the key with the $ symbol on it; then press the space bar.

For answers to the review questions, turn to page 3-9.

No peeking!

This page intentionally left blank.

Answers

Question 1. The *correct* answer is: True.

When you press the Shift Lock key, the keyboard is set in uppercase until you press one of the shift keys or until the power is switched off on the computer.

This question is covered under "Shift keys" in "The keyboard" chapter of *Operator Reference* in binder 2.

Question 2. The *correct* answer is: False.

When the keyboard is set in uppercase, the number in the last position on the status line is 2. It is 1 when the keyboard is set in lowercase.

This question is covered under "Shift keys" in "The Keyboard" chapter of *Operator Reference* in binder 2.

Question 3. The *correct* answer is: a *or* c.

When you press either the Backspace key or the Cursor Left key, the cursor will move to the left. Either one of these keys can be used to move the cursor to the left.

The other answers are *incorrect* because:

Answer b: The Cursor Right key moves the cursor to the right.

Answer d: The space bar moves the cursor to the right. But, as it moves, it erases all characters on the line.

This question is covered under "Edit keys" in "The keyboard" chapter of *Operator Reference* in binder 2.

Exercise 3 - Using the keys

Answers (continued)

Question 4. The *correct* answer is: b *or* c.

The preferred method for typing a single, uppercase character, such as the $, is described in answer c.

The method described in answer b will work. But, it is not necessary to hold the Shift Lock key once it has been pressed.

The other answers are *incorrect* because:

Answer a: Pressing these keys won't shift the keyboard to uppercase. If you press and hold the Cmd key and the key with the $ symbol on it, you will request a system command to be displayed. Commands and their use will be discussed in later exercises.

Answer d: Pressing the space bar won't shift the keyboard to uppercase. If you press the space bar, the cursor will move to the right and erase the character that was above it.

This question is covered under "Shift keys" in "The keyboard" chapter of *Operator Reference* in binder 2.

HELP

HELP

On the next few pages, we have provided you with some helpful hints to guide you through situations that might occur during the "Using the keys" exercise.

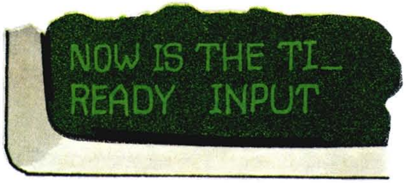
If you have a problem, read through these pages for help. If you still have a problem, call IBM for technical support.

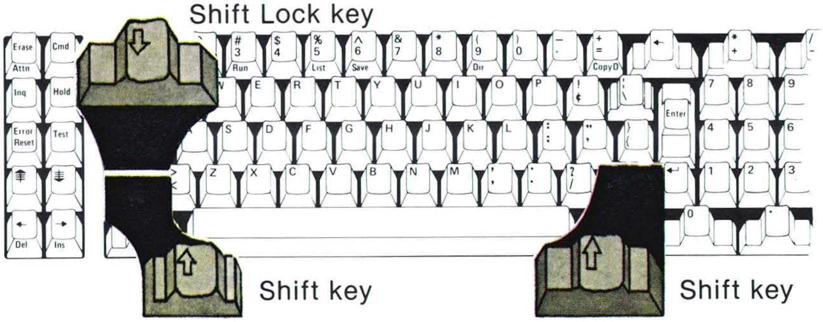
Exercise 3 - Using the keys

HELP (continued)

The letters you type appear on the screen in all capital letters. You want lowercase letters.

The keyboard is locked in uppercase. The Shift Lock key has been pressed.

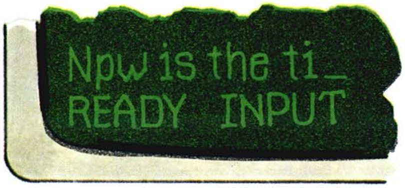

NOW IS THE TI_
READY INPUT


Shift Lock key
Shift key
Shift key

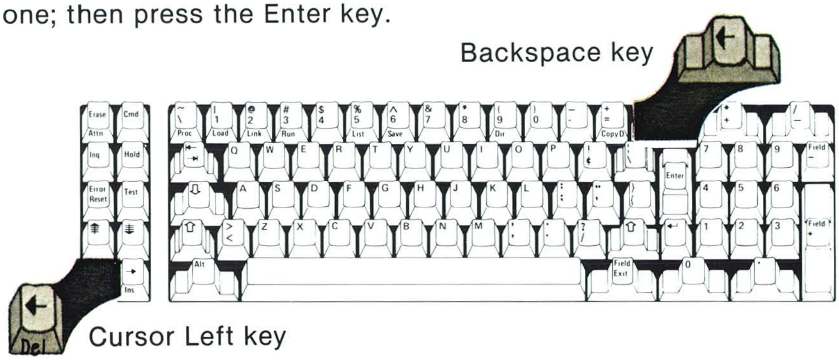
Press either Shift key to release the Shift Lock key. The keyboard is then set for lowercase.

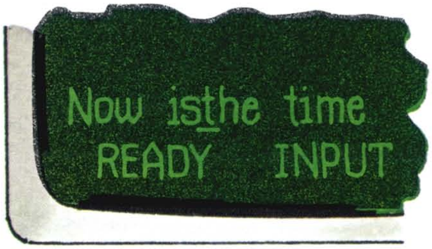
Backspace and retype the letters in lowercase.

You make a typing mistake. You want to correct it before you press the Enter key.


Npw is the ti_
READY INPUT

Press the Backspace key or the Cursor Left key to move the cursor under the letter you want to change. Type the correct letter over the wrong one; then press the Enter key.

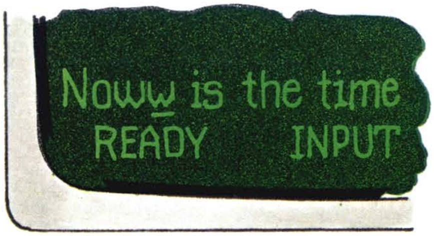

Backspace key
Cursor Left key



You want to insert a space between two letters or two words.

Move the cursor under the position where you want the space. Then, press and hold the Cmd key as you press the Ins key.

In this example, the cursor is under the "t" in "the" because you want to put a space between the words *is* and *the.*



You type an extra letter and you want to delete it.

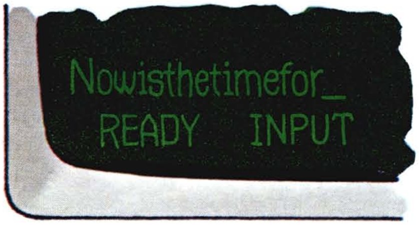
Move the cursor under the extra letter, then press and hold the Cmd key as you press the Del key. This will get rid of the unwanted letter and close up the space.

In this example, you typed, "Noww is the time." You do not want the extra "w", and you would like to get rid of it the simplest way possible.

Note: For help identifying the keys, look at the keyboard layout page in "The keyboard" chapter of *Operator Reference* in binder 2.

Exercise 3 - Using the keys

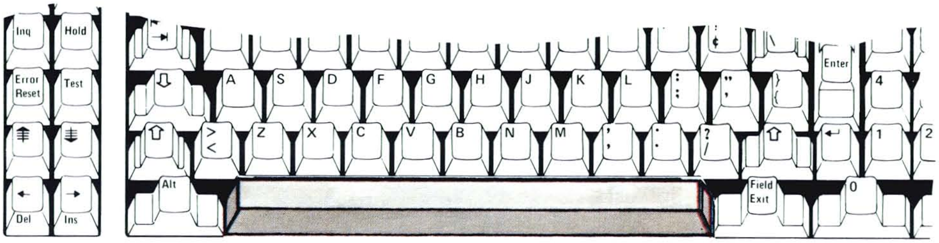
HELP (continued)

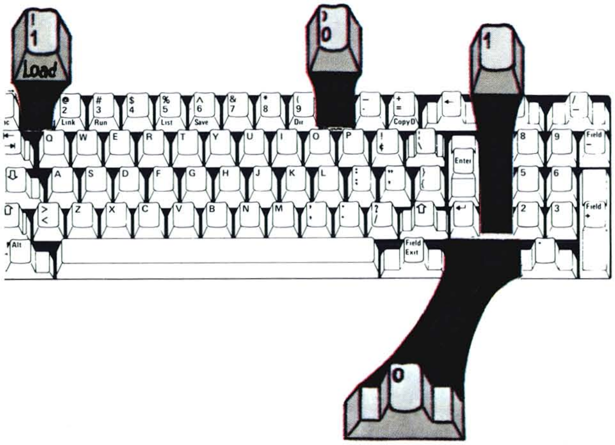

Nowisthetimefor_
READY INPUT

There are no spaces between the words you are typing. You *know* you are pressing the space bar.

You are not pressing the space bar hard enough. You may be typing too fast, pressing on the far edge of the bar, or not pressing it down far enough.

Hint: Type slower. You will make fewer mistakes.


Inq
Hold
Error Reset
Test
Del
Ins
A
S
D
F
G
H
J
K
L
Enter
Z
X
C
V
B
N
M
Alt
Field Exit



You get the letter I instead of a number 1. Or, you get the letter O instead of the number 0.

You are using the wrong keys.

Use the number keys (to the right or across the top) to get the number one or zero.

Use the letter keys to get the letter I or O.

Hint: A zero appears on the screen with a small dot in the center, like this: 0.

Exercise 4 - Using the printer

IMPORTANT: If your **only** printer is a 5217, you must **now** go to *Learning To Use Your 5217 Printer* in binder 1 for further instructions and training on that printer. The following exercise will work with either an IBM 5241 or 5242 Printer but not with a 5217.

Note: The information in this exercise is part of a structured learning package that has been designed to teach you how to operate your computer.

To gain maximum benefit from this course, you should:

- Take each exercise in order if this is your first time through the course.
- Follow all the directions in this book and on the screens.
- Read all the material presented in each exercise. (Don't skip any steps.)

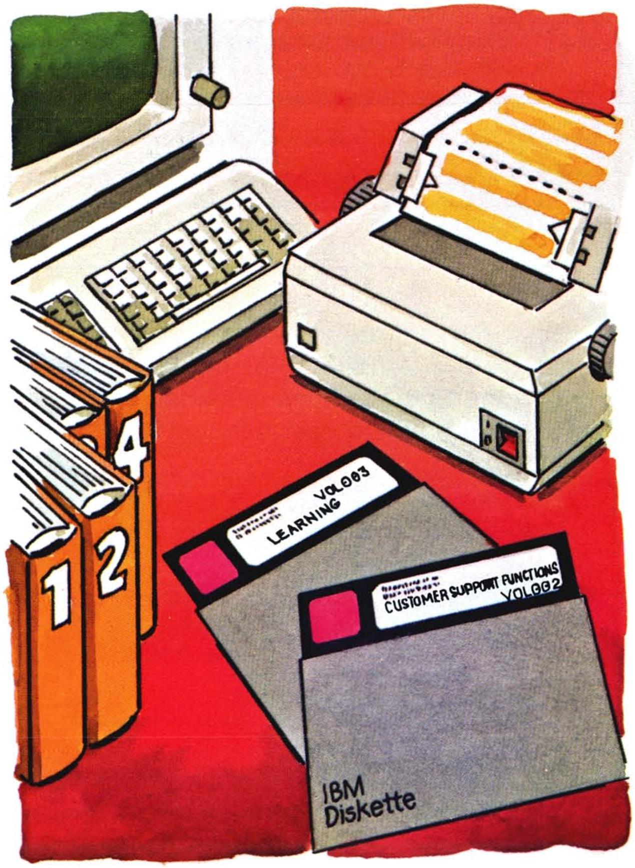
In this exercise, you will learn how to:

- Use the "Printers" chapter of *Operator Reference* in binder 2 for information about the printer
- Put continuous-forms paper in the printer correctly
- Tell the computer to print what's on the screen
- Type a memo on the screen and tell the printer to print a copy of it

Exercise 4 - Using the printer

In addition to this book, what do you need to complete Exercise 4?

- Your System/23 Computer, any model
- An IBM 5241 Printer or an IBM 5242 Printer
- Some (continuous-forms) printer paper
- *Operator Reference* in binder 2
- The Customer Support Functions diskette marked VOL002
- The Learning diskette (marked VOL003) from binder 1.


4
1
2
VOL003
LEARNING
CUSTOMER SUPPORT FUNCTIONS
VOL002
IBM
Diskette

Note: If you do not have a printer on your System/23, do not take Exercise 4. Instead, continue with Exercise 5.

Reminder: If your **only** printer is a 5217, you must leave this exercise and go to *Learning To Use Your 5217 Printer* in binder 1.

Printer questions?

Binder 2, Operation, is a good place to look when you have a question about your printer. The "Printers" chapter of *Operator Reference* in binder 2 contains step-by-step directions for such procedures as:

- Changing the ribbon cartridge
- Removing and replacing the forms tractor unit
- Loading and aligning paper

and many, many more.

Spend some time now looking through the "Printers" chapter, especially if you need to load your printer with continuous-forms paper for this exercise.

After you have made sure your printer is ready with paper loaded, and after you have browsed through the "Printers" chapter of *Operator Reference* in binder 2, you will be ready to continue with "Starting Exercise 4" on the next page.

1
2
3
4
5
PRINTERS

Exercise 4 - Using the printer

Starting Exercise 4 . . .

Although most printing is performed on a computer under control of a program, in this exercise, you will do some printing by using some controls from the keyboard.

To begin Exercise 4 on your computer, the computer should be started up, the Learning diskette should be in diskette drive 1 (or 3) and the Course menu should be on the screen.

If you have any problems as you take this exercise, check the "HELP" section at the end of this exercise.

1 **Read the Course menu. Then, to start Exercise 4,**

Type: 4
Press the Enter key.

The remainder of Exercise 4 is guided by your computer.

If your computer is switched off . . .

Starting up steps reminder

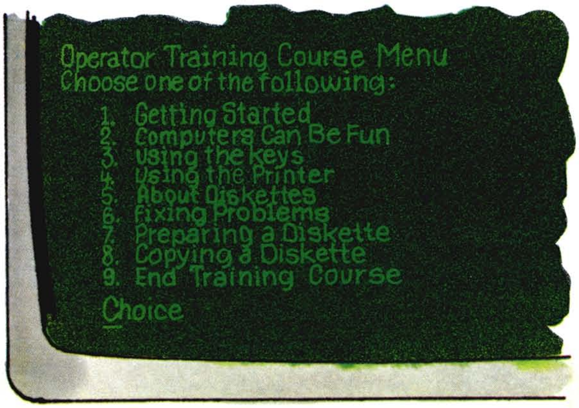
1. Switch on printer, diskette unit, and computer (last).
2. When PROC START appears on the screen, insert Customer Support Functions diskette marked VOL002 and close handle.
3. Press Enter.
4. Set date and time.
5. Remove Customer Support Functions diskette, VOL002, when READY INPUT appears on the screen.

If READY INPUT is on your screen . . .

Learning diskette reminder

1. With READY INPUT on the screen, insert your Learning diskette and close the handle.
2. Type: proc learning
3. Press Enter.

(Follow directions on screens until Course menu appears.)



```
Operator Training Course Menu
Choose one of the following:
     1. Getting Started
     2. Computers Can Be Fun
     3. Using the Keys
     4. Using the Printer
     5. About Diskettes
     6. Fixing Problems
     7. Preparing a Diskette
     8. Copying a Diskette
     9. End Training Course
     Choice
```

Welcome back.

At this point, you should have completed the portion of Exercise 4 that was on the computer.

2 **Press the Enter key.**
Type: 9
Press the Enter key.

You should have READY INPUT on your screen.

Now, read the summary on the next page and do the review questions at the end of this exercise.

Note: If you have the 5217 Printer as an additional printer, you must go to *Learning To Use Your 5217 Printer* for your training on that printer after you have answered the review questions for this exercise.

Exercise 4 - Using the printer

Summary

In this exercise, you learned how to:

Summary

- Use the "Printers" chapter of *Operator Reference* in binder 2 for information about the printer
- Put continuous-forms paper in the printer so that the perforation line is even with the top of the plastic guide
- Use the Cmd and CopyD keys to print what's on the screen
- Type a memo on the screen and tell the printer to print a copy of it

Review

Please write the answers to the following questions on a piece of paper. Compare your answers to ours.

Question 1. You are loading continuous-forms paper into the printer. Where can you find information for loading continuous forms?

a. *Learning to Use System/23* (in binder 1)
b. *Operator Reference* (in binder 2)
c. *System Messages* (in binder 3)
d. *Customer Support Functions* (in binder 5 or 6)

Question 2. You want to print the information displayed on your screen. What should you do?

a. Type: print
b. Press: Cmd
c. Press: Cmd and CopyD
d. Type: proc learning

Question 3. When you are printing on continuous-forms paper, the paper-release lever should be set to the PRINT position.

True or false?

Exercise 4 - Using the printer

Answers

Question 1. The *correct* answer is: b.

Binder 2 is the best place to look for information about the printer.

The other answers are *incorrect* because:

Answer a: *Learning to Use System/23* is your guide through this course. You should use the Learning book only during training. After this course, use the *Operator Reference* in binder 2 if you have questions.

Answer c: Messages will be covered in Exercise 6. You should use *System Messages* in binder 3 when you need information about error messages.

Answer d: Customer Support Functions in binder 5 will be covered in Exercises 7 and 8 (or 7A and 8A). You should use this material when you need information about Customer Support Functions.

This question is covered in the ''Printers'' chapter of *Operator Reference* in binder 2.

Question 2. The *correct* answer is: c.

When you press and hold the Cmd key and then press the CopyD key, everything on the screen is printed.

The other answers are *incorrect* because:

Answer a: If you type print by itself, the computer won't do anything. Print requires that you enter other information with it.

Answers

Answer b: If you press only the Cmd key, nothing will happen. You must press and hold the Cmd key and then press the CopyD key to print the contents of the screen.

Answer d: If you type proc learning, the computer will try to start the learning program on the Learning diskette.

This question is covered under "Shift keys" in "The keyboard" chapter of *Operator Reference* in binder 2.

Question 3. The *correct* answer is: True.

When the paper-release lever is set in the PRINT position, the continuous-forms paper is fed through the printer under control of the forms tractor unit.

This question is covered under "Controls" in the "Printers" chapter of *Operator Reference* in binder 2.

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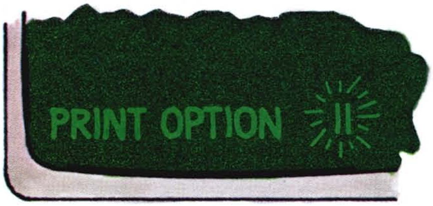
HELP

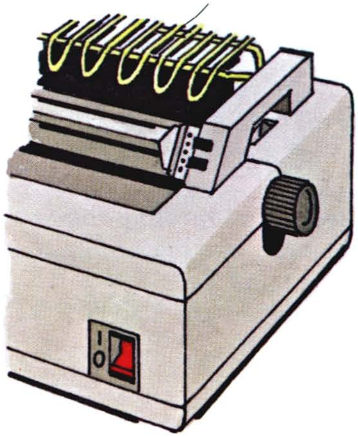
On the next few pages, we have provided you with some helpful hints to guide you through situations that might occur during the "Using the printer" exercise.

If you have a problem, read through these pages for help. If you still have a problem, call IBM for technical support.

Exercise 4 - Using the printer

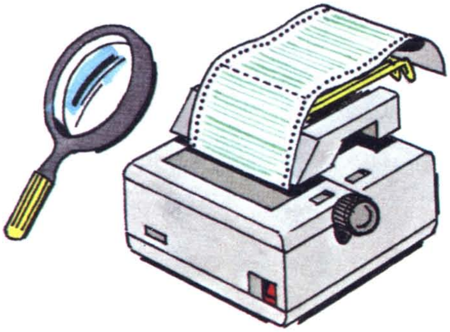
HELP (continued)

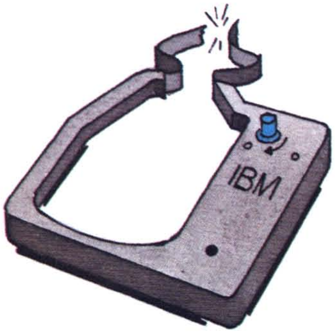


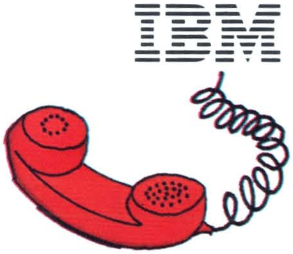


The printer should print something, but nothing is printing.

1. The printer is out of paper.
   - Insert more paper into the printer. (Follow the steps in the "Printers" chapter of *Operator Reference* in binder 2.)
   - Press the Error Reset key.
   - Press the Enter key.
2. The printer is not switched on.
   - Switch off the other units.
   - Switch on the printer and diskette unit.
   - Switch on the computer.
   - Try the print operation again.







The paper is moving, but nothing is printing on it, or the printing is too light to read.

1. The copy-control dial may not be set right.

   Set the dial to 0 and move it toward 8 until the print is readable. (See the "Printers" chapter of *Operator Reference* in binder 2.)

2. The printer ribbon is missing, broken, or worn.

   Press the Hold key on the keyboard.

   Remove the ribbon and insert a new one. (See the "Printers" chapter of *Operator Reference* in binder 2.)

   Press the Hold key again to continue.

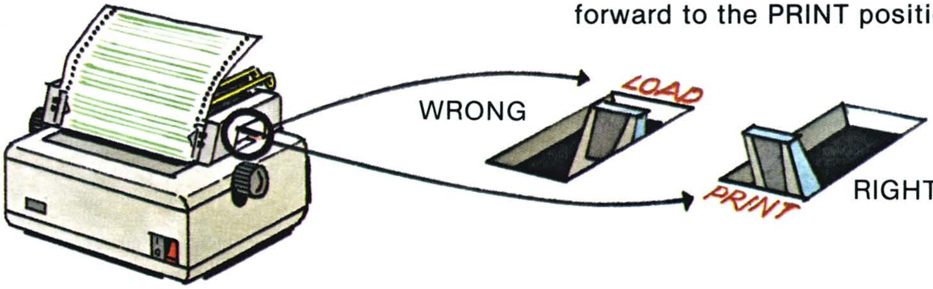
3. The printer ribbon is new. It seems OK, but nothing prints. Call your service representative.

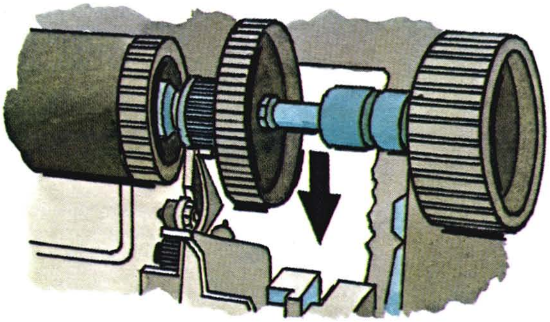
Exercise 4 - Using the printer

HELP (continued)

The paper doesn't move up. New lines print over old lines.

1. The paper release lever is set to the LOAD position. It should be pulled forward to the PRINT position.

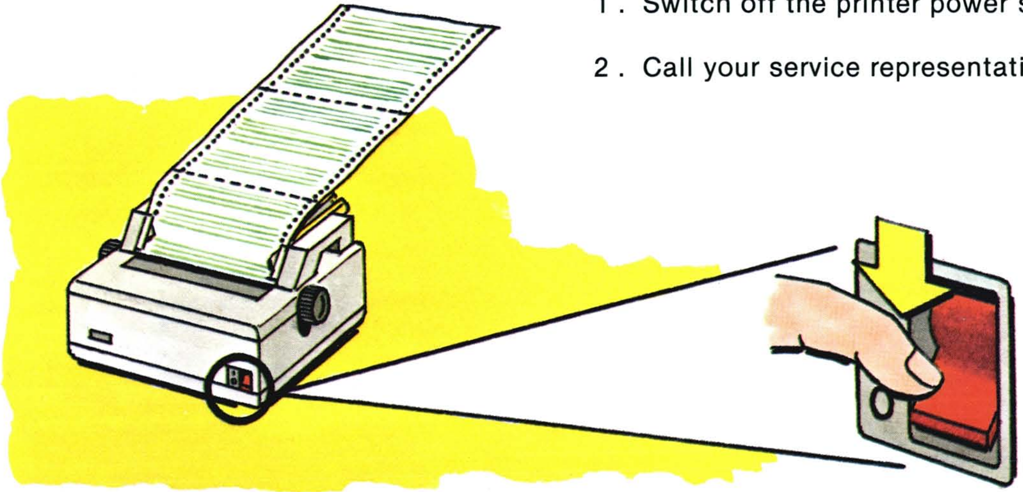


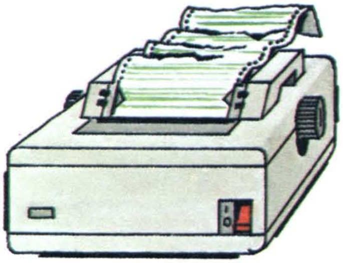


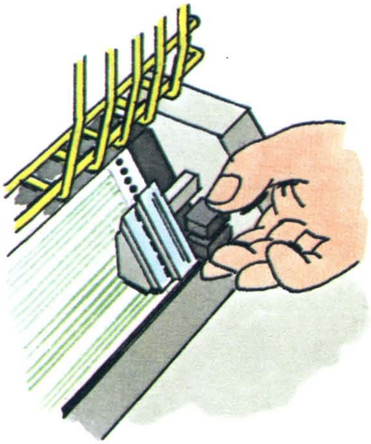
2. The platen (roller for the paper) is slipping. Make sure that the platen is firmly hooked in place. See *System/23 Setup Instructions* in binder 4 for detailed directions.

The paper is "shooting out" of the printer.

1. Switch off the printer power switch.
2. Call your service representative.







The paper is wrinkling as it moves through the printer.

1. Adjust the paper stacked behind the printer.

   If the paper is set to the side, it might be entering the printer at an angle.

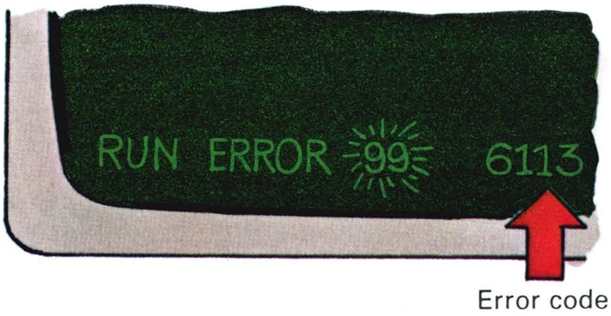
2. Adjust the tractor lever on the right. Move it to the right to take up any slack in the paper. Move it to the left if the paper around the holes is tearing. (Paper is too tight.)

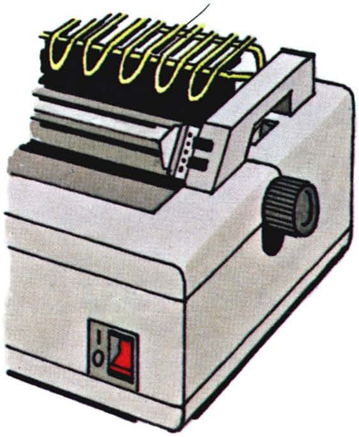
3. Adjust the paper guides to assure smooth movement of paper.

> **Note:** See the "Printers" chapter of *Operator Reference* in binder 2 for complete adjustment directions.

Exercise 4 - Using the printer

HELP (continued)





After you press the Cmd and CopyD keys, the printer does not complete copying the screen:

1. Press the Cmd and CopyD keys again. (You will then see the error code 6113 on the screen.)
2. Press the Error Reset key.
3. Switch off the printer.
4. Switch on the printer.
5. Press the Error Reset key.
6. Press the Cmd and CopyD keys.

Exercise 5 - About diskettes

Note: The information in this exercise is part of a structured learning package that has been designed to teach you how to operate your computer.

To gain maximum benefit from this course, you should:

- Take each exercise in order if this is your first time through the course.
- Follow all the directions in this book and on the screens.
- Read all the material presented in each exercise. (Don't skip any steps.)

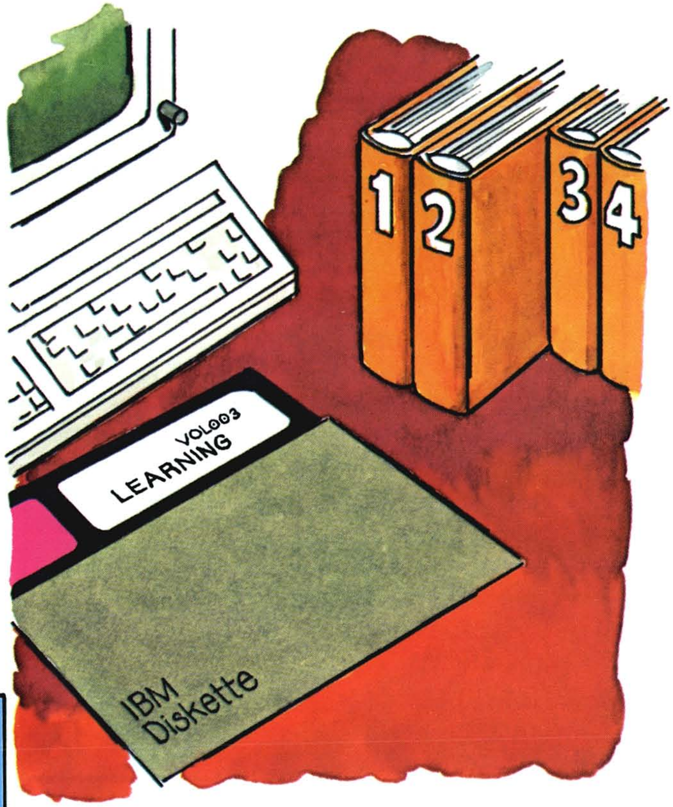
In this exercise, you will learn:

- How to handle diskettes correctly
- How diskettes store information
- What kinds of labels diskettes have
- How computers find information on diskettes
- How to display the diskette directory

Exercise 5 - About diskettes

In addition to this book, what do you need to complete Exercise 5?

- Your System/23 Computer, any model
- The Learning diskette (marked VOL003) from binder 1
- *Operator Reference* in binder 2



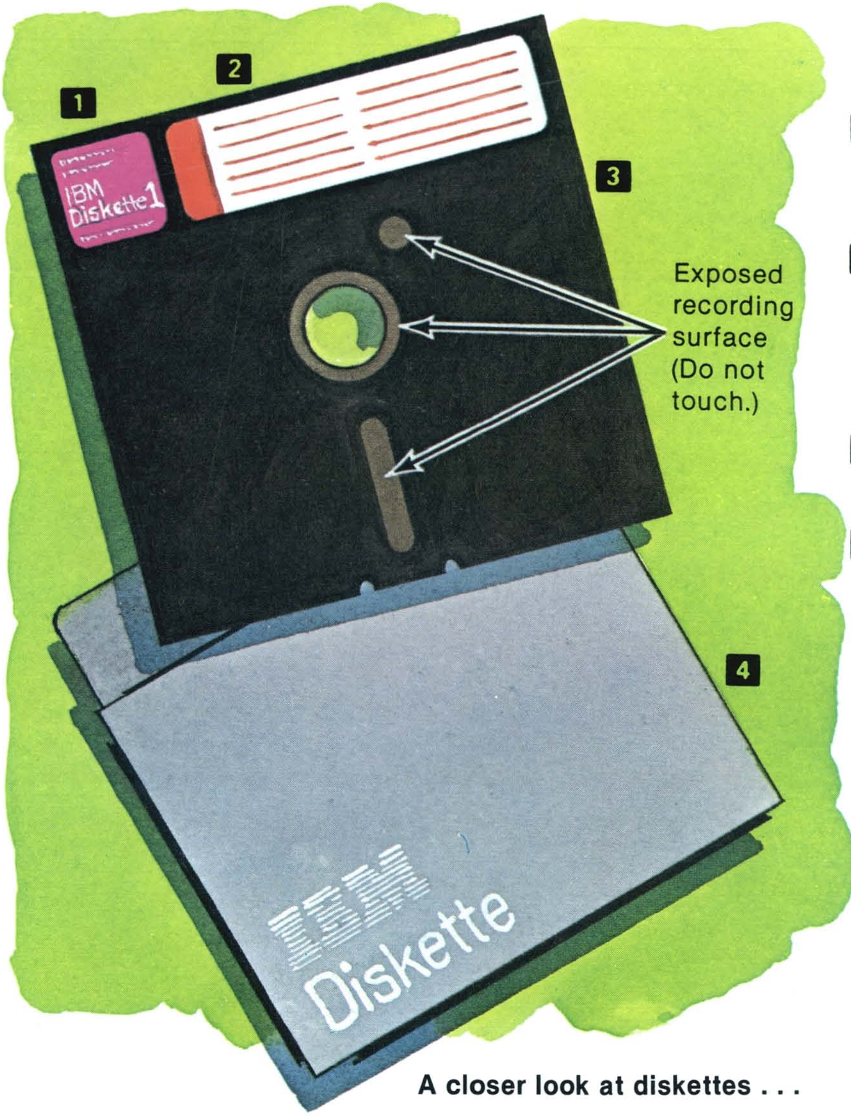
1

Locate the "Diskettes" chapter of *Operator Reference* in binder 2.

Read the section on "Handling and storing diskettes" before proceeding with this exercise.

Return here when you have finished.

The information on the following pages will be very useful to you later on. Take your time reading it.


1
2
IBM Diskette 1
3
Exposed recording surface (Do not touch.)
4
IBM Diskette

1 Permanent label—identifies the "type" of IBM diskette

2 Adhesive label—applied by the user of the computer to describe the contents of this diskette

3 Diskette in permanent protective jacket

4 Diskette envelope

A closer look at diskettes . . .

A diskette is a device for storing information—lots of information—that can be used by your computer.

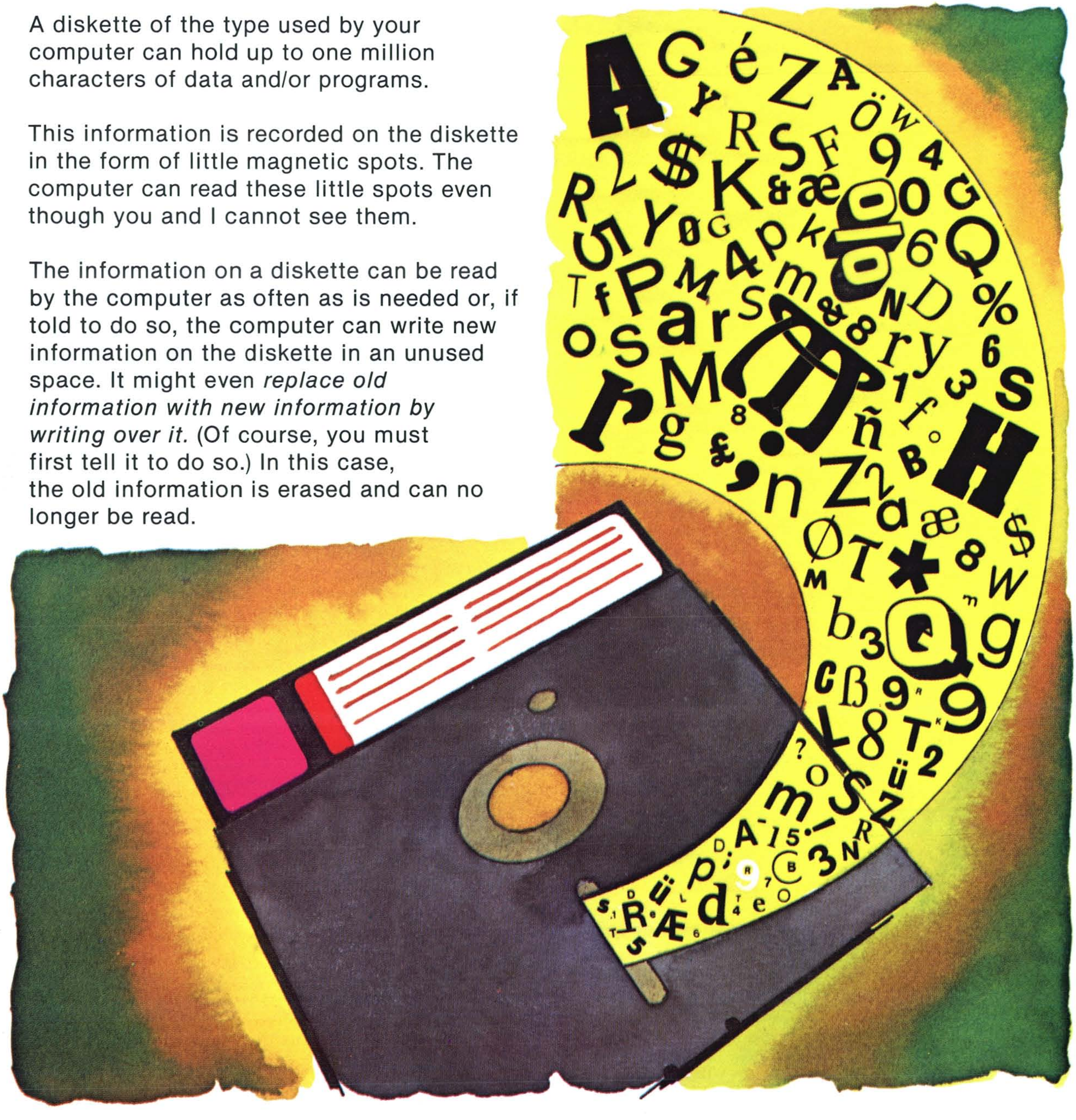
The information on a diskette is usually in the form of instructions that the computer is to perform (the instructions are called a *program*), or in the form of *data* (facts and figures) that the programs work with.

Exercise 5 - About diskettes

A diskette of the type used by your computer can hold up to one million characters of data and/or programs.

This information is recorded on the diskette in the form of little magnetic spots. The computer can read these little spots even though you and I cannot see them.

The information on a diskette can be read by the computer as often as is needed or, if told to do so, the computer can write new information on the diskette in an unused space. It might even *replace old information with new information by writing over it.* (Of course, you must first tell it to do so.) In this case, the old information is erased and can no longer be read.



OK! A diskette can store programs or data, or both. But to be able to efficiently find all this information when it is needed, the computer must organize it so that it can be retrieved quickly and accurately. Although the computer itself takes care of most of the organizing, the person supplying the data or programs must do a few things too.

First, how does the computer tell one diskette from another?

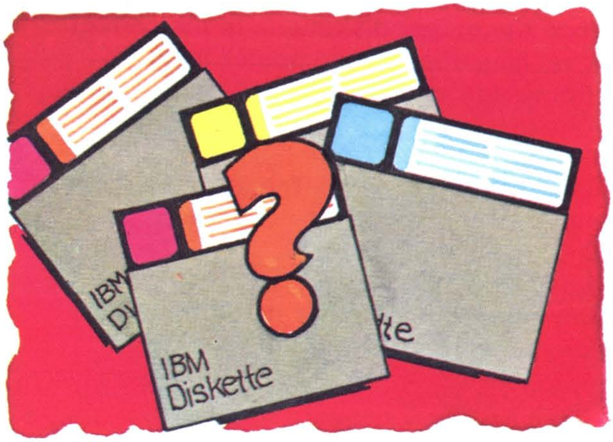
Two ways!

1. One way is by its name.

   Each diskette you use must have a name. (In computer-talk, a diskette's name is called its volume identification, or *VOLID* for short.)

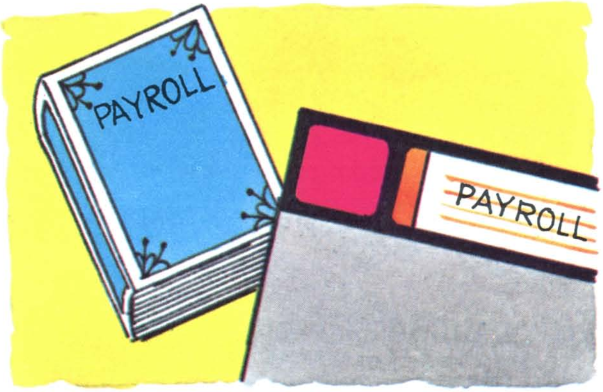
2. Another way the computer knows which diskette to work with is by having you, the operator, tell it which drive the diskette is in. On many diskette operations, the computer will ask you for either a VOLID or a drive number so it knows where the information is to do the job.

A diskette is named (or given a VOLID) during an operation called PREPARE. PREPARE is one of your Customer Support Functions. You will learn how to use PREPARE in the "Preparing a diskette" exercise.



VOLID = VOLUME IDENTIFICATION

Just as a book title is the name of a book, a diskette's VOLID is the name of the diskette.



The VOLID is written on the diskette when you run the PREPARE Customer Support Function so that the computer can identify the diskette.

Then, you should put an adhesive label on your diskette with the VOLID written on it so that you can identify the diskette.

Exercise 5 - About diskettes

Once the proper diskette is in the correct drive, how does the computer find the information on the diskette?

Because a diskette can hold so much information, frequently there will be more than one program or several groups of data on a single diskette.

How does the computer find different things on a diskette?

Easy!

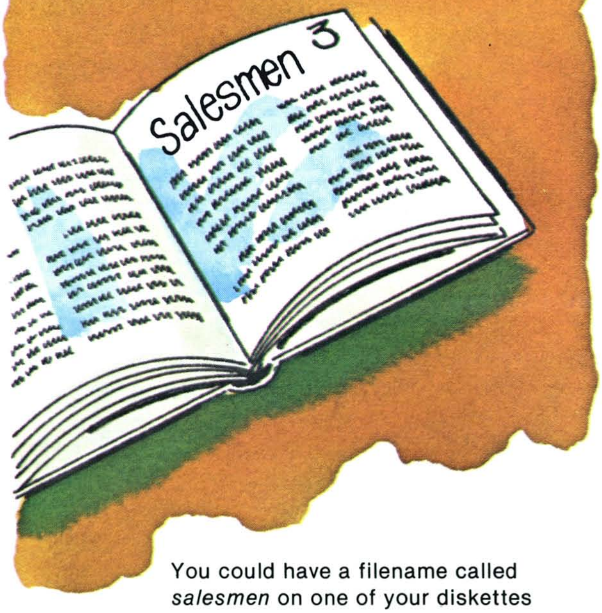
It looks for a filename.
People who write programs give their programs names. Data is grouped into files and each file will have a name, too. When a program needs a particular piece of data, it looks for the data's *filename.*

To learn more about filenames, go now to the "Diskette and disk" chapter of *Operator Reference* in binder 2. Return here when you have finished reading that chapter.

What happens if a program can't find a file on a diskette?

The program stops, and the computer displays some numbers and the name of the file it is looking for on the status line of the screen. You will learn more about that in Exercise 6.

filename A *filename* on a diskette is similar to a *chapter* in a book.



You could have a filename called *salesmen* on one of your diskettes containing records concerning your company's sales personnel.

Filenames are normally assigned by programmers as they write the programs for the computer.

Because it is so important, let's review what we have learned about diskettes so far.

A diskette is like a *volume* in a library. And, like a book, each volume has a name. A diskette's name is called its VOLID.

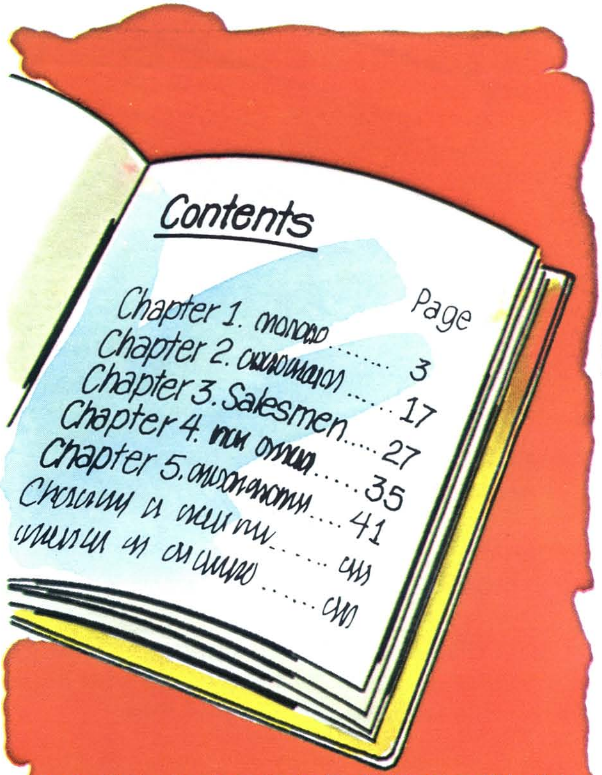
Information is recorded on the surface of the diskette. The information can be in the form of programs (instructions the computer will follow) or data.

The information is grouped so that the computer can easily locate it. A *file* is a collection of many related items. The computer can locate a file on a diskette because the programmer gives each file a *filename.*

So . . .

Just as a book has a table of contents, each diskette has a *directory.* The directory is created when you do a PREPARE function. The diskette's directory is made up of many entries called *labels* that hold information the computer needs to identify and locate files on the diskette.

Each diskette directory is usually built to hold about 50 labels (one for each file on a diskette). That's average and is usually all you will need. If your programmer thinks that the files on a particular diskette may be very long and take up lots of room, you may define fewer labels in your directory. Or, if you are working with very short files, you may have many more of them on your diskette and need more than 50 labels in your directory.



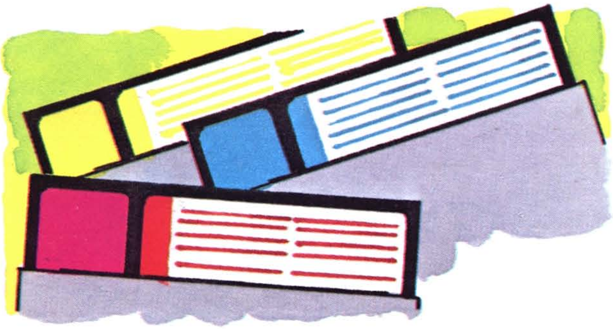
A book's table of contents is similar to a diskette's **directory**

Before we show you how *you* can read a diskette's directory, there is one more thing in the directory you will have to know at this time.

Exercise 5 - About diskettes

During a PREPARE operation, you will be asked for your diskette's *type.*

A diskette's type is written on the permanent label in the upper left corner of the diskette if it is an IBM diskette.



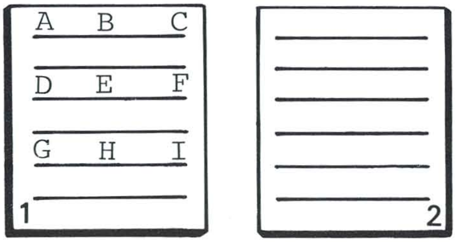
Note: If you do not have an IBM diskette, or if your IBM diskette does not have the diskette type printed on the permanent label, there is another way to tell what type diskette you have. This method will be shown to you later in this exercise.

A diskette is a type 1, a type 2, or a type 2D.

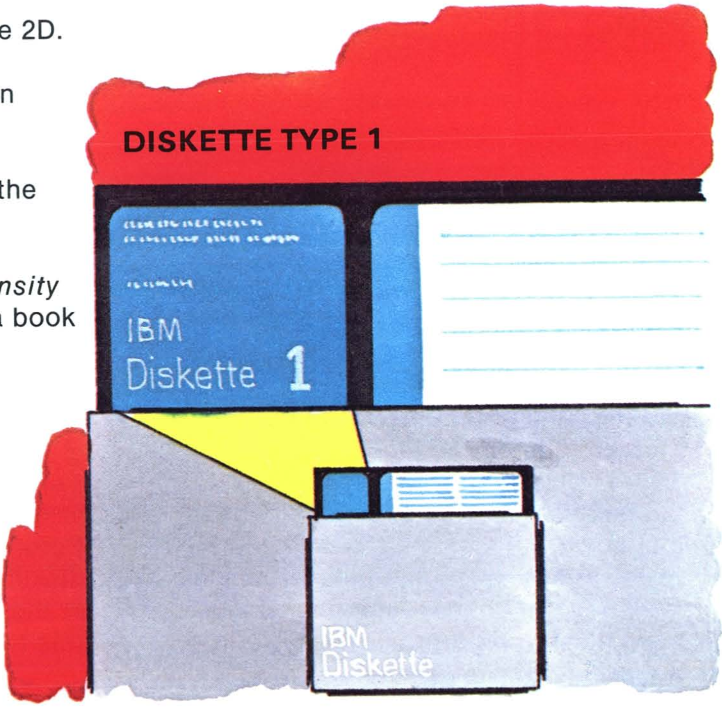
These types refer to the way information is stored on the diskette.

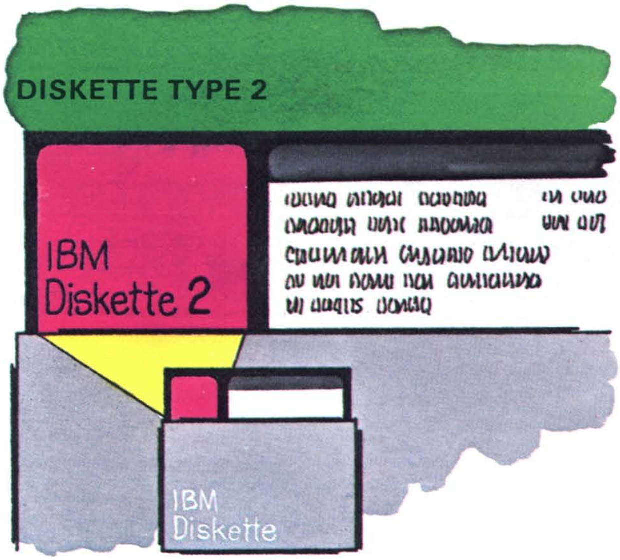
We can compare each diskette type to the way words are printed in a book.

A type 1 diskette is written in *single-density* on *one side* of the diskette. A page of a book written this way would look like this:

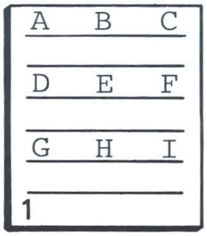


Front Back

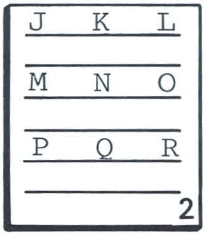



DISKETTE TYPE 2
IBM Diskette 2
IBM Diskette

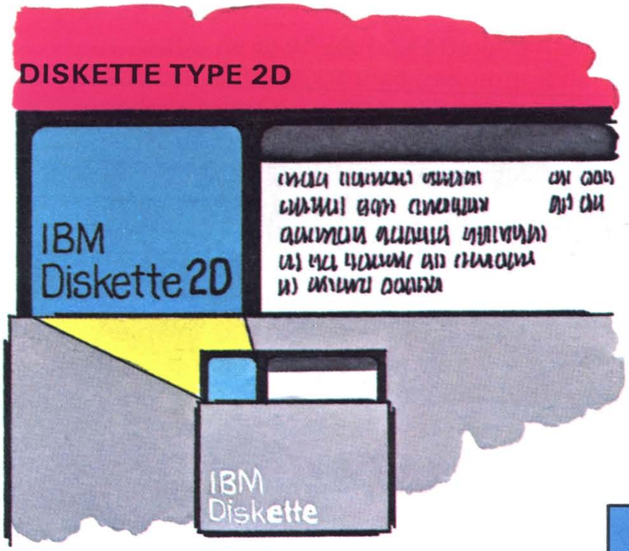
A type 2 diskette is written in *single-density* on *both sides* of the diskette. Therefore, it holds twice as much information as a type 1. In a book:


A B C
D E F
G H I
1

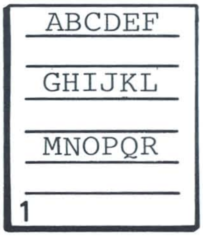
Front


J K L
M N O
P Q R
2

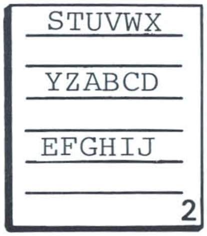
Back


DISKETTE TYPE 2D
IBM Diskette 2D
IBM Diskette

A type 2D diskette is written in *double-density* on *both sides* of the diskette. Type 2D diskettes hold four times as much information as a type 1. Or:


ABCDEF
GHIJKL
MNOPQR
1

Front


STUVWX
YZABCD
EFGHIJ
2

Back

You can order type 1, type 2, or type 2D diskettes, depending upon the model computer you have.

Exercise 5 - About diskettes

Each diskette should have an adhesive label attached to it to identify the VOLID of that diskette. Because there probably isn't room on that label for all the filenames on the diskette (and from time to time many may be added and deleted), you might wonder how you could find out what files are on a particular diskette.

You can find out very much the same way the computer locates files on a diskette, and very much the same way you find something in a book.

You look at the *directory.*

At this time, make sure your system is started up, no program is running, and all diskettes are removed. All diskette drive handles should be open.

The screen should show READY INPUT on the status line.

1 **Locate your Learning diskette.**

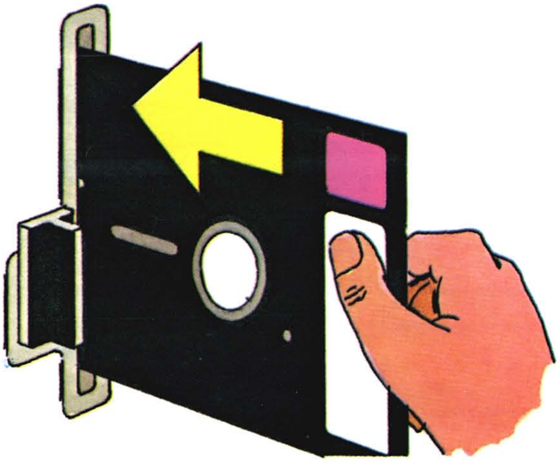
2 **Insert the Learning diskette into any drive.**

Close the handle.

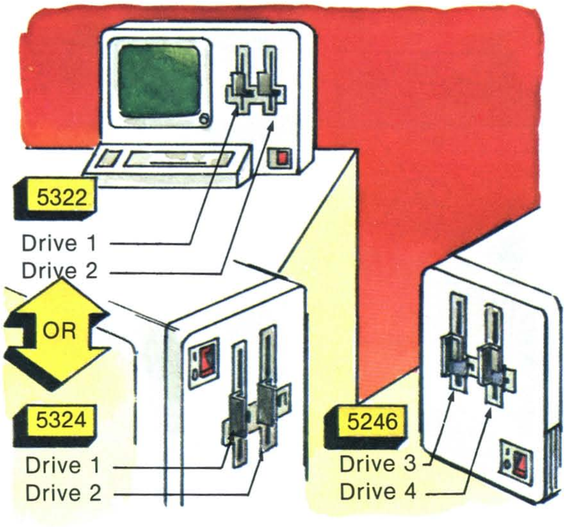
If your computer is switched off . . .

Starting up steps reminder

1. Switch on printer, diskette unit, and computer (last).
2. When PROC START appears on the screen, insert Customer Support Functions diskette marked VOL002 and close handle.
3. Press Enter.
4. Set date and time.
5. Remove Customer Support Functions diskette, VOL002, when READY INPUT appears on the screen.



3 **Type: dir**
space once, and
type the number of the diskette drive into which you inserted the Learning diskette.



Example

If you put the Learning diskette into diskette drive 1, you would have typed:

dir 1

drive 2 would have been **dir 2**
drive 3 would have been **dir 3**
drive 4 would have been **dir 4**

Note: The diskette drive number is written on each drive handle. In addition, each handle is marked with either a small 1D or 2D to show what type of diskette that drive will accept.

The numbers on your diskette drive handle might look like this:

1 **2D**

A 1D means that the drive will only accept a type 1 diskette.

A 2D means that the drive will accept a type 1, 2, or 2D diskette.

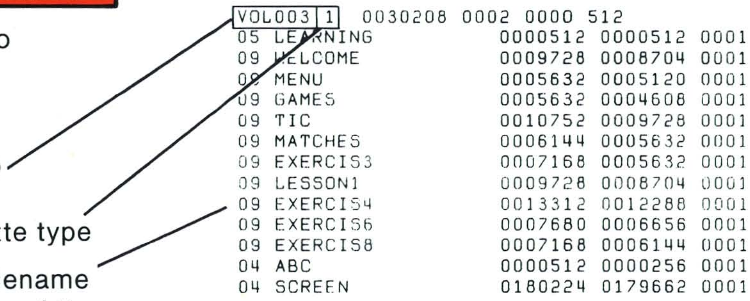
Exercise 5 - About diskettes

4 **Press the Enter key.**

If you don't see this type of directory information on your screen, refer to the "HELP" section at the end of this exercise.

Use DIR when you want to see the contents of a diskette's directory.

This is the other way to identify the type of diskette you have.



```
VOL003 1  0030208 0002 0000 512
05 LEARNING                 0000512 0000512 0001
09 WELCOME                  0009728 0008704 0001
09 MENU                     0005632 0005120 0001
09 GAMES                    0005632 0004608 0001
09 TIC                      0010752 0009728 0001
09 MATCHES                  0006144 0005632 0001
09 EXERCIS3                 0007168 0005632 0001
09 LESSON1                  0009728 0008704 0001
09 EXERCIS4                 0013312 0012288 0001
09 EXERCIS6                 0007680 0006656 0001
09 EXERCIS8                 0007168 0006144 0001
04 ABC                      0000512 0000256 0001
04 SCREEN                   0180224 0179662 0001
```

If you have a printer, you can print the directory by typing a comma and the word **print** after the diskette drive number. For example, if the diskette is in diskette drive 1, you would type: **dir 1,print** and press the Enter key.

Note: For a full explanation of DIR, look up DIR in the Index of *Operator Reference* in binder 2.

Let's do that now.

Make sure that there is paper in your printer, and

5 **Type: dir 1,print**
Press the Enter key.

It would be a good idea to remove your printed directory from the printer, fold it, and put it in the diskette envelope now. In the future, you might like to know which files are on VOL003.

6 **Remove the Learning diskette if you are not continuing on to Exercise 6 at this time.**

Now you should know something about diskette names, files, and diskette types.

You should also know how to display a diskette's directory on the screen. Remember, you can print the contents of any screen on your printer by using the CopyD feature you learned in Exercise 4. You can also print the directory alone by typing: **dir** (leave a space), type the drive number, type a comma, then type the word **print**.

Now, read the summary on the next page and do the review questions at the end of this exercise.

Note: Any time you want to clear the screen of directory information, you can use the Scroll Up key.

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Summary

Summary

In this exercise, you learned:

- How to handle diskettes correctly
- How diskettes store data and programs
- About diskette labels
- How computers use the diskette VOLID, type, and file label names
- About using the DIR command to display the diskette directory:

  - Insert your diskette into any diskette drive.
  - Close the handle.
  - Type: dir
  - Space once.
  - Type the number of the diskette drive.
  - Press the Enter key.

- How to print diskette directory information using the print command

  - Insert your diskette into any diskette drive.
  - Close the handle.
  - Type: dir
  - Space once.
  - Type the number of the diskette drive.
  - Type a comma.
  - Type: print
  - Press the Enter key.

Exercise 5 - About diskettes

Review

Please write the answers to the following questions on a piece of paper. Compare your answers to ours.

Question 1. When a computer writes new information over old information, the old information is erased.

True or false?

Question 2. A type 2 diskette means that the diskette is written in double-density.

True or false?

Question 3. The diskette VOLID is the diskette's:

a. age
b. drive number
c. name
d. type

Question 4. Computers use filenames to find:

a. a particular piece of information
b. the operator's name
c. where the diskette was manufactured
d. the diskette type

Question 5. To display the directory of a diskette in drive 1, you should:

a. Type: proc start
b. Type: link directory
   Press the Enter key
c. Type: volid 1
   Press the Enter key
d. Type: dir 1
   Press the Enter key

Question 6. Where would you look to find more information about the diskette directory?

a. *System Messages* (in binder 3)
b. *Customer Support Functions* (in binders 5 and 6)
c. *Operator Reference* (in binder 2)

Exercise 5 - About diskettes

Answers

Question 1. The *correct* answer is: True.

A computer can read information on a diskette as often as is necessary. But, when a computer writes new information over old information, the old information is erased.

This question is covered under "A closer look at diskettes."

Question 2. The *correct* answer is: False.

Type 1 and type 2 diskettes are written in single-density. A type 2D diskette is written in double-density.

This question is covered in the paragraphs about diskette types.

Question 3. The *correct* answer is: c.

A diskette's name is called its VOLume IDentification, or VOLID for short.

The other answers are *incorrect* because:

Answer a: There is nothing on a diskette that tells its age.

Answer b: The drive number will be 1, 2, 3, or 4. It is written on the drive handle.

Answer d: Diskette types are 1, 2, and 2D. The diskette type tells you how data is stored on that diskette.

Question 4. The *correct* answer is: a.

Information is grouped into files, and each file is given a filename.

The other answers are *incorrect* because:

Answer b: The operator's name is not listed on a diskette.

Answer c: The place of manufacture is not listed on a diskette.

Answer d: Diskette types are 1, 2, and 2D. The type is listed on the label on the outside of the diskette or on the first line of the diskette directory.

Question 5. The *correct* answer is: d.

DIR 1 commands the computer to display the directory of the diskette in drive 1.

The other answers are *incorrect* because:

Answer a: PROC START is what the screen displays before you insert the Customer Support Functions diskette, VOL002, in "Starting up."

Answer b: Link directory is not a command for your System/23.

Answer c: VOLID stands for "VOLume IDentification." The VOLID is a diskette's name.

Exercise 5 - About diskettes

Answers (continued)

Question 6. The *correct* answer is: b *or* c.

Customer Support Functions, Volume I (in binder 5), explains the diskette directory under "Diskette density" in Chapter 2. The directory is explained in "Describing the commands - DIR" in chapter 6 of *Operator Reference* in binder 2.

The other answer is *incorrect* because:

Answer a: *System Messages* explains the action and error codes the computer sends you on the status line.

HELP

You follow the steps to step in "About diskettes" and . . .

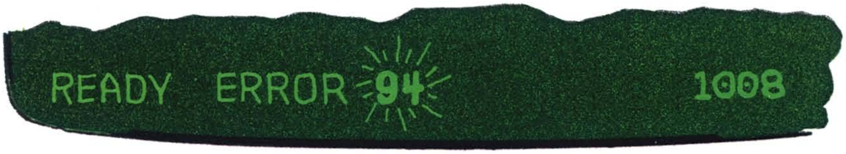
4

HELP

1. You don't see the directory information on your screen.

   Check to see that the Learning diskette is in the correct drive. (Check the number following DIR. Is it the same as the number on the drive handle?)

2. Does your status line look like this?



```
READY  ERROR 94                    1008
```

   You typed the DIR command incorrectly.

   a. Press the Error Reset key.
   b. Type: dir
   c. Press the space bar once.
   d. Type the number of the drive that contains the Learning diskette.
   e. Press the Enter key.

HELP (continued)

3. Your status line has other information on it, and a two-digit number is highlighted and blinking.

   An error condition exists.

   a. Press and hold the Cmd key and then press Error Reset.
   b. Release both keys.
   c. Press the Error Reset key.
   d. Repeat "About diskettes" steps 2, 3, and 4.

Exercise 6 - Fixing problems

Note: The information in this exercise is part of a structured learning package that has been designed to teach you how to operate your computer.

To gain maximum benefit from this course, you should:

- Take each exercise in order if this is your first time through the course.
- Follow all the directions in this book and on the screens.
- Read all the material presented in each exercise. (Don't skip any steps.)

In this exercise, you will learn:

- How to identify a problem condition
- Where the action and error codes are located on the status line
- How to correct an ERROR status
- How to correct an OPTION status
- What to do if a line of asterisks appears across the screen

Exercise 6 - Fixing problems

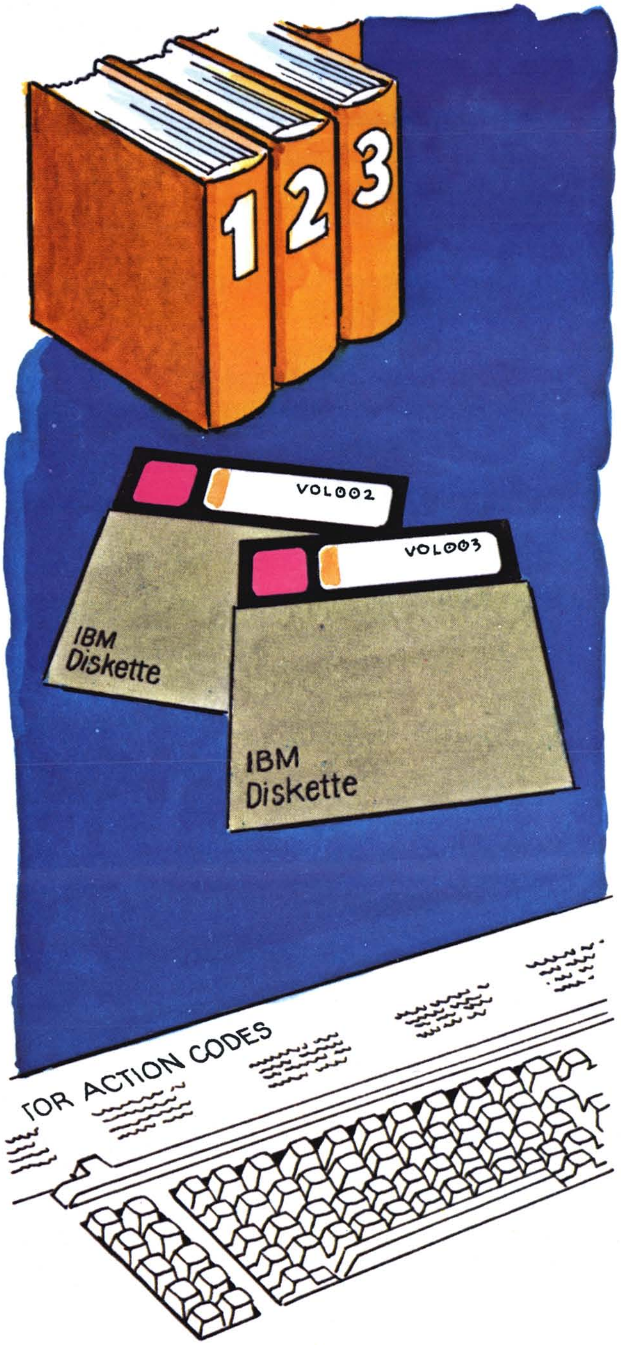
In addition to this book, what do you need to complete Exercise 6?

- Your System/23 Computer, any model
- The Learning diskette (marked VOL003) from binder 1
- *System Messages* in binder 3
- Keyboard aid (Operator Action Codes)
- The Customer Support Functions diskette, VOL002
- *Operator Reference* in binder 2

About this exercise . . .

You will learn how to identify various types of problems that can occur on your system and how to deal with them.

Don't try to remember all the details of each problem. The best thing you can do is become familiar with the books and aids that are provided to help you. We will be referring to them throughout the exercise.



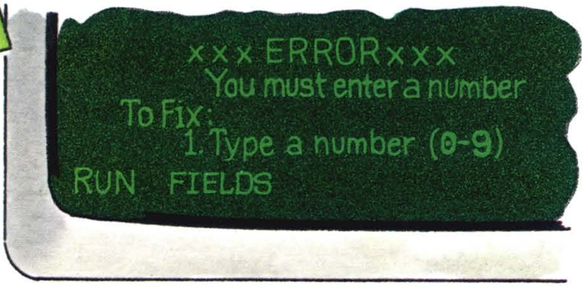
How will you know when you have a problem?

Easy! The computer will tell you.

If your computer needs help with something, it will make a "beep" sound to attract your attention so that you will look at the screen.

The screen will contain information either from a program that is running or from the computer itself, depending on what the problem is.

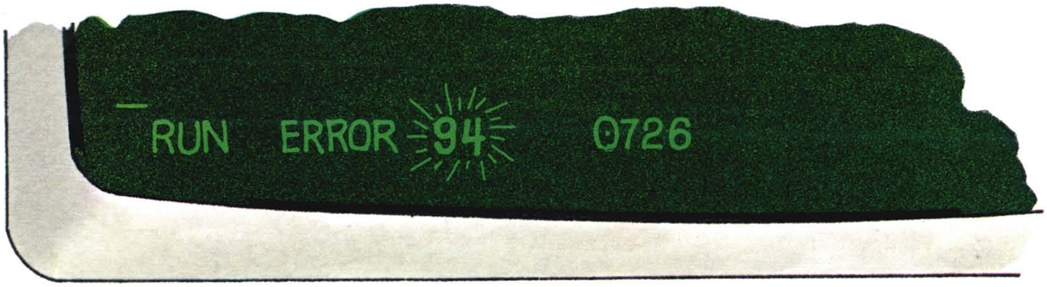
A message from a program might look something like this . . .



```
        xxx ERRORxxx
          You must enter a number
  To Fix:
        1. Type a number (0-9)
RUN  FIELDS
```

A message from the computer is usually in the form of groups of numbers on the status line (the bottom line of the screen). The computer displays numbers because there just isn't enough room on that line for detailed descriptions of problems and solutions.

The numbers, therefore, are "codes" that you can use to find more complete explanations in *System Messages* in binder 3.



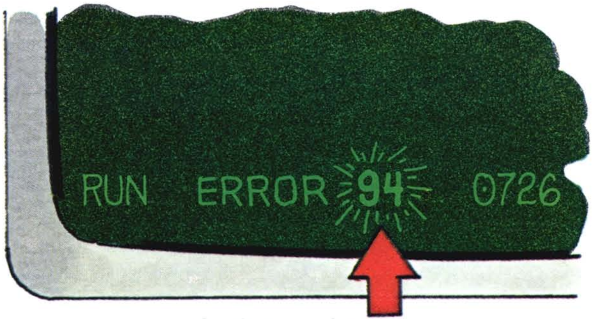
```
RUN   ERROR 94      0726
```

Exercise 6 - Fixing problems

Looking at the status line . . .

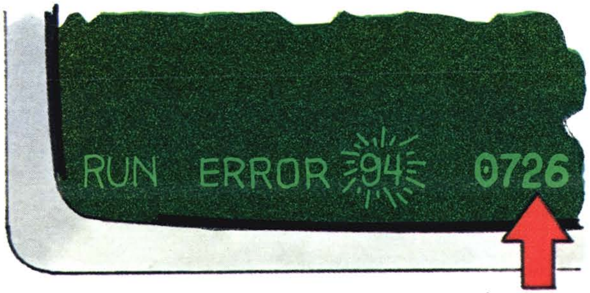
When your computer needs your assistance, it displays two numbers on the status line.

The first number is called an *action* code. It tells you what action to take to correct a problem. You will recognize it because it is brighter than the rest of the information on the status line and it is blinking. When you get an action code on your screen, you should refer to the keyboard aid or to the "Action codes" chapter of *System Messages* in binder 3 for complete information about what you should do to correct the problem.



Action code

The second number is called an *error code.* It tells you what caused the problem. You can recognize the error code because, like the action code, it is brighter than the other information on the status line (except that it is not blinking). When you get an error code on the status line, you should go to *System Messages* in binder 3 for a description of what might have caused the problem.



Error code

> **Note:** Because many of the error codes describe programming problems, unless you have a programming background, some of these codes might not be too helpful to you.

But let's let your computer tell you about action codes and error codes.

If your computer is switched off . . .

Starting up steps reminder

1. Switch on printer, diskette unit, and computer (last).
2. When PROC START appears on the screen, insert Customer Support Functions diskette marked VOL002 and close handle.
3. Press Enter.
4. Set date and time.
5. Remove Customer Support Functions diskette, VOL002, when READY INPUT appears on the screen.

If READY INPUT is on your screen . . .

Learning diskette reminder

1. With READY INPUT on the screen, insert your Learning diskette and close the handle.
2. Type: proc learning
3. Press Enter.

(Follow directions on screens until Course menu appears.)

Note: As you take this exercise, you will be directed to look up information in *System Messages* in binder 3.

Open binder 3 to *System Messages* now, and refer to this book as you take this exercise.

1

Type: proc learning
Press the Enter key.

Follow the directions on the screens until you get to the Course menu.

When you have the Course menu on the screen . . .

2

Type: 6
Press the Enter key.

Follow the directions on the screens until you are told to return to the Learning book. Then come back here to step 3.

Exercise 6 - Fixing problems

Welcome back.

You have completed one portion of Exercise 6 that was on the computer. Now . . .

3

Press the Enter key.
The Course menu is now on the screen.

Type: 9
Press the Enter key.

You should have READY INPUT on the screen.

Sometimes the smallest mistake can cause a problem for you. For example:

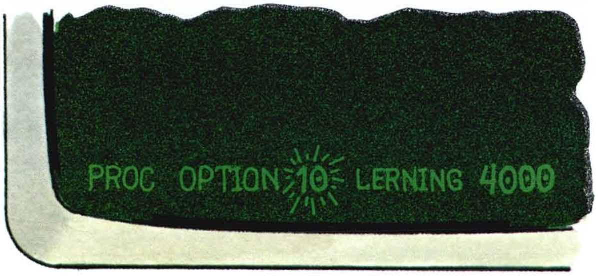
. . . a simple spelling error . . .

4

Misspell the following exactly as shown. (Leave out the "a" in learning)

Type: proc lerning
Press the Enter key.

5 **Observe the screen.**



```
PROC OPTION 10 LERNING 4000
```

The computer tried very hard to do exactly what it was told. It looked in the directory for a file with a filename of **lerning.**

There is none. The file you wanted was really called **learning.**

The computer tells you it couldn't find a file by:

1. A "beep"
2. The following information on the status line:
    An action code of **10,**
    An error code of **4000**,
    And the filename it couldn't find, **lerning**

6 **Look up action code 10 on your "Operator Action Codes" keyboard aid.**

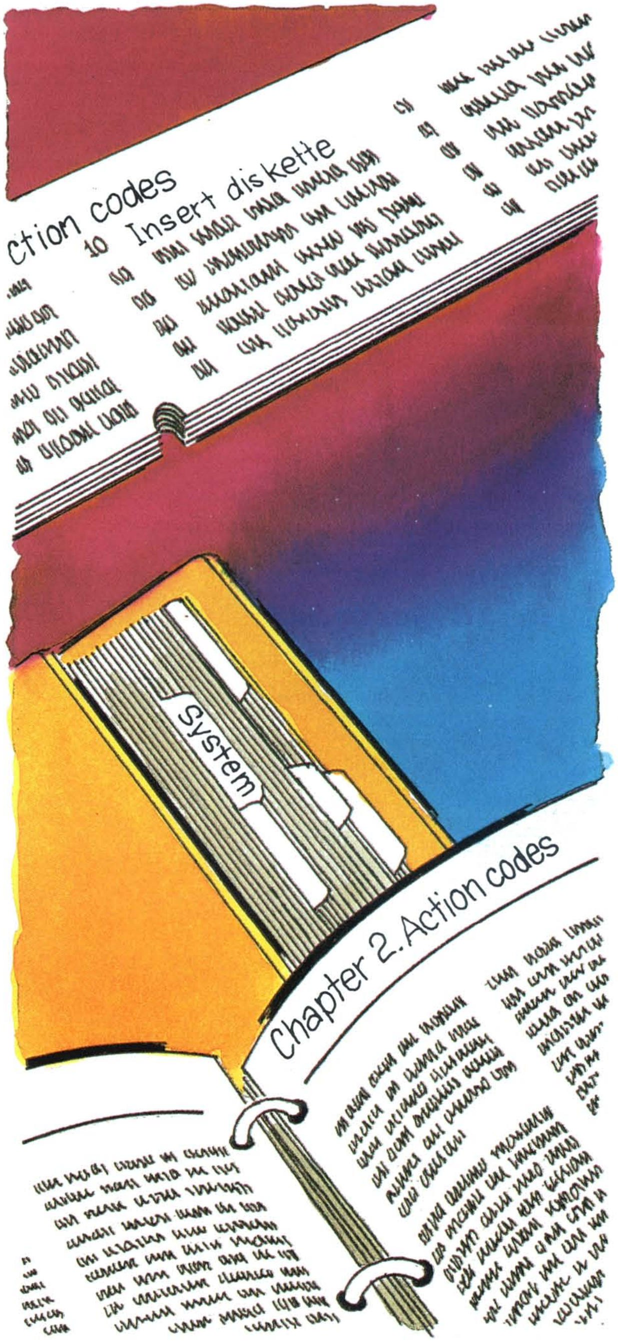
If you look up the action code, the keyboard aid says "Insert diskette."

But you already have a diskette in the drive. The computer is telling you that it can't find that filename on that diskette; are you sure you have the right diskette in the machine?

The computer has no way of knowing you made a spelling error and is suggesting that if what you are looking for isn't on this diskette, perhaps it's on another.

You need more help.

7 **Locate your *System Messages* book in binder 3. Under "Action codes" look up action code 10.**



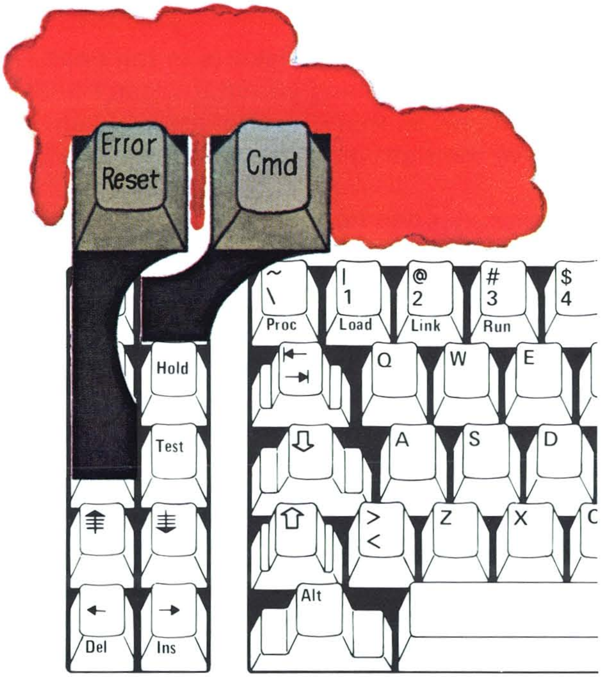
Exercise 6 - Fixing problems

Because the computer cannot be sure if it is trying to read the correct diskette or not, it will give you the opportunity to put in the correct diskette in case that is the problem.

Therefore, *System Messages* recommends that the following action be taken:

8 **Press and hold the Cmd key, then press the Error Reset key. Release both keys.**

9 **Observe the status line on the screen.**

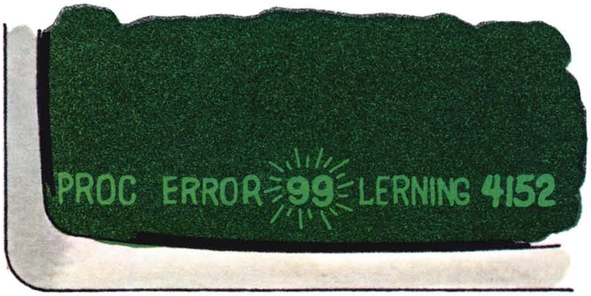

Error Reset
Cmd
Proc
Load
Link
Run
Hold
Test
Del
Ins
Alt
Q
W
E
A
S
D
Z
X

The word OPTION on the status line has been replaced by the word ERROR.

Action code 10 has been replaced by action code 99.

Error code 4000 has been replaced by error code 4152.

What does all this mean?


PROC ERROR 99 LERNING 4152

The computer cannot find the filename **lerning.** The computer knows that:

1. The wrong diskette is in the drive, or

2. The filename is incorrect

First, the computer gave you the OPTION to put in a different diskette.

Because you did not put in a different diskette, the computer must now conclude that there is an error in the filename.

10 **Look up action code 99 on your keyboard aid.**

Action code 99 directs you to look up the error code in the Messages binder.

11 **Look up error code 4152 in Chapter 3 of *System Messages* in the Messages binder (3).**

Error code 4152 states that you either have a problem with the diskette, or you have an *incorrect filename.*

Now you would check the filename shown on the status line and see that it *is incorrect.*

To recover from this, as well as from any ERROR condition,

12 **Press the Error Reset key.**

13 Observe the status line on the screen.

To correct the error at this point, you would now type in the correct filename (proc learning), but . . .

DO NOT DO THAT NOW.

There is no need to go back through the Learning screens since there is no more of Exercise 6 on the Learning diskette.

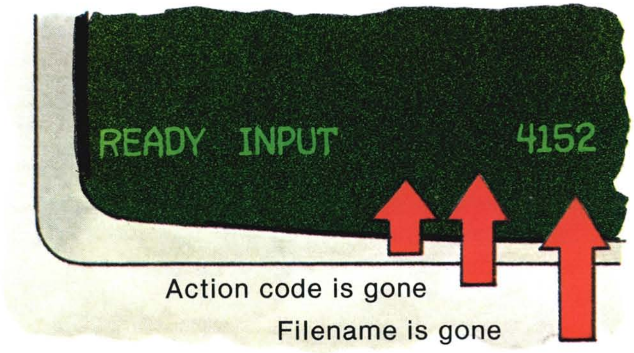
To print an error message:

There might be an occasion when you would need to make a copy of an error message screen. To do this, you must first do the following before you use the Error Reset key:

Press and release the Hold key.
While pressing the Cmd key,
press the CopyD key.

This procedure will give you a printout of the screen showing the entire status line at the time the error occurred. This way, you will have a record of the error condition should you need to communicate that information to someone else.

To get out of the "hold" condition, you must first press and release the Hold key before you press Error Reset:



Action code is gone

Filename is gone

Error code is no longer highlighted.

OPTION vs. ERROR
What to do . . .

When OPTION appears on the status line, you may either:

- Perform the action indicated by the action code and press the Error Reset key, or,
- Cancel the request that caused the problem by pressing the Cmd key together with the Error Reset key

When ERROR appears on the status line, you must:

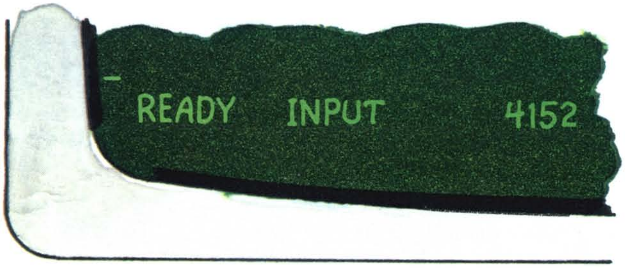
- Press the Error Reset key and then correct the cause of the problem.

Another easy mistake . . .

You have seen what can happen if you type a filename incorrectly.

Now, you will see what happens if you type a system command incorrectly. We will use the DIR command for our example because you should already be familiar with how it works.

READY INPUT should be on the status line, and the Learning diskette should be in a drive with the handle closed.



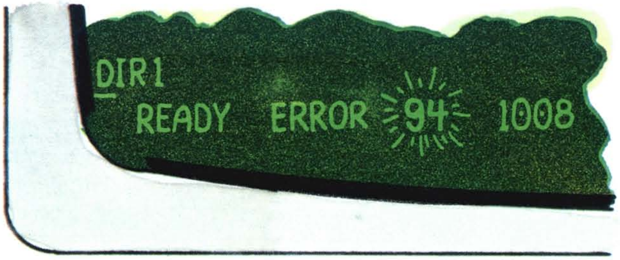
```
_
 READY   INPUT        4152
```

14 **Type the following exactly as shown.**
Type: dir
Then type the number of the drive your Learning diskette is in.
DO NOT leave a space after dir.

For example, if your Learning diskette is in drive 1, you would type:

dir1

15 **Press the Enter key.**



```
DIR1
 READY   ERROR 94   1008
```

16 **Observe the status line.**

17 **Look up action code 94 on your keyboard aid.**

Exercise 6 - Fixing problems

"Fix program" probably isn't enough information for you at this point; so:

18 **Look up the action code in Chapter 2 of *System Messages* in binder 3.**

Action code 94 is caused when information is entered incorrectly.

Where do you find out how a system command should be entered properly?

System commands are described fully in the "Commands" chapter in binder 2.

19 **Look up DIR in the "Commands" chapter of *Operator Reference* in binder 2.**

Remember, any time ERROR is displayed on the status line, you must . . .

20 **Press the Error Reset key.**

Then, perform the system command properly:

21 **Type: dir**
Space once.
Type the number of the drive containing the Learning diskette.
Press the Enter key.

The error is now fixed.

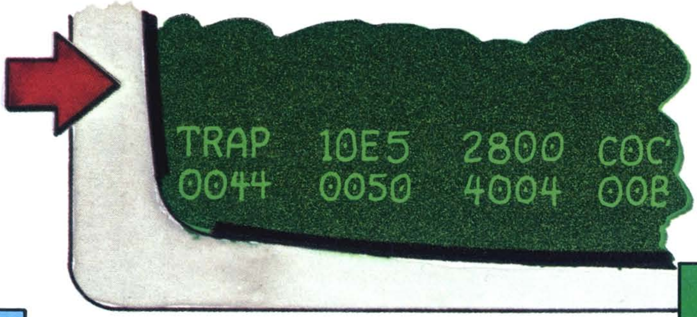
22 **Remove the Learning diskette and put it away.**

The TRAP error (not a common one) . . .

This error is not caused by anything you have done, nor anything a program has done.

If you get this indication on your screen,

DO NOT switch off power!



```
TRAP 10E5 2800 COC
0044 0050 4004 00B
```

23 **Go to the "HELP" chapter of binder 2 and read the steps for "What to do when you get a system trap."**

When you have finished reading the "Help" chapter of your *Operator Reference,* read the summary of this exercise and answer the review questions before continuing on to the "Preparing a diskette" exercise.

Exercise 6 - Fixing problems

Summary

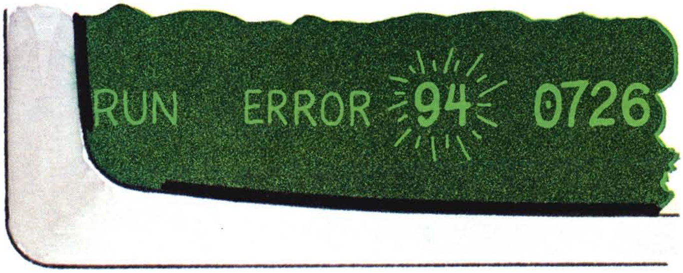
Summary

In this exercise, you learned:

- How to identify a problem condition

  —The computer will "beep"
  —A message is displayed
  or
  —An action code and error code are displayed

- Where the action code and error code are located on the status line



- The action code is displayed, highlighted, and blinking.
- The error code is displayed and highlighted.
- When you press Error Reset, the action code disappears and the error code returns to normal brightness.
- You can't type anything while the action code is on the screen. (The keyboard is locked.)

- When the word OPTION is on the status line, you may either correct the problem and continue or tell the computer not to re-try the operation that caused the problem.

  1. Find the action to take to fix the problem.

Note: At this point, you must decide whether you want to try the operation again or cancel it.

If you want to re-try the operation:

1. Correct the condition that caused the problem.
2. Press the Error Reset key.

If you don't want to try the operation again:

1. Press and hold the Cmd key.
2. Press the Error Reset key.
3. Release both keys.
4. Press the Error Reset key again (without the Cmd key).

- It is necessary to type go after fixing the problem that caused asterisks to be displayed across the screen.

- Where to look for help when a problem occurs

  —Keyboard aid (Operator Action Codes)

  —*System Messages* in binder 3 (Chapter 2, "Action codes" and Chapter 3, "Error codes")

- When the word ERROR is on the status line, you must correct the problem to continue.

  1. Find the action to take to correct the problem.
  2. Press the Error Reset key.
  3. Type go if a line of asterisks is across the screen.
  4. Press the Enter key.
  5. Correct the problem.

Exercise 6 - Fixing problems

Review

Please write the answers to the following questions on a piece of paper. Compare your answers to ours.

Question 1. When a problem occurs, the action code and error code will appear only on the status line.

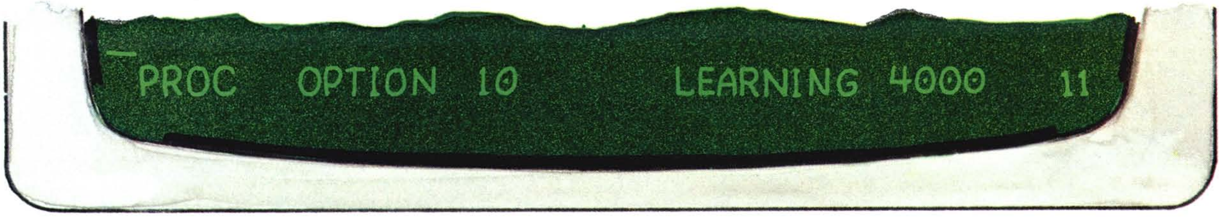
True or false?

Question 2. When you have a problem, where should you look to find what to do to correct the problem?

a. *Customer Support Functions,* Volume I and Volume II (in binders 5 and 6)
b. *Learning to Use System/23*
c. Keyboard aid (Operator Action Codes)
d. *System Messages* (in binder 3)

Question 3. You want to use the Learning diskette and have just typed proc learning and pressed the Enter key.

The following information is displayed on the status line. What should you do?



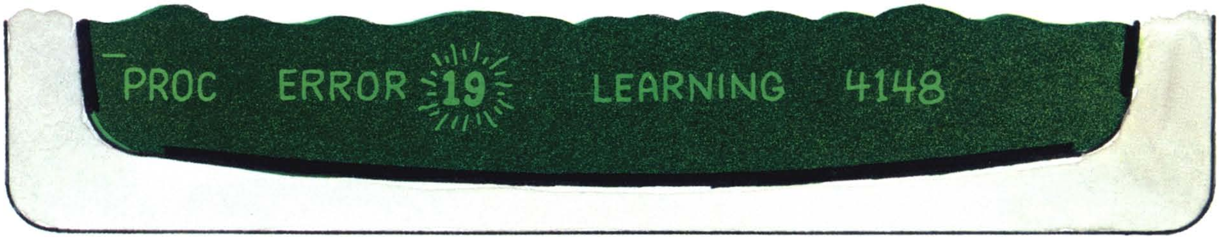
```
PROC  OPTION 10        LEARNING 4000   11
```

a. Type go and press the Enter key.
b. Insert the Learning diskette into any diskette drive, close the diskette drive handle, and press the Error Reset key.
c. Press and hold the Cmd key and then press the Error Reset key.
d. Switch off the computer.

Question 4. When you press the Enter key with an action code displayed on the status line, you cannot type information on the screen.

True or false?

Question 5. If your status line displays the information shown below, what should you do to correct the problem?



```
PROC    ERROR 19    LEARNING  4148
```

a. 1. Type: go
   2. Press the Enter key.

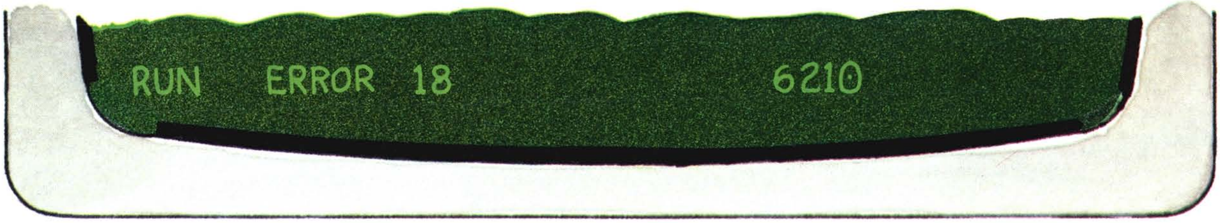
b. 1. Press and hold the Cmd key.
   2. Press the Error Reset key.
   3. Release both keys.
   4. Press the Error Reset key again.

c. 1. Look up the action code and error code in *System Messages* (in binder 3).
   2. Make sure that the file is not being used by someone else.
   3. Press the Error Reset key.
   4. Type: protect learning,close
   5. Press the Enter key.
   6. Type: go
   7. Press the Enter key.

d. 1. Type: proc learning
   2. Press the Enter key.

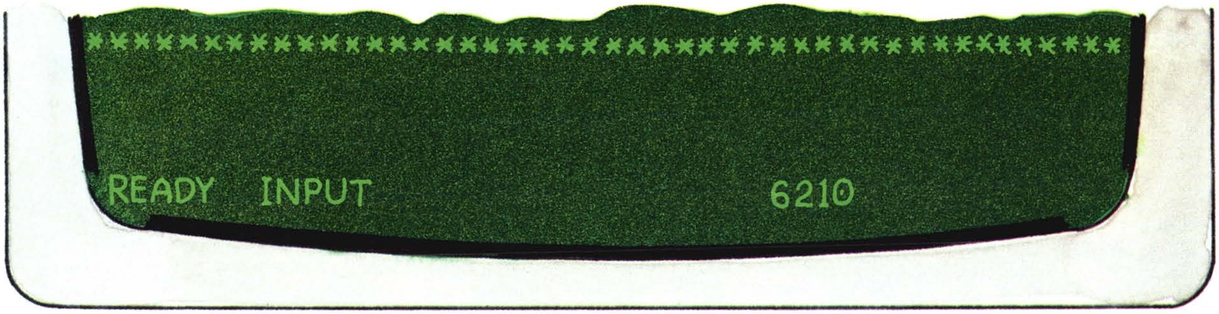
Review (continued)

Question 6. You are printing information, and the following appears on your status line.



```
RUN    ERROR 18                        6210
```

After you press the Error Reset key and correct the problem, this screen appears:



```
*********************************************


READY   INPUT                          6210
```

What should you do?

a. Press the Enter key.
b. Press and hold the Cmd key and then press Error Reset.
c. Type: run
   Press the Enter key.
d. Type: go
   Press the Enter key.

Answers

Question 1. The *correct* answer is: True.

The computer displays the action code and error code along with other information only on the status line.

If you answered False, that was *incorrect.*

The status line is the only line on the screen reserved for the computer to display information such as the action code and error code.

Question 2. The *correct* answers are: c and d.

You should look at the keyboard aid first. If it doesn't help you correct the problem, you should then look in *System Messages* (in binder 3).

The other answers are *incorrect* because:

Answer a: You should use *Customer Support Functions,* Volume I and Volume II, only when you have a question about a Customer Support Function.

Answer b: You should use the Learning book only while learning to use the System/23.

Exercise 6 - Fixing problems

Answers (continued)

Question 3. The *correct* answer is: b.

The information on the status line is telling you that the computer is looking for a file named ''Learning.'' The action code and error code help you to determine that the diskette with the file named ''Learning'' is not inserted in a drive.

The other answers are *incorrect* because:

Answer a: When the action code is displayed on the status line, the keyboard is locked. You can't type anything until you have pressed the Error Reset key.

Answer c: When you press the Cmd key and the Error Reset key, you tell the computer to cancel the operation and not start up Learning.

You would press these keys if you had incorrectly typed the filename (Learning). Because the status line shows the filename to be correct, *System Messages* (in binder 3) recommends checking for other causes of the problem.

Answer d: If you have a problem, instead of switching off the computer, you should follow the instructions in *System Messages* (in binder 3) to fix the problem.

Question 4. The *correct* answer is: True.

Information cannot be typed from the keyboard when the action code is displayed.

If you answered False, that was *incorrect.*

When an action code is on the screen (highlighted and blinking), the keyboard is locked and can't be used to type information onto the screen. You must press the Error Reset key to unlock the keyboard.

Question 5. The *correct* answer is: c.

The information in *System Messages* (in binder 3) identifies the problem as either a file in use or an open file. The steps listed in the answer are the steps you should follow to close the file. (Be sure that the file is not being used by someone else before entering protect learning,close.)

The following answers are *incorrect* because:

Answer a: When an action code is on the status line, the keyboard keys are inoperative. You have to press the Error Reset key before you can type anything.

Answer b: The steps listed for this answer should be used only when OPTION is displayed on the status line.

Answer d: The same is true here as was true in answer a.

Exercise 6 - Fixing problems

Answers (continued)

Question 6. The *correct* answer is: d.

The screen with the line of asterisks is to be expected when you have an error that causes the program to stop running.

When this type of error occurs, you should:

1. Press the Error Reset key.
2. Fix the problem.
3. Type: go
4. Press the Enter key.

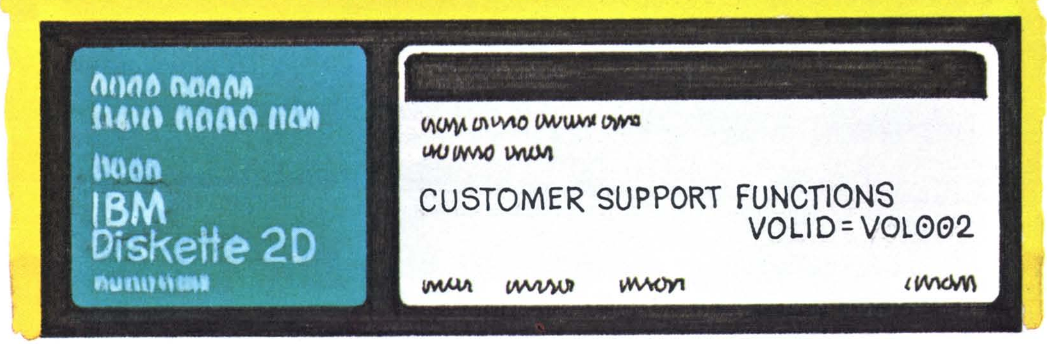
The other answers are *incorrect* because:

Answer a: If you press the Enter key, an error will occur. Action code 94 and error code 1012 will be displayed on the status line.

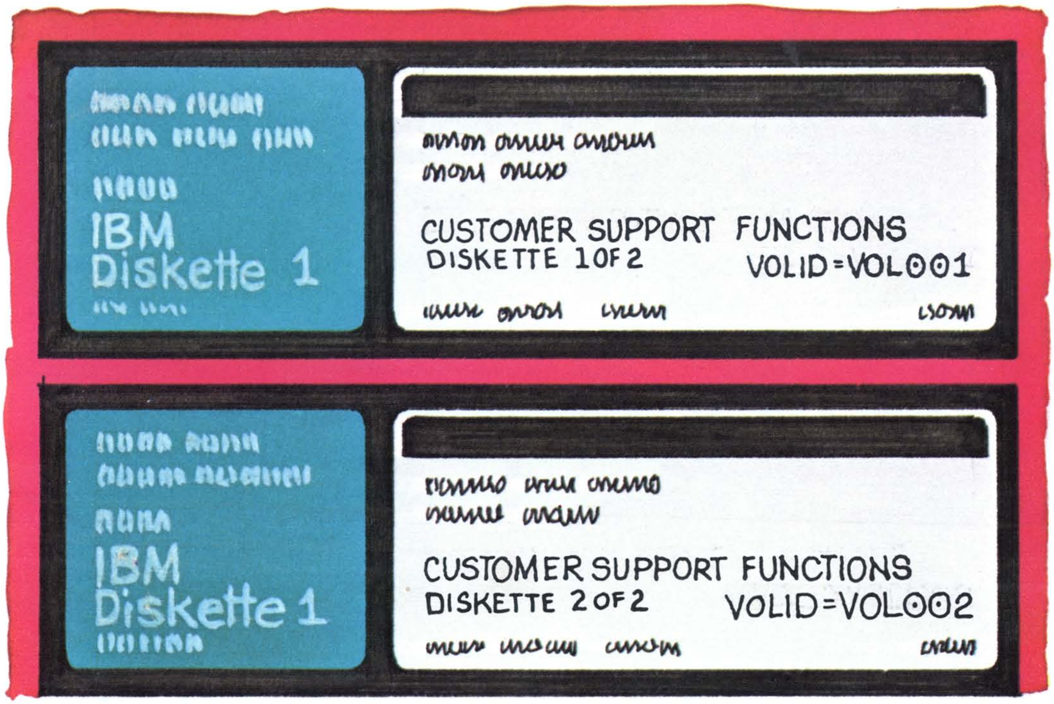
Answer b: Pressing the Cmd and Error Reset keys will have no effect when this screen is displayed.

Answer c: If you type run and press Enter, an error will occur. Action code 15 and error code 2108 will be displayed on the status line.

Exercise 7, "Preparing a diskette," and Exercise 8, "Copying a diskette," are to be used only if your System/23 came with a single Customer Support Functions diskette. That diskette's labels contain the following information:


IBM
Diskette 2D
CUSTOMER SUPPORT FUNCTIONS
VOLID=VOL002

If your System/23 came with two Customer Support Functions diskettes, you must skip over to Exercise 7A, "Preparing a diskette," and Exercise 8A, "Copying a diskette." The labels of those two diskettes contain the following information:


IBM
Diskette 1
CUSTOMER SUPPORT FUNCTIONS
DISKETTE 1 OF 2
VOLID=VOL001
IBM
Diskette 1
CUSTOMER SUPPORT FUNCTIONS
DISKETTE 2 OF 2
VOLID=VOL002

Exercise 7 - Preparing a diskette

IMPORTANT: This exercise, "Preparing a diskette," is to be used only if your System/23 came with a single Customer Support Functions diskette. If you received two Customer Support Functions diskettes, you must use Exercise 7A to learn how to prepare a diskette.

Note: The information in this exercise is part of a structured learning package that has been designed to teach you how to operate your computer.

To gain maximum benefit from this course, you should:

- Take each exercise in order if this is your first time through the course.
- Follow all the directions in this book and on the screens.
- Read all the material presented in each exercise. (Don't skip any steps.)

In this exercise, you will learn:

- How to find your diskette type
- How to find information about PREPARE in *Customer Support Functions,* Volume I
- Why you need to prepare diskettes
- How to prepare a diskette

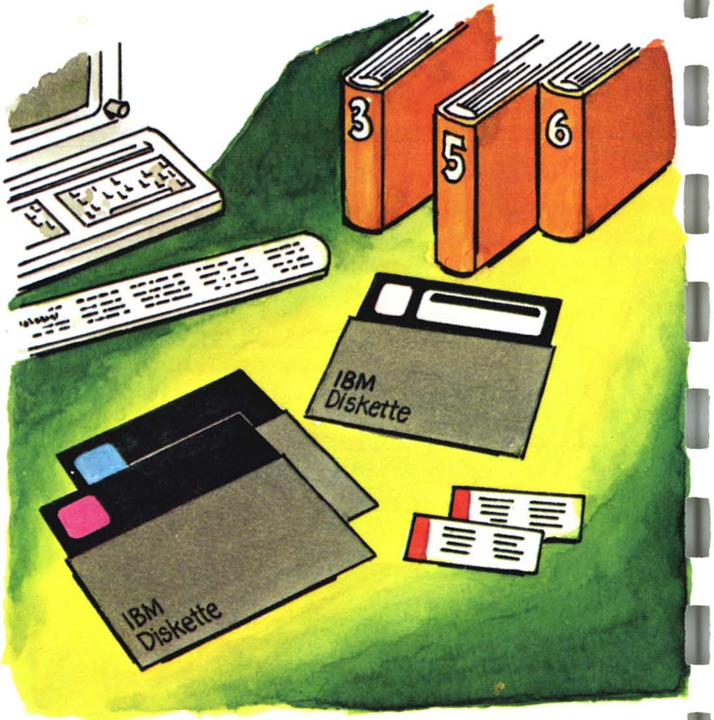
In this exercise, you will perform your first, actual job-related task. You should take your time going through this exercise and read the directions carefully. After this course, you will need to prepare diskettes in your day-to-day operations.

Exercise 7 - Preparing a diskette

Before you start . . .

In addition to this book, you need:

- Your System/23 Computer, any model
- *System Messages* in binder 3
- Binder 5, Support Functions
- The Operator Action Codes keyboard aid
- The Customer Support Functions, VOL002, diskette
- Two blank diskettes (or diskettes that contain information no longer needed), type 2D
- Two blank diskette labels and a felt-tipped pen



About this exercise . . .

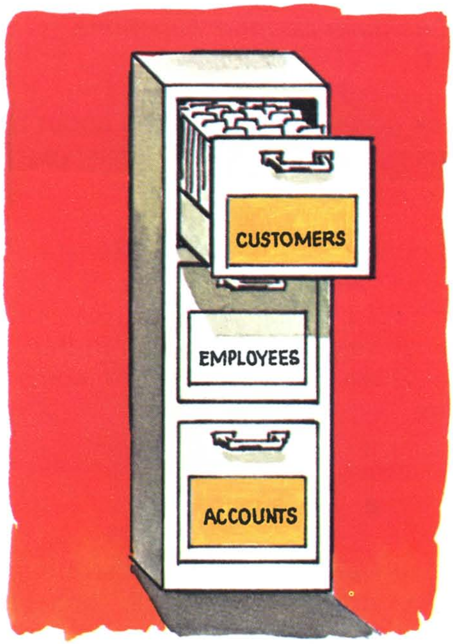
In this exercise, you will learn why diskettes must be "prepared." Then you will prepare two diskettes so that they are ready to accept information from your system.

You must prepare diskettes if:

- You want to use a brand-new diskette or one that has never been used on your system before
- You want to check a diskette for surface damage
- You want to erase old information on a diskette in order to reuse it

Before you actually prepare a diskette, let's talk about why you need to prepare one.

Suppose that your business suddenly receives a number of new, large accounts, and your present filing space is used up. You now have to order a new file cabinet so that you can store all of the information about these accounts in file folders.



After the cabinet arrives, you need to get it ready to hold the file folders. The first thing you might do is open the drawers to see if they roll out properly. Then you might adjust the metal separators in each drawer to accommodate the folders. Next, you might put labels on the drawers to show what will be contained in each one.

What you do to prepare a file cabinet to receive your new folders if very similar to what you will do when you prepare a diskette to receive information.

REMEMBER, a diskette must be prepared before it can be used the first time. You will not be able to copy information onto a diskette unless the diskette receiving the information has been prepared first.

Exercise 7 - Preparing a diskette

Now, let's look at some of the "tools" you have to work with.

Locate binder 5. Inside, you will see a book called *Customer Support Functions,* Volume I.

This book gives you information about the functions you might need to use in your everyday, job-related tasks.

You will notice that there is a "General information" section in binder 5. It would be a good idea for you to skim over that chapter before going any further in this exercise. When you have finished, come back here.

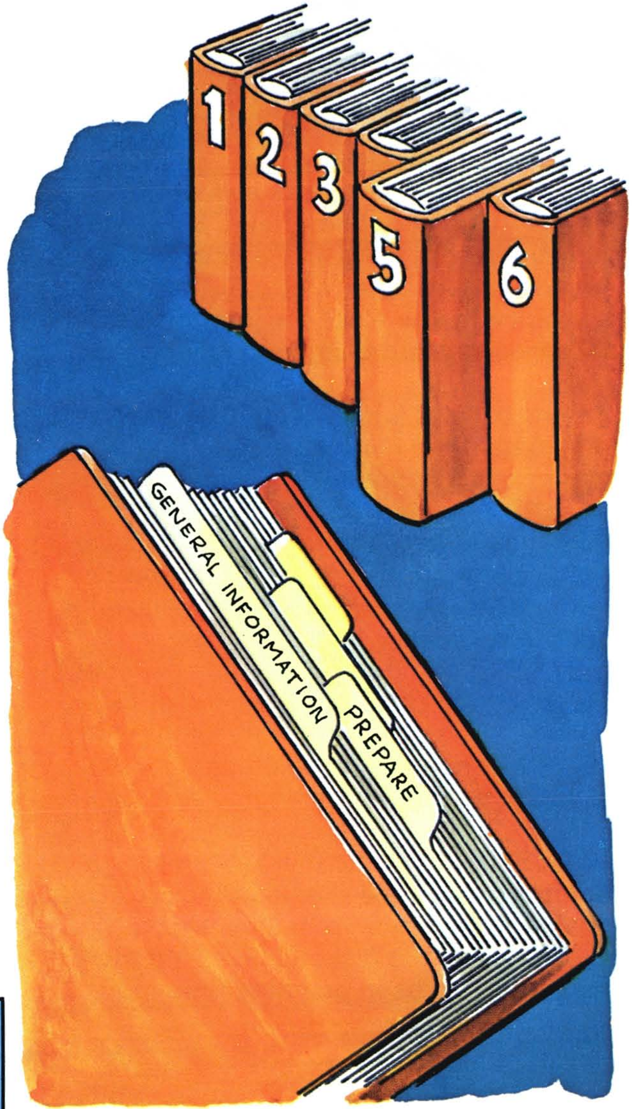
● ● ● ● ●

You probably also noticed that there is a "PREPARE" chapter in binder 5. That is the place to go if you have any additional questions about preparing diskettes, either in this exercise or after you finish training.

For now, proceed with step 1.

1 **Locate a blank, type 2D diskette for the PREPARE you will do.**

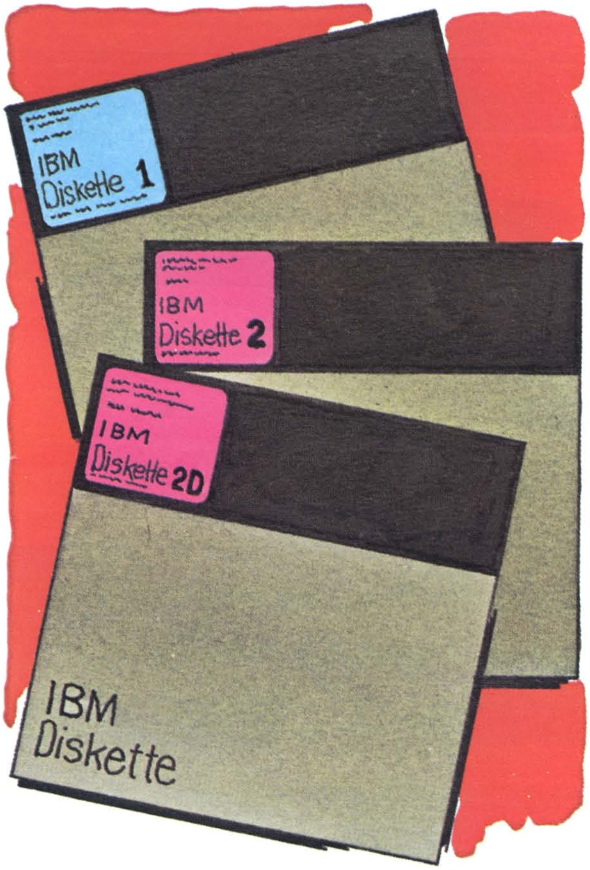
IMPORTANT: Make sure that you have selected a diskette that does not contain any information you need. The PREPARE operation completely erases all information stored on the diskette.



Note: Once you have completed this training, binder 5 will be your primary source of information when running the Customer Support Functions.

Before you can prepare a diskette, you must know its type. The diskette type (if you are using an IBM diskette) is written on the diskette label in the upper left portion of the diskette. Diskettes are either type 1, type 2 or type 2D.

During the PREPARE operation, the computer will ask you what type of diskette you are trying to prepare. You will use a type 2D diskette for this PREPARE.



2 **Note that you have a type 2D diskette.**

If, for some reason, you cannot determine the diskette type from the diskette label in the upper left corner, go to the "HELP" section at the end of this exercise.

Note: You may put your blank diskette aside, but keep it handy. You will be using it a little later in the exercise.

Diskette 1	*Single-density, written on one side only*
Diskette 2	*Single-density, written on both sides*
Diskette 2D	*Double-density, written on both sides*

Exercise 7 - Preparing a diskette

3 Observe the screen. Is READY INPUT on the status line?

yes

no

3A If the system power is ON, another program may be running. Check with whoever started it to determine when you may use the system.

If system power is OFF, start it.

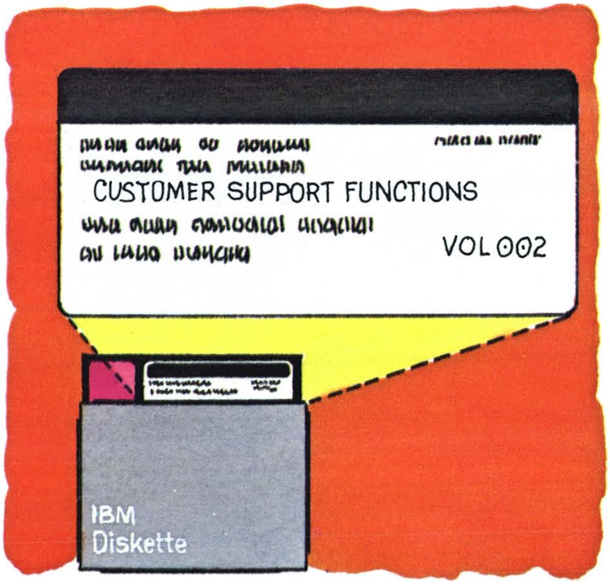
Starting up steps reminder

1. Switch on printer, diskette unit, and computer (last).
2. When PROC START appears on the screen, insert Customer Support Functions diskette marked VOL002 and close handle.
3. Press Enter.
4. Set date and time.
5. Remove Customer Support Functions diskette, VOL002, when READY INPUT appears on the screen.

4 If there are any diskettes in any of the diskette drives, remove them now. All handles should be open.

5 Locate your Customer Support Functions diskette.

6 Insert the Customer Support Functions diskette into drive 1 (or drive 3 if your computer has no drives). Close the drive handle.



The Customer Support Functions diskette is in a drive and READY INPUT is on the screen. Now . . .

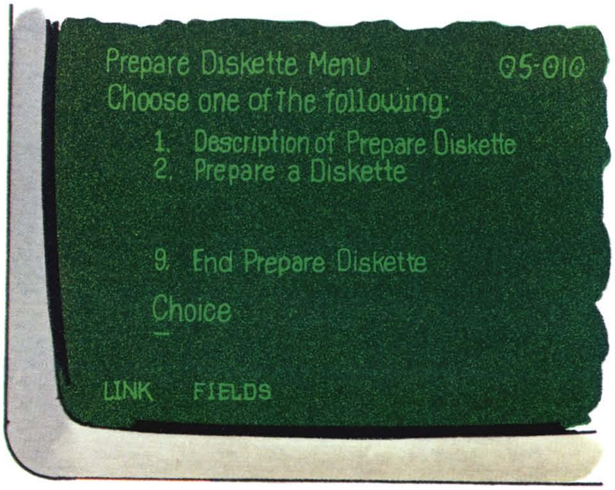
7 **Type: link prepare**
Press the Enter key.

Note: When you type link prepare and press the Enter key, the computer reads the file with the filename PREPARE from this diskette and stores it temporarily. Then the computer starts the PREPARE program by putting the Prepare Diskette menu on your screen.

If your Customer Support Functions diskette is in the correct drive, you've typed link prepare and pressed the Enter key, don't worry if you don't see the Prepare Diskette menu on the screen right away. It could mean that someone else is using the diskette unit. If, after a while, you still don't see the menu, check *Operator Reference* in binder 2 under "Startup problems" (in Chapter 8, "HELP").

8 **Remove your Customer Support Functions diskette when the Prepare Diskette menu appears.**

9 **Observe the screen.**



```
Prepare Diskette Menu                05-010
Choose one of the following:
    1. Description of Prepare Diskette
    2. Prepare a Diskette


    9. End Prepare Diskette
    Choice
    _

LINK    FIELDS
```

The number 05-010 is in the upper right corner of the Prepare Diskette menu screen. Every screen in a Customer Support Function has a number in the upper right corner. This number can help you to locate the screen in the Customer Support Functions books.

If you don't see this screen, turn to the "HELP" section at the end of this exercise.

Exercise 7 - Preparing a diskette

Screen 05-010, the Prepare Diskette menu, asks you if you want to:

1. Read a description of the Prepare Diskette Customer Support Function, or
2. Do the actual procedure to prepare a diskette, or,
9. End the Prepare Diskette function

Because this exercise will show you how the Prepare Diskette function works, you will choose 1. But come back here after reading the first description screen so that we can explain it.

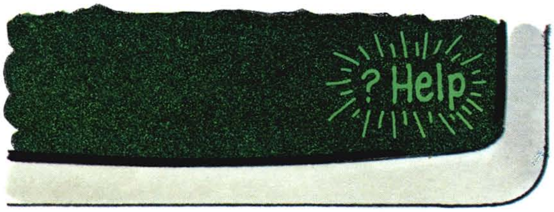
10 **Type: 1**
Press the Enter key.

This is the first of two description screens. It explains the use of the Enter key, the "? Help" feature, and the use of the Cmd key and 9 key.

You have already been using the Enter key in this course to advance to the next screen.

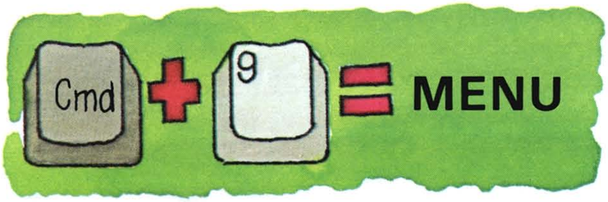
The "? Help" feature is built into many of the Customer Support Functions screens to provide you with additional information about fields you are asked to fill in. Any time you see "? Help" in the lower right corner of a screen, you may request additional help by typing a ? in any field on that screen then pressing Enter. Additional text will appear on that screen.

Be sure to try this feature in this exercise whenever you see a "? Help" at the bottom of a screen.



Any screen displaying a Cmd 9 at the bottom will allow you to return directly to the menu without performing that function.

Simply hold down the Cmd key while you press the 9 key on the right side of your keyboard (the numeric key pad); then, release both keys. It is not necessary to press the Enter key. You will return to the menu for whatever function you are performing.



11 **When you have read the first description screen, you may go to the second description screen.**

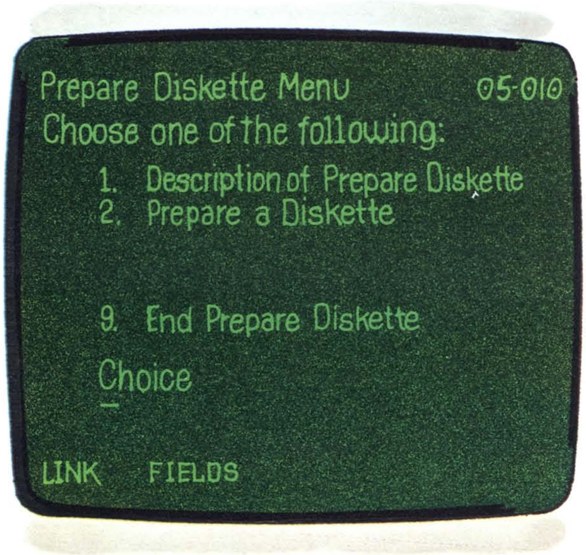
Press the Enter key.

12 **When you have read the second description screen and want to return to the Prepare Diskette menu:**

Press the Enter key.

Now, you have looked at the description screens and are ready to actually prepare a diskette.

The Prepare Diskette menu is on the screen . . .

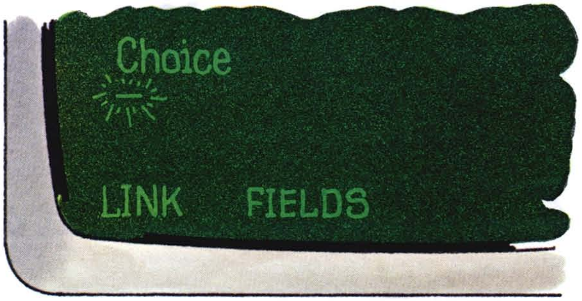


```
Prepare Diskette Menu                05-010
Choose one of the following:
    1. Description of Prepare Diskette
    2. Prepare a Diskette


    9. End Prepare Diskette

    Choice
    _

LINK    FIELDS
```

Exercise 7 - Preparing a diskette

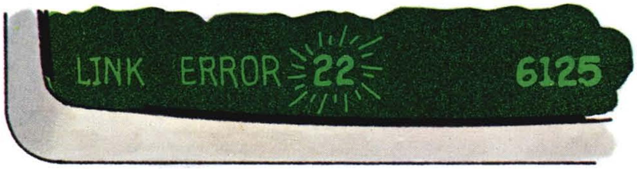
Before we actually do the PREPARE, let's look at some common error situations.

You have the Prepare Diskette menu on the screen. The cursor is blinking in the first field. The program is looking for a one-digit entry into that field (a 1, a 2, or a 9). Let's type more than one digit and see what happens.



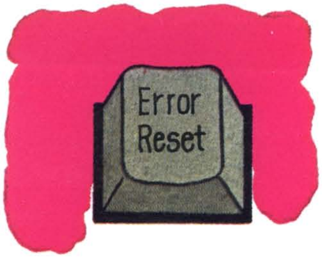
13 **Type: 456**

As soon as you typed more digits than the field was looking for, the computer recognized that something was wrong and "*beeped!*" It also put an action code and error code on the status line.



If you checked your *System Messages* book for error code 6125, you would find that you have typed too many characters into an input field.

Notice the position of the cursor. It is *stuck* at the end of the field. As soon as you tried to advance it past the end of the field, the error was recognized. Therefore, to correct the error:

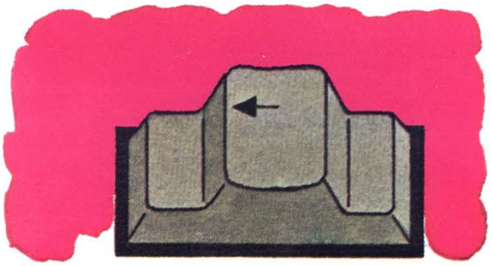


14 **Press the Error Reset key.**

This clears the error condition . . .

The blinking action code disappears. The highlighted error code isn't highlighted anymore.

Then:



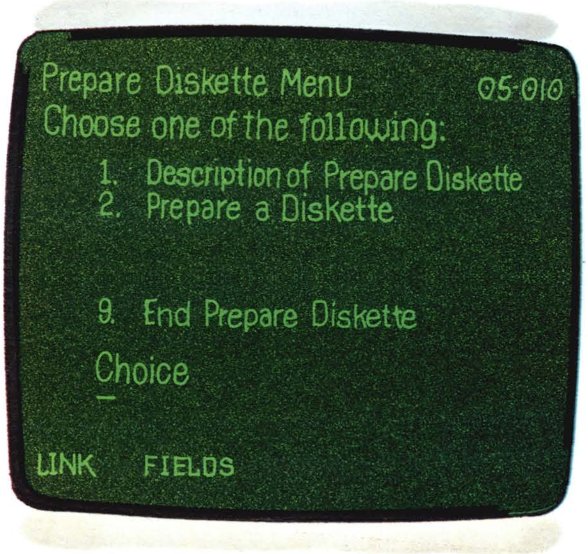
15 **Press the Backspace key once.**

In effect, this returns the cursor to the last position *in* the field (since the error occurred in the first position *past* the field). If this were a longer field instead of a one-position field, you would continue to backspace until the cursor was back at the beginning so that you could type into the field again (correctly this time, of course).

Now that you can handle this type of error, let's do a PREPARE!

Exercise 7 - Preparing a diskette

Screen 05-010, the Prepare Diskette menu, asks you to choose one of the following functions:



```
Prepare Diskette Menu                05-010
Choose one of the following:
     1. Description of Prepare Diskette
     2. Prepare a Diskette


     9. End Prepare Diskette

    Choice
    _

LINK    FIELDS
```

You would:

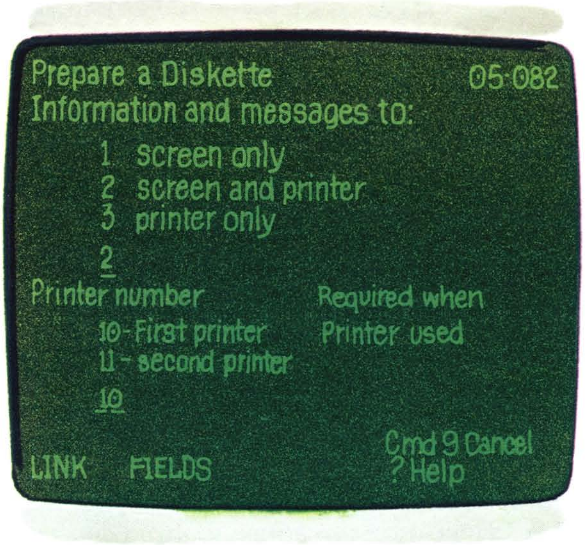
1. Type a 1 for a description of the Prepare Diskette Customer Support Function
2. Type a 2 for the actual procedure to prepare a diskette
9. Type a 9 to end the Prepare Diskette Customer Support Function

You have already read the description screens, and now are ready to prepare a diskette; therefore:

16

On screen 05-010,
Type: 2
Press the Enter key.

You should now see screen **05-082.**



Prepare a Diskette 05-082
Information and messages to:
1 screen only
2 screen and printer
3 printer only
2
Printer number Required when
10-First printer Printer used
11-second printer
10
LINK FIELDS Cmd 9 Cancel
? Help

Note: The numbers that appear on certain screens as selections have been chosen for you. In some cases, you will use them; in others, it might be necessary to change them. You will be told when to choose a number other than the one selected by the computer. If you don't make the choice, the computer will use the number already filled in.

Screen 05-082 asks:

When this program communicates with you, do you want that communication to appear on the screen? on the printer? or on both the screen and the printer?

You would type a 1 to have the communication appear only on the screen.

You would type a 2 to have the communication appear on the screen and printed on paper.

You would type a 3 to have the communication appear printed on paper only.

If you choose 2 or 3, you must make sure your printer is loaded with paper and ready to print.

You must also tell the computer which printer you want to use. Some systems have two printers; yours might not. Your first printer is specified by the number 10; your second printer is specified by the number 11.

You don't need a printed output from this function; so:

17 **On screen 05-082,**
Type: 1
Press the Enter key.

Note: The 2 in the first field of this screen will be replaced by a 1; the 10 in the second field will stay the same, and the program will proceed to the next screen (05-092).

Exercise 7 - Preparing a diskette

You should now see screen **05-092** . . .

The first choice you are asked to make is called *format.*

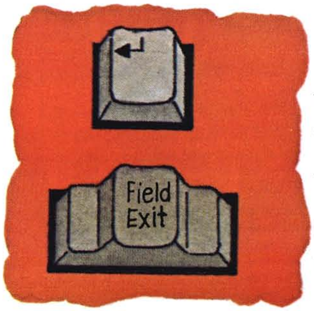
Most diskettes will be prepared in IBM System/23 format because that is the most efficient layout for this computer.

The other two formats are only used to make a diskette compatible with other IBM systems that have slightly different languages. When in doubt, use the IBM System/23 format.

You are then asked to supply the VOLID (name) you want this diskette to have. In this exercise, we have chosen a name for you. Other times when you prepare a diskette, you will supply the VOLID.

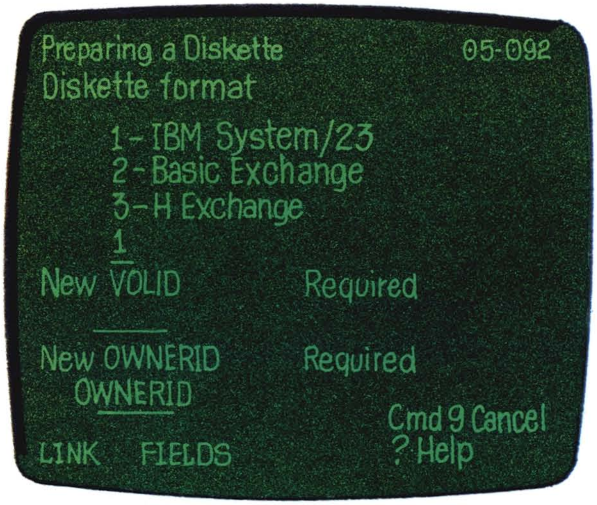
To choose IBM System/23 format and supply a VOLID of CSF002,

18 **On screen 05-092,**
Leave the 1 in the first field.
Press the New Line key once.
Type: csf002



The New Line key advances the cursor to the next field.

The Field Exit key removes information from the rest of a field and advances the cursor to the next field.



```
Preparing a Diskette                05-092
Diskette format
      1-IBM System/23
      2-Basic Exchange
      3-H Exchange
      1
New VOLID               Required
______
New OWNERID             Required
   OWNERID
                            Cmd 9 Cancel
LINK  FIELDS                ? Help
```

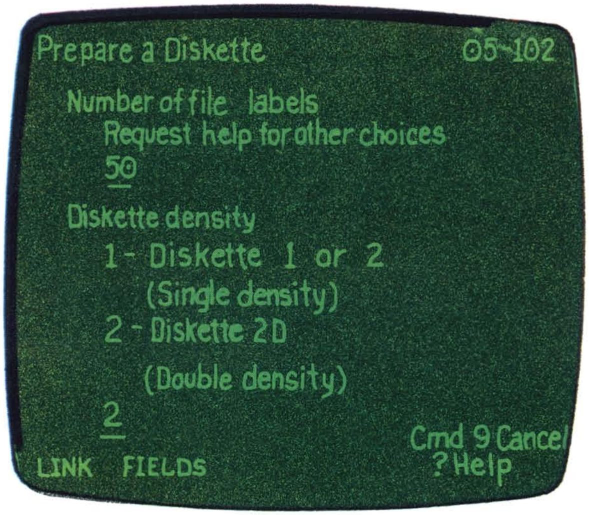
Note: To learn more about VOLID, you should now go to the "Diskettes and disk" chapter of *Operator Reference* in binder 2.

OWNERID is a further means of identifying your diskette. In some cases, you might want to use OWNERID as a key or a password to restrict the use of a diskette. Remember, you can only use up to 14 letters or numbers with no spaces between them for OWNERID.

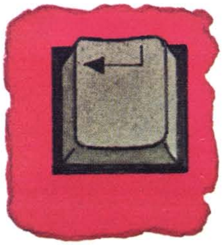
19 **Then,**
Press the New Line key once.
Type your first name for OWNERID.
Press the Field Exit key.

20 **Press the Enter key.**

You should now see screen **05-102** . . .



```
Prepare a Diskette                    05-102
  Number of file labels
    Request help for other choices
    50
  Diskette density
    1 - Diskette 1 or 2
        (Single density)
    2 - Diskette 2D
        (Double density)
    2
                                   Cmd 9 Cancel
LINK  FIELDS                           ?Help
```



The New Line key advances the cursor to the next field.

This screen allows you to choose whether you want to have a diskette with many small files, or a diskette with only a few large files, or an average number of average-sized files. The PREPARE function will then build a space for a directory to hold your filenames which you will assign as you fill the diskette with information. This will enable the computer to locate your files as they are written on the diskette.

The number *50* has been filled in for you and works well in most cases. The number 50 means that the PREPARE program will build a directory (similar to a table of contents) that can hold 50 filenames.

The PREPARE program must know what *type* of diskette you are preparing. A double-density diskette can hold twice as many characters in a given space as a single-density diskette can.

Therefore, to format the diskette to hold 50 files and tell the program the diskette type you are using . . .

21

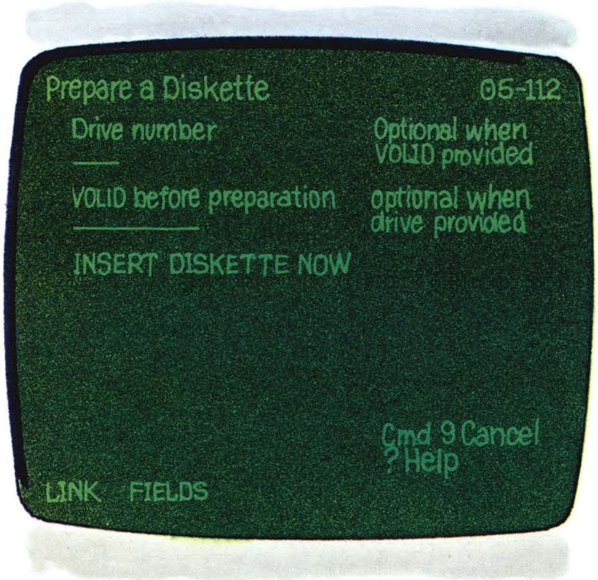
On screen 05-102,
Press the New Line key once.

Since you are using the type 2D (double-density) diskette,
Type: 2

Press the Enter key.

Exercise 7 - Preparing a diskette

You should see screen **05-112** . . .



```
Prepare a Diskette                          05-112
  Drive number                         Optional when
                                       VOLID provided
  ___
  VOLID before preparation             optional when
                                       drive provided
  ________
  INSERT DISKETTE NOW




                                       Cmd 9 Cancel
                                       ? Help
LINK  FIELDS
```

Now, you must tell the computer the number of the drive containing the diskette that will be prepared. Remember, the number is written on the handle of the drive.

As long as you tell the computer which drive contains the diskette to be prepared, it is not necessary to tell the computer the old VOLID of that diskette.

22 **On screen 05-112, Type the number of the drive into which you will insert your diskette.**

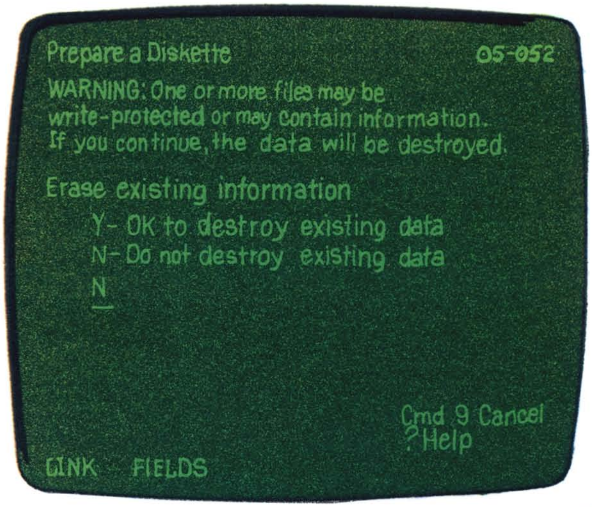
23 **Insert the diskette that will be prepared into the diskette drive you selected in step 22.**

Close the handle.

Once you press the Enter key, the PREPARE program will begin to do the PREPARE.

24 **Press the Enter key.**

Screen 05-042 is a warning screen. Other warning screens are: 05-122, 05-132, and 05-192.

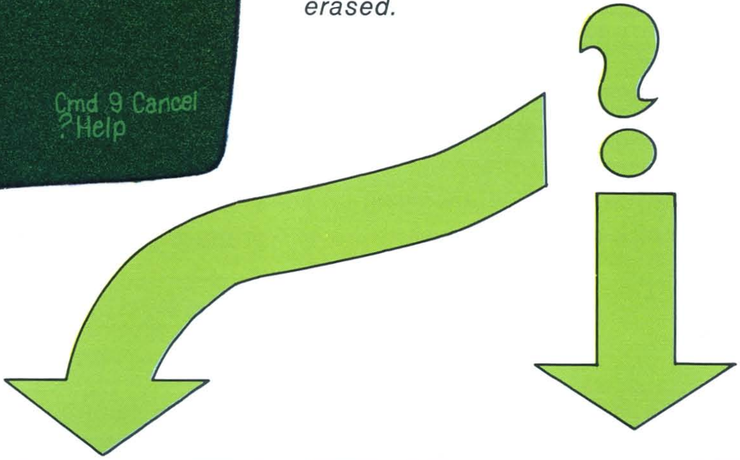


```
Prepare a Diskette                          05-052
WARNING: One or more files may be
write-protected or may contain information.
If you continue, the data will be destroyed.

Erase existing information
     Y- OK to destroy existing data
     N- Do not destroy existing data
     N
     _

                                  Cmd 9 Cancel
                                  ? Help
LINK    FIELDS
```

25 **If no warning screen appears, skip over to step 26 on the next page.**

Screen 05-042 tells you that the diskette you are trying to prepare has information on it.

At this time, you should check to be sure that you are preparing the correct diskette. If this is a used diskette, be sure the data on it is no longer needed. If you continue, all information on this diskette *will be erased.*



25 A **To continue the PREPARE,**
Type: y
Press the Enter key.

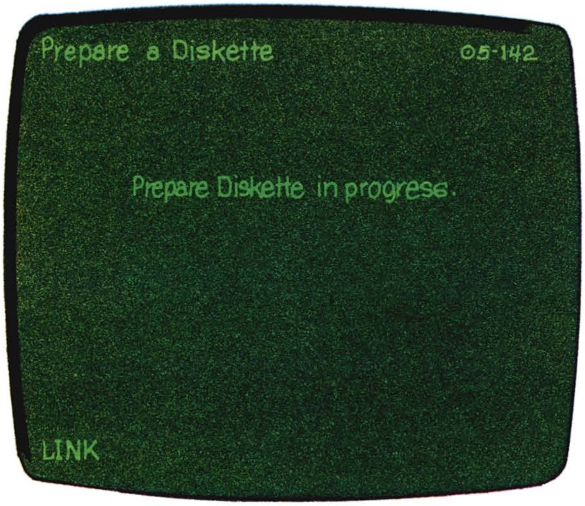
25 B **To stop the PREPARE, press the Enter key.**

You will go to screen 05-052, "*unsuccessful prepare.*"

Then follow directions on screen 05-052.

Exercise 7 - Preparing a diskette

You should see screen **05-142** . . .

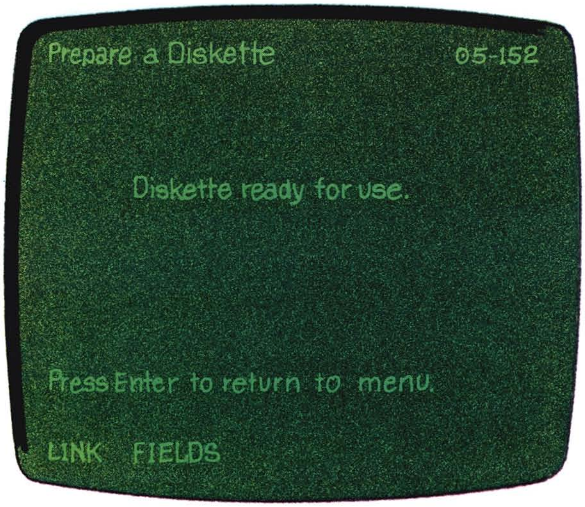


```
Prepare a Diskette                05-142

       Prepare Diskette in progress.

LINK
```

The PREPARE program is being run at this time. Please wait until it is completed.

If you do not see screen 05-152 following screen 05-142, go to the "HELP" section at the end of this exercise.

followed by this screen **05-152.**



```
Prepare a Diskette                05-152

          Diskette ready for use.

Press Enter to return to menu.

LINK   FIELDS
```

The PREPARE program has completed preparing this diskette.

26 **Your diskette preparation is complete.**

Follow directions on the screen to return to the menu.

27 **When you see the Prepare Diskette menu on the screen,**

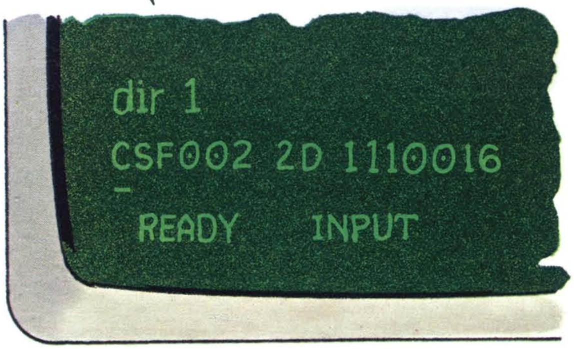
Type: 9
Press the Enter key.

You used the DIR command in Exercises 5 and 6 to display a diskette's directory.

To verify that the diskette you just prepared has been prepared correctly:

28 **Type: dir**
Space once.
Type the number of the drive containing your prepared diskette. Press the Enter key.

The directory on the screen should look like this.



```
dir 1
CSF002 2D 1110016
_
 READY    INPUT
```

On this screen, the VOLID is CSF002, and the diskette type is 2D. Don't worry if the long number following the diskette type is different from the number on your screen.

29 **Compare the directories. Make sure the VOLID is CSF002.**

Is the diskette type shown on your screen correct?

Make a note of this diskette's VOLID and type. You will need it later in this exercise.

30 **Remove the diskette named CSF002 from the drive.**

You have just prepared your first diskette. Congratulations! Because it is so important that you be able to do this, we will go through the prepare operation again. This time, using the same diskette, we will change the number of files and the directory size.

31 **Insert the Customer Support Functions diskette into any drive.**

Close the handle.

32 **Type: link prepare**
Press the Enter key.

When the Prepare Diskette menu is on the screen:

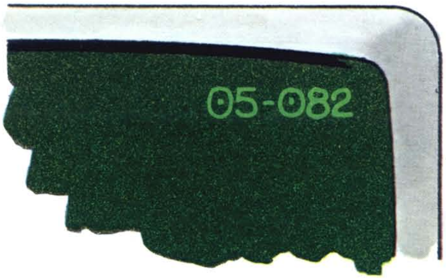
33 **Remove the Customer Support Functions diskette from the drive.**

Note: Failure to remove your Customer Support Functions diskette could result in the accidental erasing of that diskette.

34 **To prepare a diskette**
Type: 2
Press the Enter key.

You will see screen 05-082. This screen wants to know where you would prefer to receive information and messages.

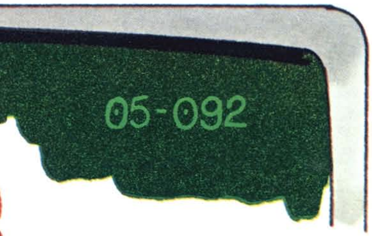
Even though the 2 is filled in for you, choose 1.



35 **Type: 1**

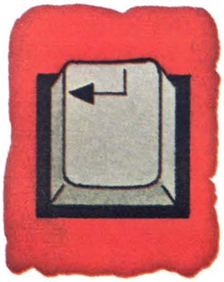
36 **Press the Enter key.**

You are looking at screen 05-092. First, it asks you what diskette format you want. Since you are not trying to prepare diskettes for any other type of system, you will use IBM System/23 format.



1 is already selected; so:

37 **Press the New Line key.**



The New Line key advances the cursor to the next field.

Now, you will tell the computer the name (VOLID) you want to give the diskette you are preparing. You will use the diskette you just prepared and give it the same name; so, type in CSF002.

38 **Type: csf002**
Press the New Line key.

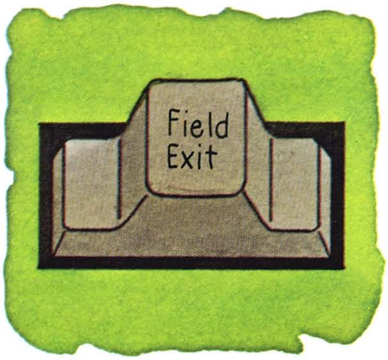
Exercise 7 - Preparing a diskette

The last item on the screen asks you for an OWNERID. This is an additional level of diskette identification. The OWNERID can be your name, your company name, or any identification of 14 characters or fewer. For this exercise, type your first name.

39

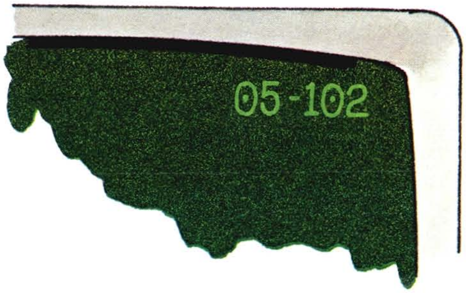
Type your first name.
Press the Field Exit key.

Press the Enter key to go to the next screen.



The Field Exit key removes information from the rest of a field and advances the cursor to the next field.

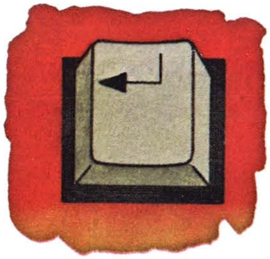
You are looking at screen 05-102. This is where you tell the PREPARE program how many file labels you want on your diskette. Although 50 is usually enough, let's say that this time we would like to have 100. To make sure that is not more than the diskette can hold, type a ? into the first position of the field and press the Enter key. This will tell you the limits for the type of diskette you are preparing.



Once you have checked that 100 is OK,

40

Type: 100
Press the New Line key.



The New Line key advances the cursor to the next field.

The cursor is now in the next field.

The computer must know the density of the diskette you are preparing.

Since your diskette is a type 2D, it is a double-density diskette, and you will type a 2.

41 **Type: 2**
Press the Enter key.

Now you are looking at screen 05-112. This screen wants to know the number of the drive into which you will put the diskette you are preparing.

42 **Insert the diskette you want to prepare into a drive.**

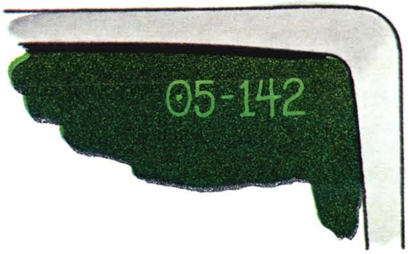
This is the same diskette you just finished preparing (CSF002).

Close the handle.

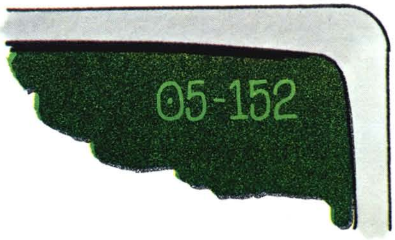
43 **Type the drive number of the diskette you are preparing.**

Next, the computer wants to know the *old* VOLID (name) of the diskette you are going to prepare. You could enter CSF002 here, but it is not necessary to supply the old VOLID as long as you have told the computer what drive the diskette will be in when you prepare it. Since you have done this, you can move on.

44 **Press the Enter key.**



You are now looking at screen 05-142. The PREPARE function is in progress. At this time, the program is erasing old information, checking the surface of the diskette for defects, and building a new directory from the information you have supplied.



When the PREPARE program has completed preparing your diskette, it will display screen 05-152 telling you that the operation has been done successfully.

45 **Press the Enter key.**

When you have the Prepare Diskette menu on the screen,

46 **Type: 9**
Press the Enter key.

READY INPUT is displayed.

Now you have performed the Prepare Diskette Customer Support Function twice and should start feeling a little more confident about it.

To make sure that this diskette has been prepared properly:

47 **Type: dir**
Space once.
Type the drive number.
Press the Enter key.

48 **Look at the directory.**
Make sure the VOLID is CSF002.

If the VOLID isn't CSF002, you might have incorrectly entered the new VOLID on screen 05-092. Go to the "HELP" section at the end of this exercise.

Exercise 7 - Preparing a diskette

49 **Remove the diskette named CSF002. Write CSF002 on an adhesive label and apply it to the diskette.**

You will use this diskette that you just prepared later, in Exercise 8. Put it aside until then.

Exercise 8 will require another diskette. It must be prepared now. This time, you will do the PREPARE on your own.

Don't forget that the "? Help" feature is there for you to use. Also, you can look up any screen by its number in the "PREPARE screens" section of Chapter 2 in binder 5.

50 **Insert the Customer Support Functions diskette.**

Close the handle.

51 **Type: link prepare**
Press the Enter key.

52 **When the Prepare Diskette menu appears, remove your Customer Support Functions diskette.**

Note: Please observe proper diskette handling procedures when writing and applying adhesive labels. For information on diskette handling procedures, refer to "Handling and storing diskettes" in the "Diskettes and disk" chapter of *Operator Reference* in binder 2.

PREPARE
Prepare Screens
CUSTOMER SUPPORT FUNCTIONS
VOL002

53 **Since you have the Prepare Diskette menu on your screen,**

Type: 2
Press the Enter key.

Make the following selections as you go from screen to screen.

If you have any problems doing this PREPARE, go to the "PREPARE screens" section of binder 5.

(Note that your diskette type is a 2D.)

- At screen 05-082, select information to "screen only."
- At screen 05-092:
  - — Choose the IBM System/23 format.
  - — Use LRN004 as your new VOLID.
  - — Use a name, such as your company's, (if it doesn't have more than 14 characters) for new OWNERID.
- At screen 05-102:
  - — Request 75 file labels.
  - — Indicate your diskette type.
- At screen 05-112, type in the number of the drive containing the diskette you will prepare.

After your PREPARE is completed, you should have the Prepare Diskette menu on your screen (screen 05-010).

54 **Type: 9**
Press the Enter key.

Note: If you have a question about any Customer Support Functions screen, use the number in the upper right corner of that screen to find the description of that screen in the chapter of the *Customer Support Functions* book for the function you are using (binder 5 or binder 6).

To make sure that this diskette has been prepared properly:

55 **Type: dir**
Space once.
Type the drive number.
Press the Enter key.

56 **Check the screen.**
Is the VOLID now LRN004?
Is the diskette type correct?

If the VOLID isn't LRN004, you might have incorrectly entered the new VOLID on screen 05-092. Go to the "HELP" section at the end of this exercise.

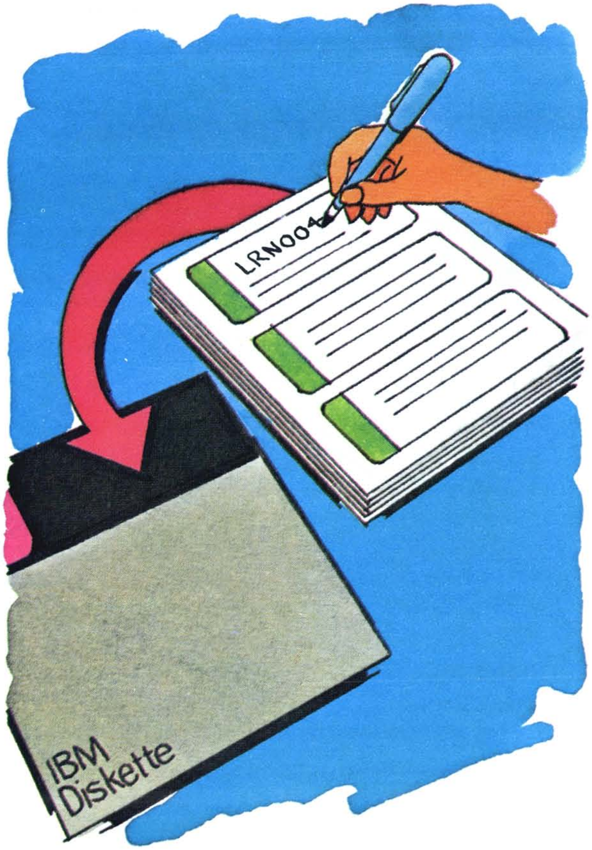
57 **Remove the diskette named LRN004.**

Exercise 7 - Preparing a diskette

58 **Write this diskette's name, LRN004, on an adhesive label and apply it to the diskette.**

Note: Please observe proper diskette handling procedures when writing and applying adhesive labels.

Note: Save the diskettes called LRN004 and CSF002. They will be needed in Exercise 8.



Congratulations!

Performing the steps necessary to prepare a diskette involves using many of the same skills that you need to successfully operate your system on a day-to-day basis. Having come this far along, you have shown that you can use the books supporting your system to do productive work.

Much of the remainder of this course is aimed at sharpening the skills you have developed as well as building new ones.

You should now read the summary and answer the review questions at the end of this exercise.

Summary

In this exercise, you learned:

- How to find your diskette type
- Where to find information about PREPARE in binder 5
- Why you need to prepare diskettes
- The steps in PREPARE:
  - Go through the "Starting up" steps.
  - Insert the Customer Support Functions diskette.
  - Type: link prepare
  - Press the Enter key.
  - Remove the Customer Support Functions diskette.
  - Choose 2 on the Prepare menu.
  - Enter the correct information on the PREPARE screens.
  - Remove the diskette after it has been prepared.
  - Label the prepared diskette.

Exercise 7 - Preparing a diskette

Review

Please write the answers to the following questions on a piece of paper. Compare your answers to ours.

Question 1. Preparing a diskette will tell you if your diskette is damaged.

True or false?

Question 2. A brand new diskette must be prepared.

True or false?

Question 3. The PREPARE procedure completely erases all information stored on a diskette.

True or false?

Question 4. Which book contains the steps and screens for PREPARE?

a. *Operator Reference* (in binder 2)
b. *System Messages* (in binder 3)
c. *Customer Support Functions,* Volume I (in binder 5)
d. *Customer Support Functions,* Volume II (in binder 6)

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Exercise 7 - Preparing a diskette

Answers

Question 1. The *correct* answer is: True.

If your diskette is damaged, you will see screen 05-162 or 05-172.

This question is covered in the ''PREPARE'' chapter of *Customer Support Functions,* Volume I.

Question 2. The *correct* answer is: True.

You must prepare brand new diskettes so that they are set up for the computer system you have.

This question is covered in ''About this exercise.''

Question 3. The *correct* answer is: True.

PREPARE erases all information stored on a diskette.

This question is covered in the block marked ''IMPORTANT'' after step 1.

Question 4. The *correct* answer is: c.

Customer Support Functions, Volume I (in binder 5), covers the Customer Support Functions: PREPARE (DISKETTE), COPY, LABEL, RECOVER (DISKETTE), REPLACE, SELECT, UPDATE, PREPARE.DISK, ADD.DELETE, BACKUP.RESTORE, and DISK.RECOVER.

The other answers are *incorrect* because:

Answer a:	*Operator Reference* (in binder 2) gives information about equipment, commands, and diskettes for your computer system.
Answer b:	*System Messages* (in binder 3) explains what the error and action codes mean.
Answer d:	*Customer Support Functions,* Volume II (in binder 6), discusses the Customer Support Functions: RECOVER (DISKETTE), SORT, PRESORT, INDEX, COLSEQ, LISTFILE, LISTSTOR, LISTDISK, and DISK.RECOVER.

HELP

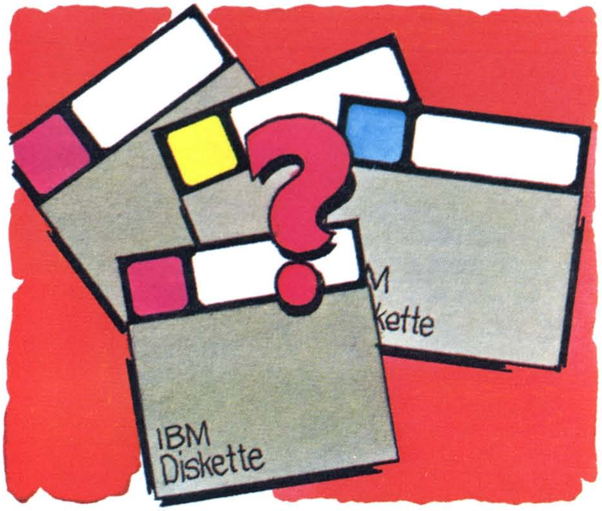
HELP

On the next few pages, we have tried to provide some helpful hints to guide you through situations that might occur during this "Preparing a diskette" exercise.

If you have a problem, read through these pages for help. If you still have a problem, call IBM for technical support.

You can locate the instructions for correcting your problem by noting the number of the step where you had the problem, then looking for that step number in this HELP section.

You are at step **2**



You cannot determine the diskette type from the diskette label in the upper left corner.

You must look at the diskette's internal directory.

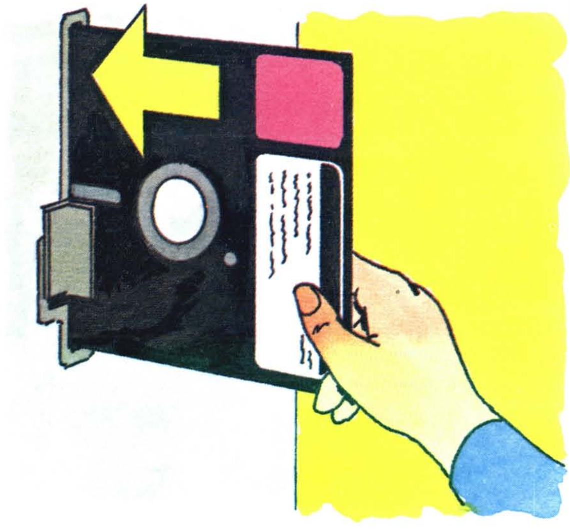
Follow these steps to display the diskette directory.

At this time, make sure your system is started up, no program is running, and all diskettes are removed. All diskette drive handles should be open.

The screen should show READY INPUT on the status line.

1 **Insert the diskette you are going to prepare into any drive.**

Close the handle.



Exercise 7 - Preparing a diskette

HELP (continued)

2 **Type: dir**
space once, and type the number of the diskette drive into which you inserted the diskette to be prepared.

For example, if you put the diskette into diskette drive 1, you would have typed:

dir 1

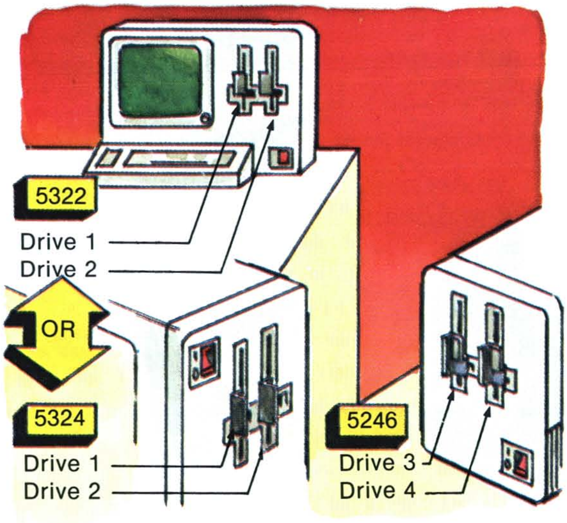
drive 2 would have been	**dir 2**
drive 3 would have been	**dir 3**
drive 4 would have been	**dir 4**

3 **Press the Enter key.**

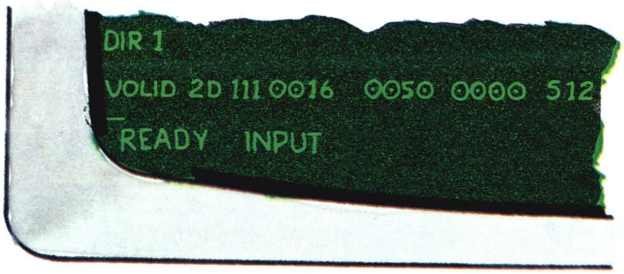
The directory information from the diskette should appear on your screen.

Use DIR when you want to see the contents of a diskette's directory.

Note: The DIR is explained fully in the "Commands" chapter of *Operator Reference* in binder 2.



Note: The diskette drive number is written on each drive handle.

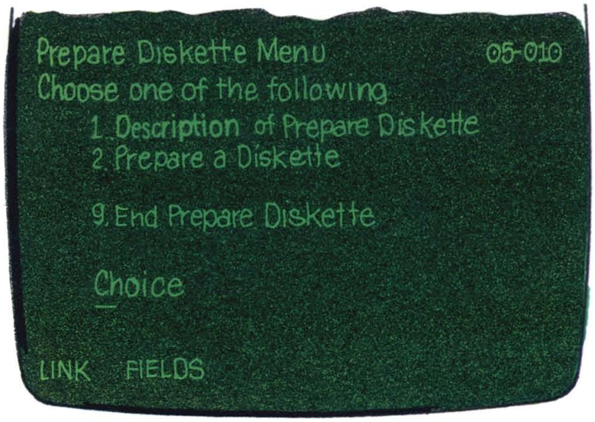


```
DIR 1
VOLID 2D 111 0016  0050 0000 512
READY  INPUT
```

The 2D following the VOLID shows the diskette type.

You are at step **9**

But you do not see the Prepare Diskette menu.



Prepare Diskette Menu 05-010

Choose one of the following

1. Description of Prepare Diskette
2. Prepare a Diskette

9. End Prepare Diskette

Choice _

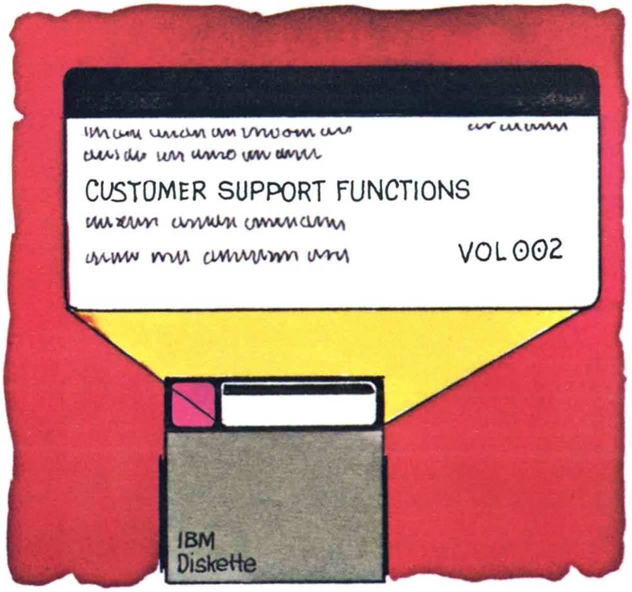
LINK FIELDS

1. You typed link prepare incorrectly. Check your spelling and correct any mistakes.

2. You inserted the wrong diskette.

   Pull out the diskette you did insert. The correct diskette should be the Customer Support Functions diskette.

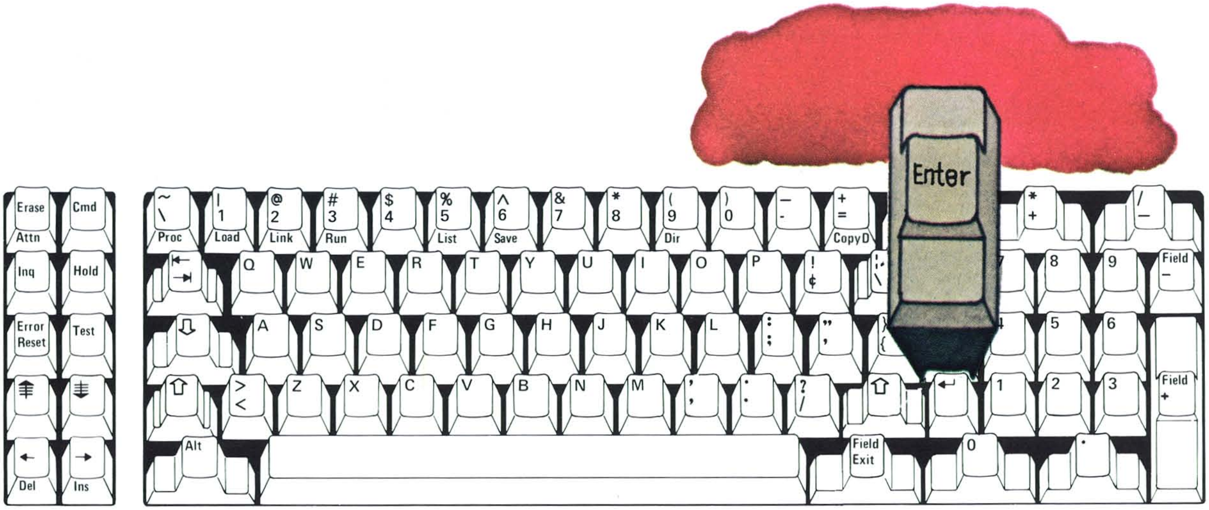
   Insert the correct diskette.



HELP (continued)

3. You forgot to press Enter.

   Press Enter when you're sure you have typed link prepare correctly.


Enter
Erase
Attn
Cmd
Inq
Hold
Error Reset
Test
Del
Ins
Proc
Load
Link
Run
List
Save
Dir
CopyD
Alt
Field Exit
Field –
Field +

You are at step **26**

in "Preparing a diskette" and . . .

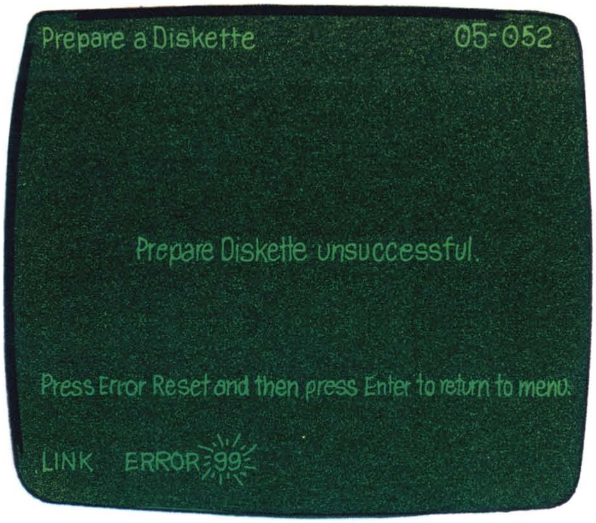
1. You expected to see screen 05-152, but screen 05-052 or 05-162 is displayed.

When one of these screens is displayed, PREPARE was unable to continue preparing the diskette and had to stop.

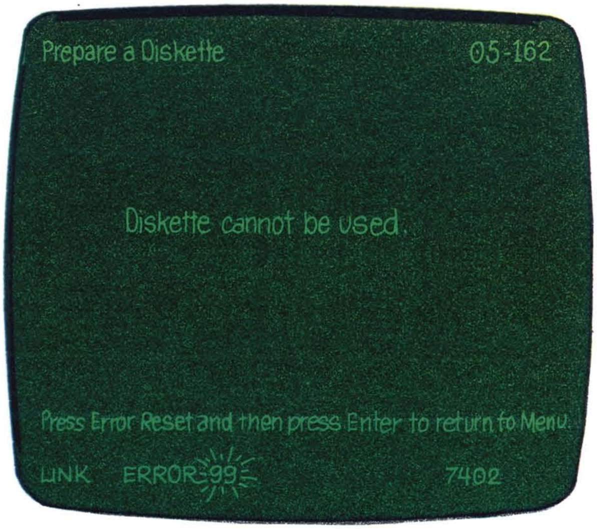
Look up the error code in *System Messages* (in binder 3) to determine the reason PREPARE stopped.

If you can, correct the condition that caused the problem. Then press Error Reset and Enter to return to the menu. Then try again to prepare the diskette.

Note: If screen 05-162 appears, you will have to use another diskette for the PREPARE procedure.



```
Prepare a Diskette                              05-052

            Prepare Diskette unsuccessful.

Press Error Reset and then press Enter to return to menu.

LINK  ERROR 99
```



```
Prepare a Diskette                              05-162

              Diskette cannot be used.

Press Error Reset and then press Enter to return to Menu.

LINK  ERROR 99                            7402
```

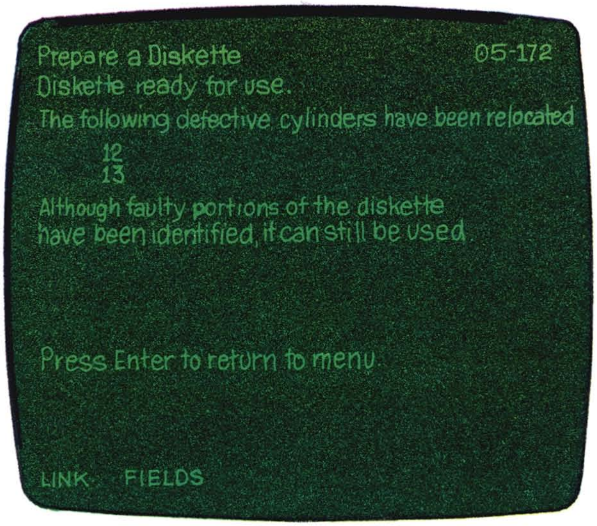
HELP (continued)

2. You expected to see screen 05-152, but screen 05-172 is displayed.

This screen is displayed to tell you that PREPARE found a defective area (cylinder) on the diskette.

A diskette may have no more than two defective areas. If more than two areas are found to be defective, screen 05-162 is displayed.

Even though a diskette is usable with a defective area, you should consider using another diskette when storing important files. A defective area may be an indication of a worn diskette.



Prepare a Diskette 05-172
Diskette ready for use.
The following defective cylinders have been relocated
12
13
Although faulty portions of the diskette have been identified, it can still be used.

Press Enter to return to menu

You are at step **48**

in "Preparing a diskette" and . . .

- The directory shows that the VOLID is not CSF002.

When screen 05-092 was displayed as you were preparing the diskette, you might have incorrectly typed the VOLID into the "New VOLID" field.

To prepare the diskette to have a VOLID of CSF002, do the following:

1. Remove the diskette you want to prepare from the diskette drive. (This is the diskette on which you just did a DIR.)
2. Repeat "Preparing a diskette," steps 31 through 48. (Be sure to type CSF002 when you are at step 38.)

When you have completed step 48 and the VOLID is CSF002, continue with step 49.

Exercise 7 - Preparing a diskette

HELP (continued)

You are at step **56**

in "Preparing a diskette" and . . .

- The directory shows that the VOLID is not LRN004.

When screen 05-092 was displayed as you were preparing the diskette, you might have incorrectly typed the VOLID into the "New VOLID" field.

To prepare the diskette to have a VOLID of LRN004, do the following:

1. Remove the diskette you want to prepare from the diskette drive. (This is the diskette on which you just did a DIR.)

2. Repeat "Preparing a diskette," steps 50 through 56. (Be sure to type LRN004 as your new VOLID on screen 05-092.)

When you have completed step 56 and the VOLID is LRN004, continue with step 57.

Exercise 8 - Copying a diskette

IMPORTANT: This exercise, "Copying a diskette," is to be used only if your System/23 came with a single Customer Support Functions diskette. If you received two Customer Support Functions diskettes, you must use Exercise 8A to learn how to copy a diskette.

Note: The information in this exercise is part of a structured learning package that has been designed to teach you how to operate your computer.

To gain maximum benefit from this course, you should:

- Take each exercise in order if this is your first time through the course.
- Follow all directions in this book and on the screens.
- Read all the material presented in each exercise. (Don't skip any steps.)

In this exercise, you will learn:

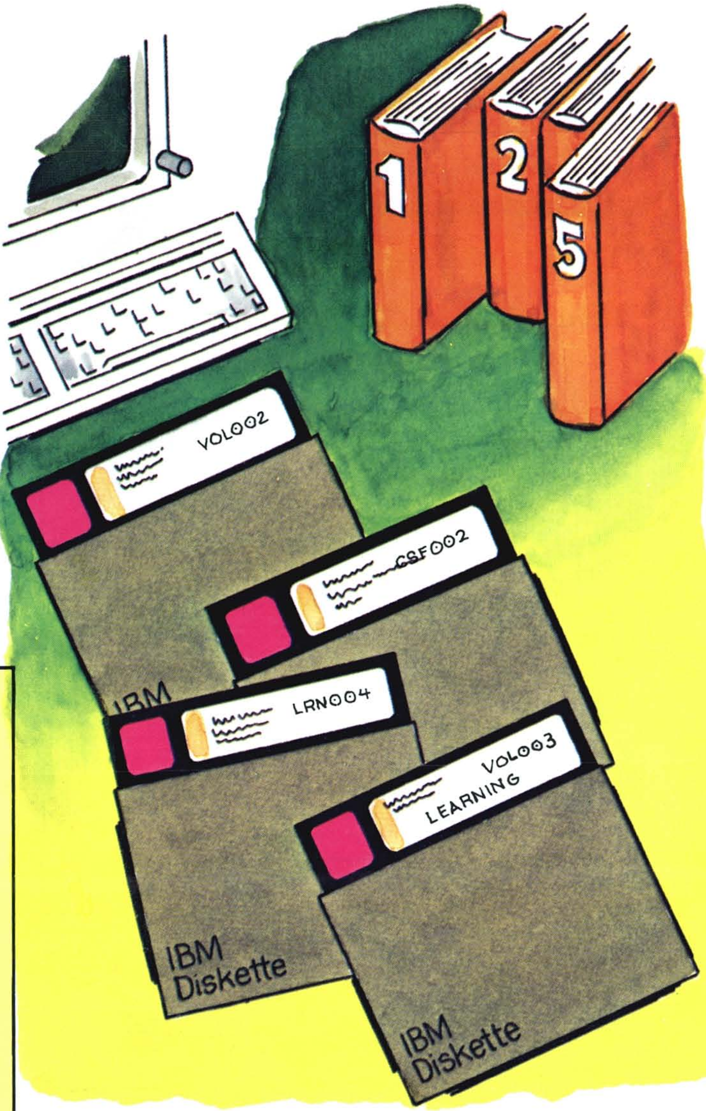
- Why you need to copy diskettes
- When to use each kind of COPY
- Where to find information about COPY in *Customer Support Functions*, Volume I (in binder 5)
- How to perform these two COPYs:
  - — COPY all files
  - — COPY one or a group of files

If your System/23 has only one diskette drive, we recommend that you do not do the COPYs now. With only one drive, these procedures take a great deal of time. To learn about COPY, you might like to read the steps in this book and binder 5. That way, you will be familiar with COPY if you have to copy a diskette after this course. Then come back to this exercise and follow the instructions on page 8-20 for the "Course review."

Exercise 8 - Copying a diskette

In addition to this book, you need the following to complete this exercise:

- Your System/23 Computer (This exercise is written describing the steps to copy a diskette using a system with *two* diskette drives available.)
- The Customer Support Functions diskette, VOL002
- The Learning diskette, VOL003
- Binder 5, containing *Customer Support Functions,* Volume I
- The two diskettes named CSF002 and LRN004 that you prepared in Exercise 7



Note: Before you go any further, be sure that the two diskettes you prepared in Exercise 7 have VOLIDs of CSF002 and LRN004.

If you don't know the VOLID, use the DIR command.

If the VOLIDs are not CSF002 and LRN004, link the PREPARE Customer Support Function into the computer and complete steps 16 through 58 in "Preparing a diskette," Exercise 7.

When do you use COPY?

COPY is another Customer Support Function like PREPARE. It is used to make copies of your diskettes. You may choose to copy part of a diskette or the entire diskette.

There are several reasons you will need to use COPY.

As you begin to use your computer to help your business run more efficiently, you will be putting important information on your diskettes. Diskettes can get lost, damaged, or just wear out. Without a backup copy, the information would be gone. It might be difficult to get it back, if you could get it back at all. A backup copy of a diskette is good insurance.

If you are using a diskette on which you have files that are no longer needed, you can copy new information over the old. The COPY procedure gets rid of the old files and makes room for your new ones.

Because you will be using your Customer Support Functions diskette daily, you will need a backup copy. You will be shown how to make one in this exercise.

In this exercise, you will perform two COPYs:

- COPY all files
- COPY one file or a group of files

Remember, COPY is a function that you will probably use many times in your job; so, it is important that you go through this exercise step-by-step.

Also, don't forget that a diskette must be prepared before information can be copied onto it the first time.

Exercise 8 - Copying a diskette

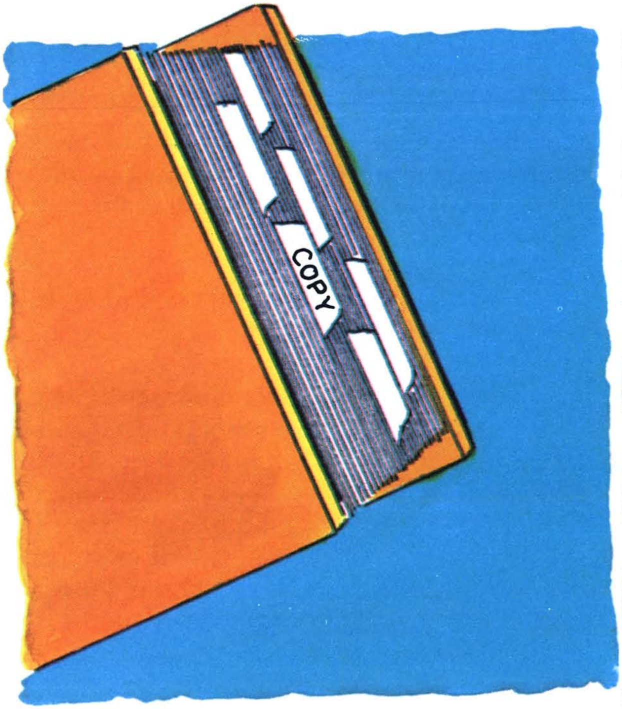
Before you actually copy some diskettes,

1

Locate binder 5.
Open *Customer Support Functions,* Volume I to Chapter 3, "COPY." Read:

- **"What COPY does"**
- **"COPY choices"**
- **"Why and when to use COPY"**

Return here.



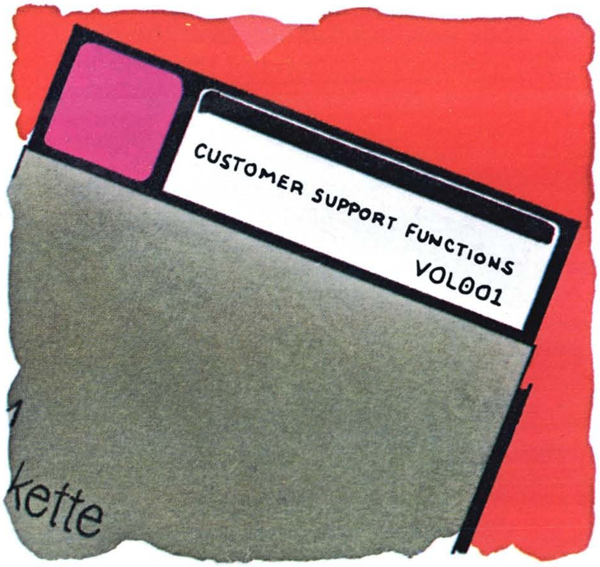
Your system should be started up (steps 1 - 20 in Exercise 1). READY INPUT should be on the status line.

All diskettes should be removed from the drives, and all handles should be open.

2

Locate your Customer Support Functions diskette.

Insert it into drive 1 (or 3). Close the handle.



3

Type: link copy
Press the Enter key.

Your screen should show the Copy menu.

4 **Type: 1**
Press the Enter key.

You should read all the COPY description screens and return to the main menu.

The first operation we will do is:

COPY all files

or

just "COPY all"

We will duplicate your Customer Support Functions diskette marked VOL002.

The Customer Support Functions diskette has a VOLID of VOL002. (Sound familiar?) This will be your *input* diskette.

In the last exercise, you prepared a blank diskette and named it CSF002. This will be your *output* diskette.

At this point, let's talk about *input* and *output* diskettes.

An input diskette contains information you will put into the computer. Its information (files) will then be copied onto another diskette.

An output diskette receives the information from the computer.

REMEMBER, *input* refers to information going into the computer; *output* refers to information coming out of the computer.

As you perform the COPY function, read each screen. Remember, additional information is available to you by either:

Typing a ?
and pressing the Enter key as you did in Exercise 7, "Preparing a diskette,"

or

Looking up each screen by the number in the upper right corner in the "COPY screens" section of your *Customer Support Functions*, Volume I (binder 5).

Exercise 8 - Copying a diskette

You are looking at screen 03-010, the Copy menu.

5 **On screen 03-010,**
Type: 4
Press the Enter key.

You are looking at screen 03-084.

6 **On Screen 03-084,**
Type: 1
Press the Enter key.

You will request that information appear only on the screen.

You are looking at screen 03-114.

7 **On screen 03-114,**
Press the Enter key.

On this screen, you are going to use the selections already made by the computer.

You are looking at screen 03-124.

8 **On screen 03-124,**
Press the Enter key.

The output diskette you will use, called CSF002, does not contain any files.
It doesn't make any difference whether "n" or "y" is chosen for this copy; so, you will accept the selection made by the computer.

You are looking at screen 03-184.

On screen 03-184, you are asked to type the numbers of the diskette drives you are using and the VOLIDs of your diskettes.

The number of the diskette drive in which you now have your Customer Support Functions diskette is the input drive number.

9 **On screen 03-184**
Type: 1 (or 3)
Press the New Line key.

10 **Type: VOL002**
Press the New Line key.

The number of the diskette drive into which you will put the diskette you prepared in Exercise 7 is the output drive number.

11 **Type the number of the drive (2 or 4) into which you will put the output diskette (CSF002).**
Press the New Line key.

12 **Type: csf002**
Insert the output diskette into the drive you specified as the output drive (2 or 4). Close the handle.

Press the Enter key.

You should now hear the computer copying the diskette.

The names of the files will appear on the screen as they are copied.

You are looking at screen 03-144.

13 **On screen 03-144,**
Press the Enter key.

◁ This screen shows you the number of files you just copied from VOL002 and tells you that the COPY is completed.

You are looking at screen 03-010, the Copy menu.

14 **On screen 03-010,**
Type: 9
Press the Enter key.

◁ You will end the Copy function now.

READY INPUT should now be on the status line. To make sure that the COPY operation was successful,

15 **Type: dir**
Space once.
Type the drive number of the output diskette (2 or 4).

Press the Enter key.

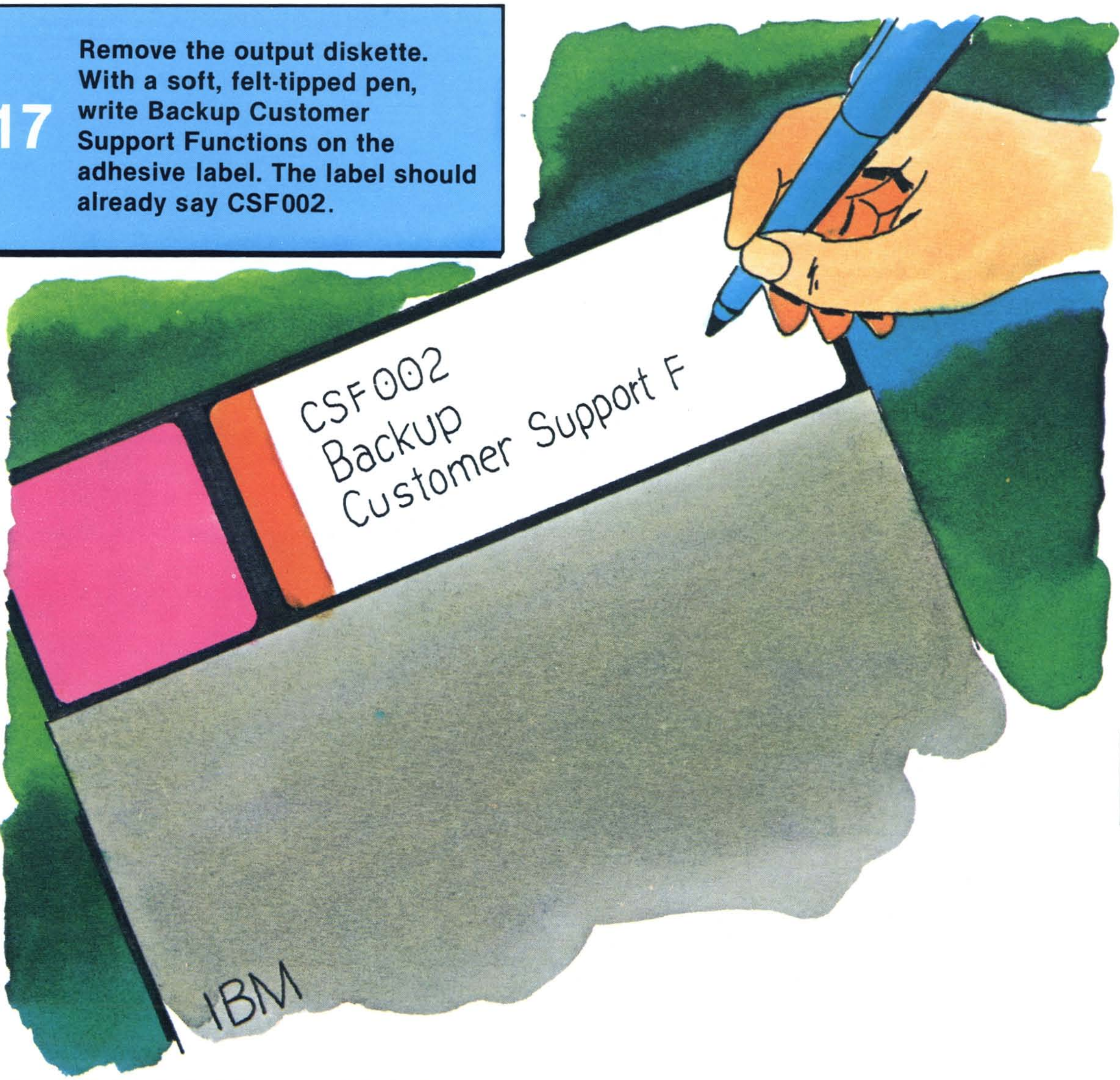
The screen should show the directory of the duplicate diskette. You should see the filenames of files copied from your Customer Support Functions diskette.

At this time, let's print a directory of your input diskette (VOL002) to compare it to the directory you just made. First, make sure that your printer is loaded with paper.

▽

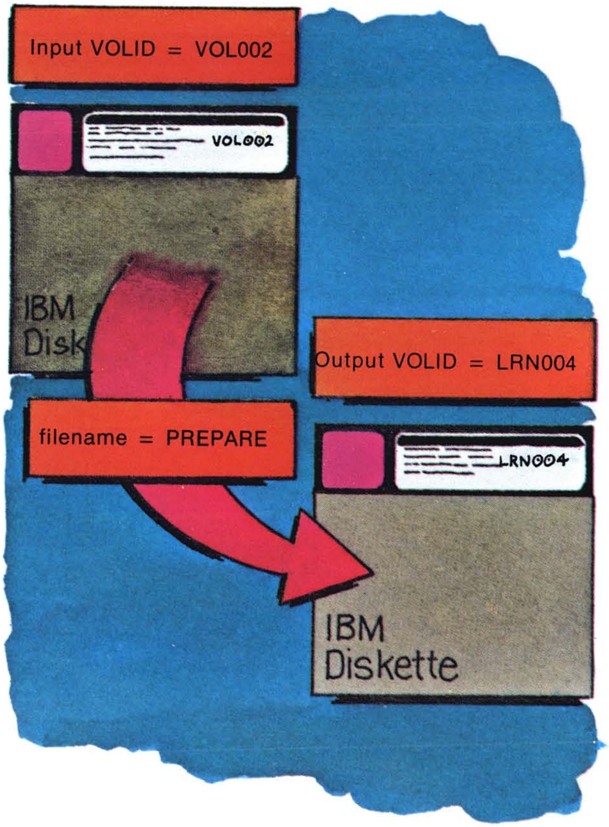
16 **Type: dir**
Space once.
Type the drive number of the input diskette (1 or 3).
Put a comma after the drive number.
Type: print
Press the Enter key.

17 **Remove the output diskette. With a soft, felt-tipped pen, write Backup Customer Support Functions on the adhesive label. The label should already say CSF002.**



Hint: It would be helpful to you later, if you put the printed directory into the diskette envelope. That way, you would always know what files are contained on this diskette.

Exercise 8 - Copying a diskette


Input VOLID = VOL002
VOL002
IBM
Disk
Output VOLID = LRN004
filename = PREPARE
LRN004
IBM
Diskette

There may be occasions when you only need to transfer one file or a group of files to another diskette rather than copying an entire diskette.

Locate the diskette you prepared in Exercise 7 called LRN004. You are going to copy the file named PREPARE from your Customer Support Functions diskette (VOL002) onto LRN004.

Your Customer Support Functions diskette should still be in drive 1 (or 3). The handle should be closed.

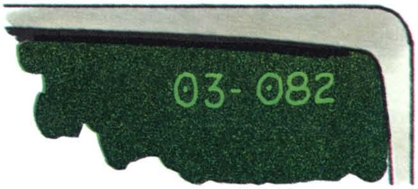
18 **Type: link copy**
Press the Enter key.

The Copy menu should be on the screen.

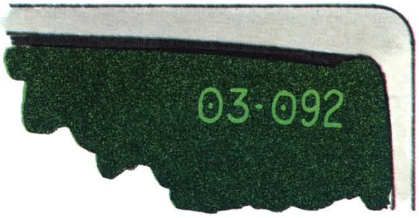
19 **On screen 03-010,**
Type: 2
Press the Enter key.

You are looking at screen 03-082.

20 **On screen 03-082**
Type: 1
Press the Enter key.



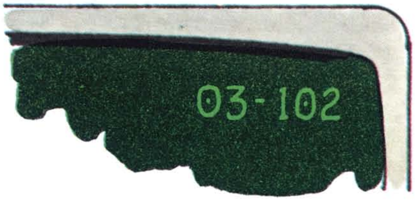
The next screen you will see is screen 03-092.



Under "Replace information in output file," you will type y. (All other selections will stay the same.)

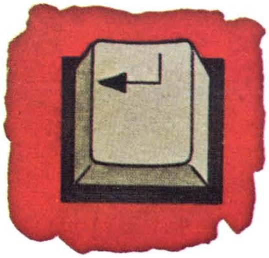
21 **Type: y**
Press the Enter key.

The next screen you will see is screen 03-102.



Your Customer Support Functions diskette is your input diskette. Your input drive number is either 1 or 3.

22 **Type: 1 (or 3)**
Press the New Line key.



The New Line key advances the cursor to the next field.

The input VOLID is not needed because you typed the drive number.

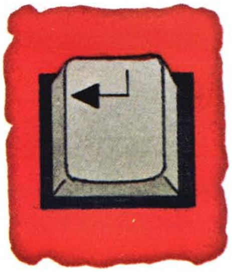
23 **Press the New Line key.**

The input filename of the file you are going to copy is called PREPARE.

24 **Type: prepare**
Press the New Line key.

Exercise 8 - Copying a diskette

Your output drive number is 2 or 4. This is the drive into which you will place your output diskette.



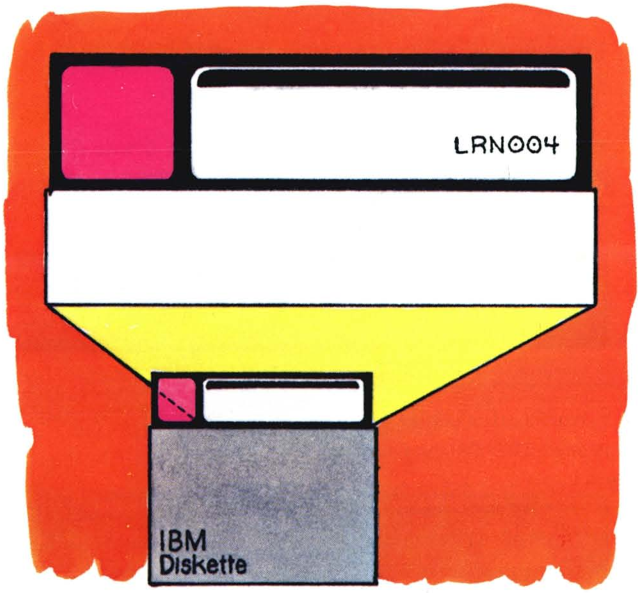
The New Line key advances the cursor to the next field.

25 **Type: 2 (or 4)**
Press the New Line key.

Once again, since you have provided the output drive number, you don't need an output VOLID. You also don't need an output filename.

You must insert your output diskette now. This diskette is the one you prepared in the last exercise. It is named LRN004.

26 **Insert LRN004 into drive 2 (or 4).**
Close the handle.
Press the Enter key.



You should now hear the computer copying the file named PREPARE.

After the screen appears that tells you that COPY was completed, you will return to the menu.

27 **To get back to the menu, press the Enter key.**

The Copy menu should be on the screen.

28 **When you have completed copying PREPARE to LRN004, you should have the Copy menu on the screen.**

Type: 9
Press the Enter key.

You can use the DIR command to verify that you have put PREPARE on LRN004.

29 **Type: dir**
Space once.
Type: 2 (or 4)

Press the Enter key.

Earlier in Exercise 8, you made a "COPY all" of your Customer Support Functions diskette. That backup diskette can be put safely away to be used in case of loss or damage to your original.

As the final project in your training, you are going to make a backup copy of your Learning diskette (the one marked Learning, VOL003). That way, you will have backup copies of both diskettes.

The COPY function is on your Customer Support Functions diskette. Since it is still in a drive,

30 **Type: link copy**
Press the Enter key.

Once the Copy menu is on your screen, you may remove the Customer Support Functions diskette so that you can insert your input diskette into that drive.

31 **Remove the Customer Support Functions diskette from the drive.**

The Learning diskette has a VOLID of VOL003 and will be your *input* diskette.

The diskette you prepared in Exercise 7, called LRN004 (that you just put a PREPARE file on) will be your *output* diskette. You should still have that diskette in drive 2 (or 4).

Exercise 8 - Copying a diskette

Locate your Learning diskette, marked VOL003.

32 **Insert your Learning diskette into drive 1 (or 3).**

Now, with the Copy menu on the screen:

33 **Type: 4**
Press the Enter key.

Just follow the screens from here on.

IMPORTANT: As you follow the screens, screen 03-124 will be displayed. Type a y where it asks if it is OK to destroy all existing data on the output diskette. The only file now on LRN004 is PREPARE, and since you already have that on CSF002, you don't need it anymore.

When you get to screen 03-184 of the "COPY all" operation, you will be asked to INSERT DISKETTES NOW. At that time, your input and output diskettes must be put into the drives you specify for them. Make sure that your input diskette is VOL003 and your output diskette is LRN004.

After you have copied VOL003 and have ended the Copy function, use the DIR command to make sure that the same files are contained on each diskette.

34 **You may now remove the output diskette (LRN004) and write Backup Learning on the adhesive label with a soft, felt-tipped pen.**

You have completed your last exercise in this book and should now read the summary and answer the review questions for Exercise 8. There will also be a general course review after you have finished.

By this time, you know a great deal about your System/23 and computers in general. Now, it's up to you to use all the tools you received with your system, and practice, practice, practice.

Summary

Summary

In this exercise, you learned:

- Why you need to copy diskettes
- When to use each kind of COPY
- Where to find information about COPY in *Customer Support Functions,* Volume I (in binder 5)
- The steps in COPY:
  - Go through the "Starting up" steps.
  - Insert the Customer Support Functions diskette.
  - Type: link copy.
  - Press the Enter key.
  - Choose the COPY option you want from the menu.
  - Enter the correct information on the screens.
  - Insert the input and output diskettes into the specified drives when the screen tells you to do so.
  - Remove the input and output diskettes.
  - Label the output diskette.

Note: When you have finished reading the summary and have answered the questions for Exercise 8, turn to the page following the answers for the "Course review."

This page intentionally left blank.

Review

Please write the answers to the following questions on a piece of paper. Compare your answers to ours.

Question 1. The input diskette is the one that contains the information you want to copy.

True or false?

Question 2. If the adhesive label comes off, you can find the diskette VOLID on the diskette directory.

True or false?

Question 3. You can copy to a diskette:

a. one file
b. a group of files
c. the entire diskette
d. all of the above

Question 4. If you forget some of the steps in COPY, you can look them up in:

a. *Learning to Use System/23* (in binder 1)
b. *System Messages* (in binder 3)
c. *Operator Reference* (in binder 2)
d. *Customer Support Functions,* Volume I (in binder 5)

Question 5. What should you type to start the COPY procedure?

a. link prepare
b. PROC START
c. link copy
d. READY INPUT

Reminder: Don't forget to take the "Course review" on page 8-20 after you've answered these questions.

Exercise 8 - Copying a diskette

Answers

Question 1. The *correct* answer is: True.

The diskette that contains the information to be copied is the input diskette. The diskette that receives information is the output diskette.

This question is covered in step 4 of this exercise.

Question 2. The *correct* answer is: True.

The diskette directory shows the diskette type and VOLID.

This question is covered in step 15 of this exercise.

Question 3. The *correct* answer is: d.

You can perform all these COPY procedures with your computer.

This question is covered under ''COPY choices'' in Chapter 3 of *Customer Support Functions,* Volume I (in binder 5).

Question 4. The *correct* answer is: a *or* d.

Both the Learning book and *Customer Support Functions,* Volume I, contain the steps for COPY. After training, *Customer Support Functions,* Volume I (in binder 5), is the best place to look up the steps.

Question 5. The *correct* answer is: c.

Typing the words link copy starts the COPY procedure.

The other answers are *incorrect* because:

Answer a: Link prepare starts the PREPARE procedure.

Answer b: PROC START begins the "Starting up" procedures on the Customer Support Functions diskette, and is used only when starting up your system.

Answer d: Your screen displays READY INPUT when it's waiting for you to enter something.

Turn to the next page for the "Course review."

Exercise 8 - Copying a diskette

Course review

Congratulations!

Now that you have completed the review for "Copying a diskette," it would be a good time to review some of the key points that you learned through this course.

The "Course review" is guided by your computer. To begin, the computer should be started up, the Learning diskette should be in diskette drive 1 (or 3), and the Course menu should be on the screen.

To get to the "Course review" from the Course menu, you will choose Exercise 8. Although that exercise is listed as "Copying a diskette," it is really your path to the review questions.

1

To get to the "Course review," At the Course menu screen,

Type: 8
Press the Enter key.

The remainder of the "Course review" is guided by your computer.

2

To end training, At the Course menu screen,

Type: 9
Press the Enter key.

If your computer is switched off . . .

Starting up steps reminder

1. Switch on printer, diskette unit, and computer (last).
2. When PROC START appears on the screen, insert Customer Support Functions diskette marked VOL002 and close handle.
3. Press Enter.
4. Set date and time.
5. Remove Customer Support Functions diskette, VOL002, when READY INPUT appears on the screen.

If READY INPUT is on your screen . . .

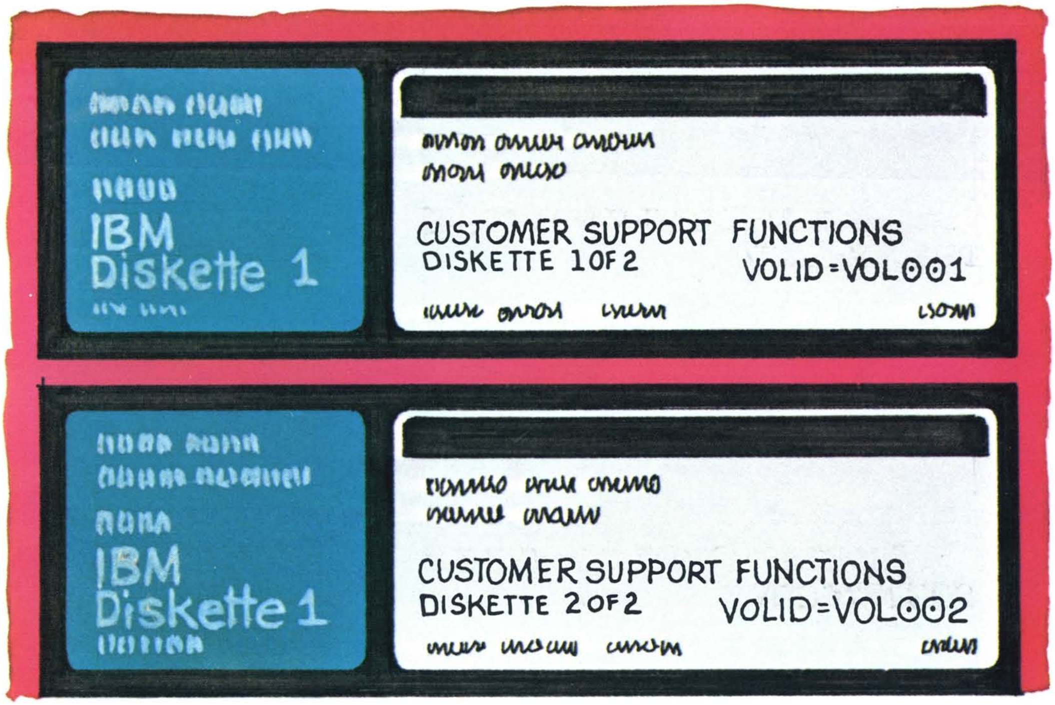
Learning diskette reminder

1. With READY INPUT on the screen, insert your Learning diskette and close the handle.
2. Type: proc learning
3. Press Enter.

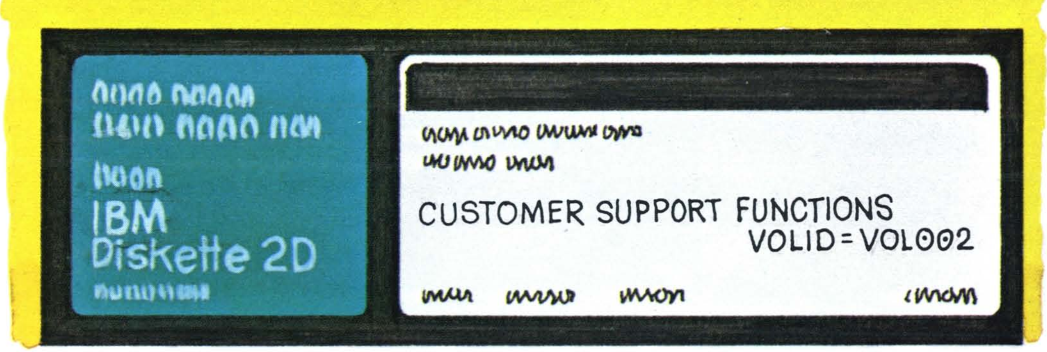
(Follow directions on screens until Course menu appears.)

Note: After you finish this course and have taken the "Course review," if you have the 5247 Disk Unit, you must refer to *Using Your 5247 Disk,* in binder 4, to learn how to use that unit.

You should use Exercise 7A, "Preparing a diskette," and Exercise 8A, "Copying a diskette," only if your System/23 came with two Customer Support Functions diskettes. The labels of those two diskettes contain the following information:


IBM Diskette 1
CUSTOMER SUPPORT FUNCTIONS
DISKETTE 1 OF 2
VOLID=VOL001
IBM Diskette 1
CUSTOMER SUPPORT FUNCTIONS
DISKETTE 2 OF 2
VOLID=VOL002

If your System/23 came with only one Customer Support Functions diskette, you need to go back to Exercise 7, "Preparing a diskette," and Exercise 8, "Copying a diskette" if you have not already done those exercises. The labels of the single Customer Support Functions diskette contain the following information:


IBM Diskette 2D
CUSTOMER SUPPORT FUNCTIONS
VOLID=VOL002

Exercise 7A - Preparing a diskette

IMPORTANT: This exercise, "Preparing a diskette," is to be used only if your System/23 came with two Customer Support Functions diskettes.

In this exercise, you will learn:

- How to find your diskette type
- How to find information about PREPARE in *Customer Support Functions, Volume I*
- Why you need to prepare diskettes
- How to prepare a diskette

In this exercise, you will perform your first, actual job-related task. You should take your time going through this exercise and read the directions carefully. After this course, you will need to prepare diskettes in your day-to-day operations.

Note: The information in this exercise is part of a structured learning package that has been designed to teach you how to operate your computer.

To gain maximum benefit from this course, you should:

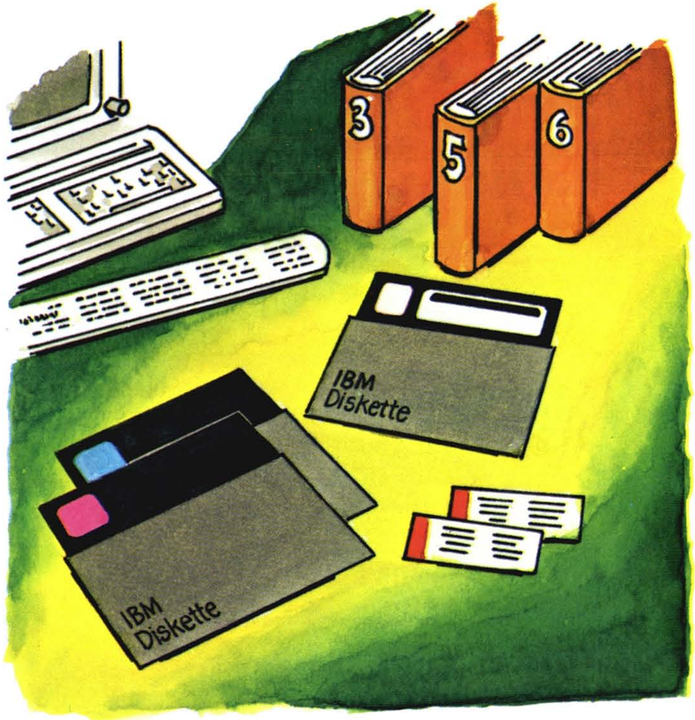
- Take each exercise in order if this is your first time through the course.
- Follow all the directions in this book and on the screens.
- Read all the material presented in each exercise. (Don't skip any steps.)

Exercise 7A - Preparing a diskette

Before you start . . .

In addition to this book, you need:

- Your System/23 Computer, any model
- *System Messages* in binder 3
- Binder 5, Support Functions
- The Operator Action Codes keyboard aid
- The Customer Support Functions diskette marked VOL001
- Two blank diskettes (or diskettes that contain information no longer needed)
- Two blank diskette labels and a felt-tipped pen



About this exercise . . .

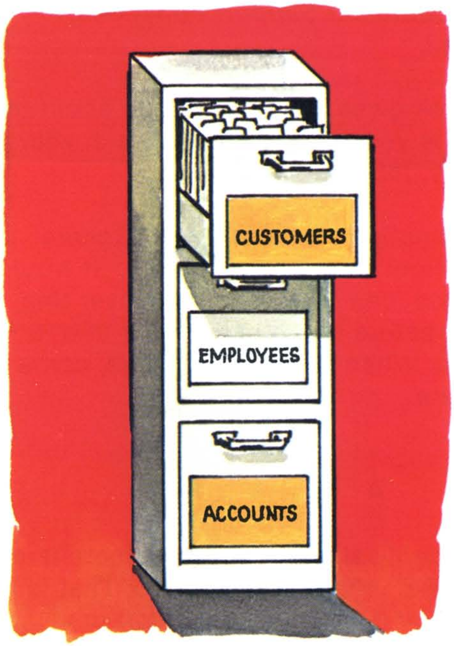
In this exercise, you will learn why diskettes must be "prepared." Then you will prepare two diskettes so that they are ready to accept information from your system.

You must prepare diskettes if:

- You want to use a brand-new diskette or one that has never been used on your system before
- You want to check a diskette for surface damage
- You want to erase old information on a diskette in order to reuse it

Before you actually prepare a diskette, let's talk about why you need to prepare one.

Suppose that your business suddenly receives a number of new, large accounts, and your present filing space is used up. You now have to order a new file cabinet so that you can store all of the information about these accounts in file folders.



After the cabinet arrives, you need to get it ready to hold the file folders. The first thing you might do is open the drawers to see if they roll out properly. Then you might adjust the metal separators in each drawer to accommodate the folders. Next, you might put labels on the drawers to show what will be contained in each one.

What you do to prepare a file cabinet to receive your new folders if very similar to what you will do when you prepare a diskette to receive information.

REMEMBER, a diskette must be prepared before it can be used the first time. You will not be able to copy information onto a diskette unless the diskette receiving the information has been prepared first.

Exercise 7A - Preparing a diskette

Now, let's look at some of the "tools" you have to work with.

Locate binder 5. Inside, you will see a book called *Customer Support Functions,* Volume I.

This book gives you information about the functions you might need to use in your everyday, job-related tasks.

You will notice that there is a "General information" section in binder 5. It would be a good idea for you to skim over that chapter before going any further in this exercise. When you have finished, come back here.

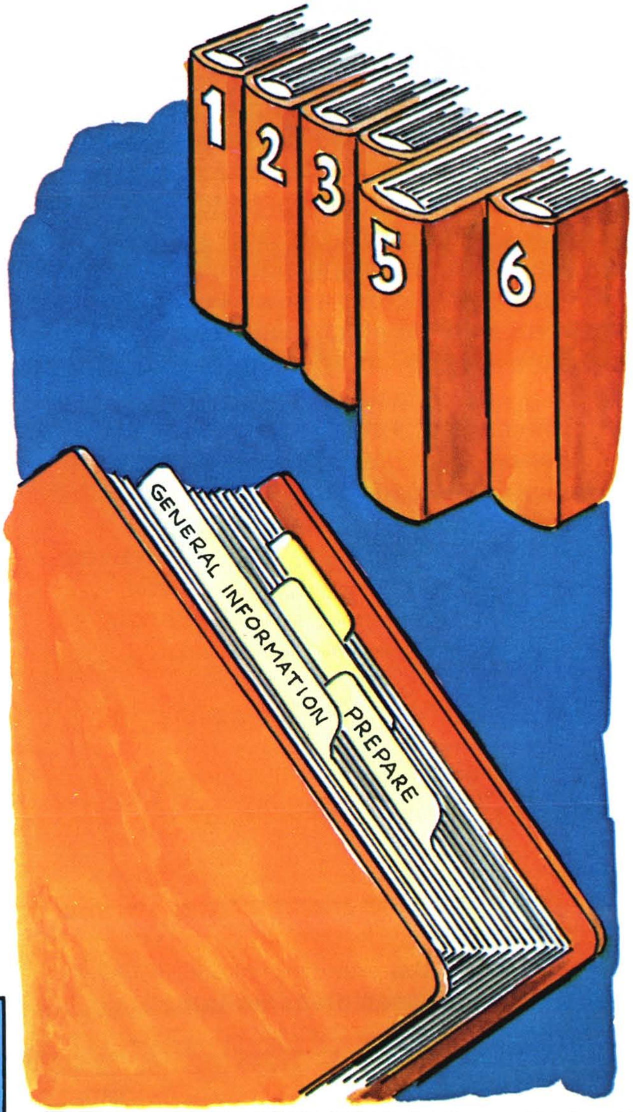
• • • • •

You probably also noticed that there is a "PREPARE" chapter in binder 5. That is the place to go if you have any additional questions about preparing diskettes, either in this exercise or after you finish training.

For now, proceed with step 1.

1 Locate the blank diskette you will prepare in this exercise.

IMPORTANT: Make sure that you have selected a diskette that does not contain any information you need. The PREPARE operation completely erases all information stored on the diskette.



Note: Once you have completed this training, binder 5 will be your primary source of information when running the Customer Support Functions.

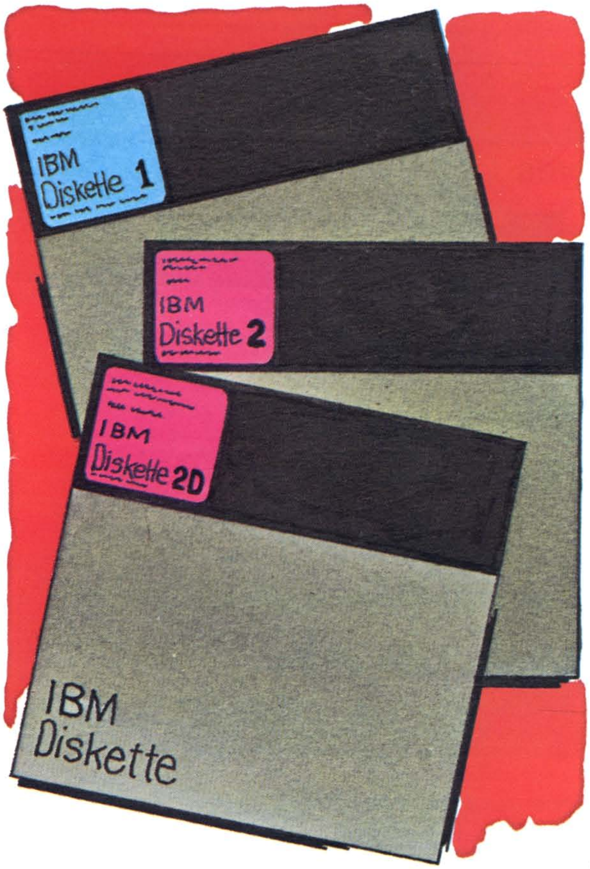
Before you can prepare a diskette, you must know its type. The diskette type (if you are using an IBM diskette) is written on the diskette label in the upper left portion of the diskette. Diskettes are either type 1, type 2 or type 2D.

During the PREPARE operation, the computer will ask you what type of diskette you are trying to prepare. Look on your blank diskette and make a note of its type.

2 Note the type of diskette you have.

If, for some reason, you cannot determine the diskette type from the diskette label in the upper left corner, go to the "HELP" section at the end of this exercise.

Note: You may put your blank diskette aside, but keep it handy. You will be using it a little later in the exercise.



Diskette 1 *Single-density, written on one side only*
Diskette 2 *Single-density, written on both sides*
Diskette 2D *Double-density, written on both sides*

Exercise 7A - Preparing a diskette

3 Observe the screen. Is READY INPUT on the status line?

yes

no

3A If the system power is ON, another program may be running. Check with whoever started it to determine when you may use the system.

If system power is OFF, start it.

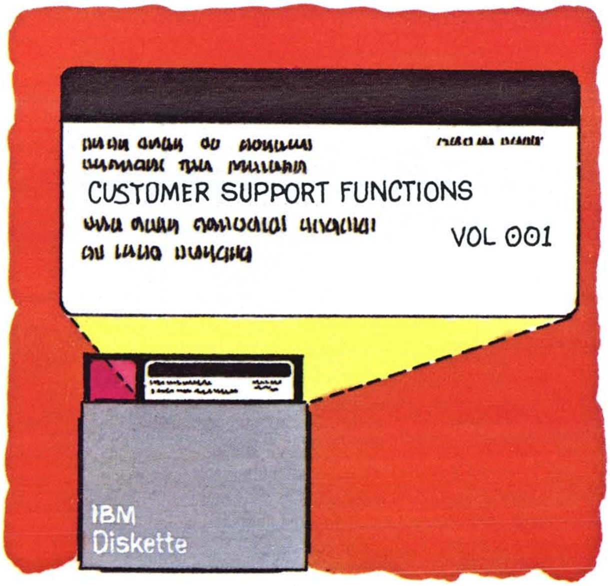
Starting up steps reminder

1. Switch on printer, diskette unit, and computer (last).
2. When PROC START appears on the screen, insert Customer Support Functions diskette marked VOL002 and close handle.
3. Press Enter.
4. Set date and time.
5. Remove Customer Support Functions diskette, VOL002, when READY INPUT appears on the screen.

4 If there are any diskettes in any of the diskette drives, remove them now. All handles should be open.

5 Locate your Customer Support Functions diskette marked VOL001.

6 Insert the Customer Support Functions diskette, VOL001, into drive 1 (or drive 3 if your computer has no drives). Close the drive handle.



The Customer Support Functions diskette, VOL001 is in a drive and READY INPUT is on the screen. Now . . .

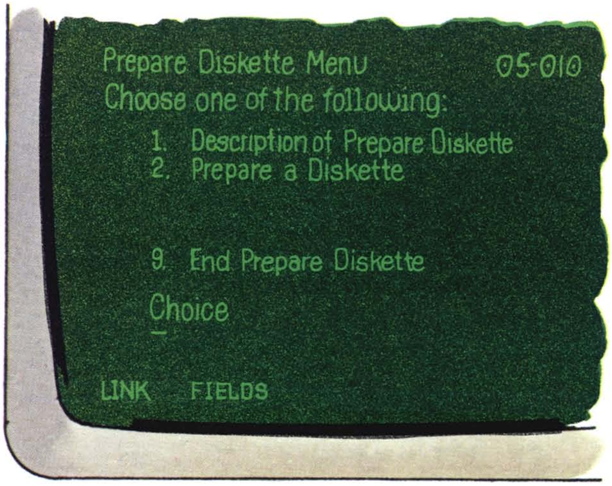
7 **Type: link prepare**
Press the Enter key.

Note: When you type link prepare and press the Enter key, the computer reads the file with the filename PREPARE from this diskette and stores it temporarily. Then the computer starts the PREPARE program by putting the Prepare Diskette menu on your screen.

If your Customer Support Functions diskette is in the correct drive, you've typed link prepare and pressed the Enter key, don't worry if you don't see the Prepare Diskette menu on the screen right away. It could mean that someone else is using the diskette unit. If, after a while, you still don't see the menu, check *Operator Reference* in binder 2 under "Startup problems" (in Chapter 8, "HELP").

8 **Remove your Customer Support Functions diskette when the Prepare Diskette menu appears.**

9 **Observe the screen.**



```
Prepare Diskette Menu                    05-010
Choose one of the following:

    1. Description of Prepare Diskette
    2. Prepare a Diskette


    9. End Prepare Diskette

    Choice
    _

LINK   FIELDS
```

The number 05-010 is in the upper right corner of the Prepare Diskette menu screen. Every screen in a Customer Support Function has a number in the upper right corner. This number can help you to locate the screen in the Customer Support Functions books.

If you don't see this screen, turn to the "HELP" section at the end of this exercise.

Exercise 7A - Preparing a diskette

Screen 05-010, the Prepare Diskette menu, asks you if you want to:

1. Read a description of the Prepare Diskette Customer Support Function, or
2. Do the actual procedure to prepare a diskette, or,
9. End the Prepare Diskette function

Because this exercise will show you how the Prepare Diskette function works, you will choose 1. But come back here after reading the first description screen so that we can explain it.

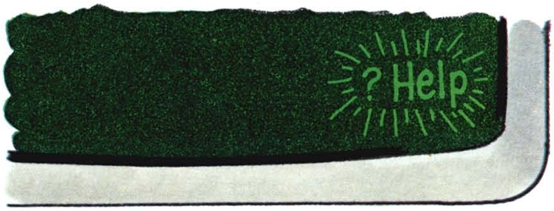
10 **Type: 1**
Press the Enter key.

This is the first of two description screens. It explains the use of the Enter key, the "? Help" feature, and the use of the Cmd key and 9 key.

You have already been using the Enter key in this course to advance to the next screen.

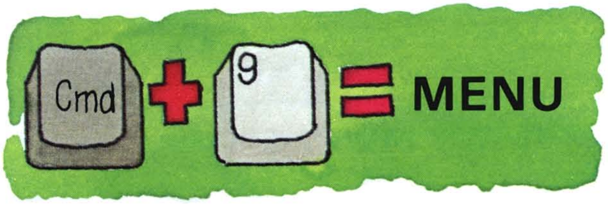
The "? Help" feature is built into many of the Customer Support Functions screens to provide you with additional information about fields you are asked to fill in. Any time you see "? Help" in the lower right corner of a screen, you may request additional help by typing a ? in any field on that screen then pressing Enter. Additional text will appear on that screen.

Be sure to try this feature in this exercise whenever you see a "? Help" at the bottom of a screen.



Any screen displaying a Cmd 9 at the bottom will allow you to return directly to the menu without performing that function.

Simply hold down the Cmd key while you press the 9 key on the right side of your keyboard (the numeric key pad); then, release both keys. It is not necessary to press the Enter key. You will return to the menu for whatever function you are performing.



11 **When you have read the first description screen, you may go to the second description screen.**

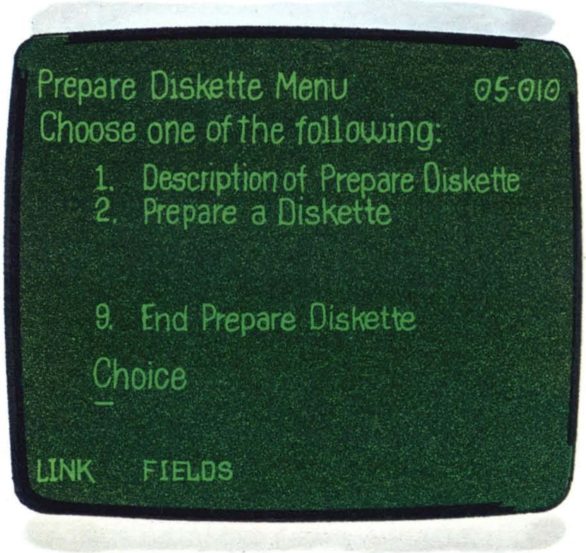
Press the Enter key.

12 **When you have read the second description screen and want to return to the Prepare Diskette menu:**

Press the Enter key.

Now, you have looked at the description screens and are ready to actually prepare a diskette.

The Prepare Diskette menu is on the screen . . .

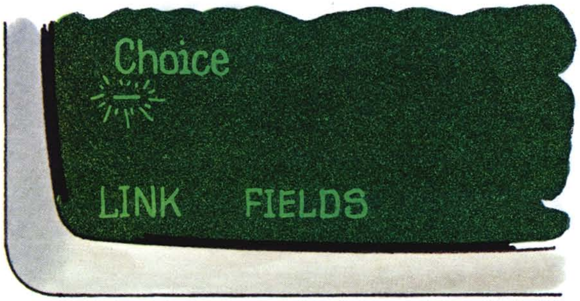


```
Prepare Diskette Menu                  05-010
Choose one of the following:

     1. Description of Prepare Diskette
     2. Prepare a Diskette


     9. End Prepare Diskette

     Choice
     _

LINK    FIELDS
```

Exercise 7A - Preparing a diskette

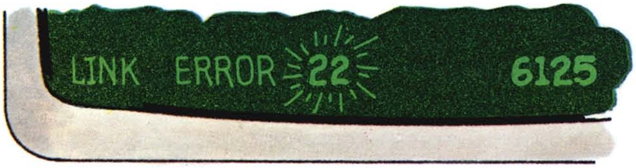
Before we actually do the PREPARE, let's look at some common error situations.

You have the Prepare Diskette menu on the screen. The cursor is blinking in the first field. The program is looking for a one-digit entry into that field (a 1, a 2, or a 9). Let's type more than one digit and see what happens.



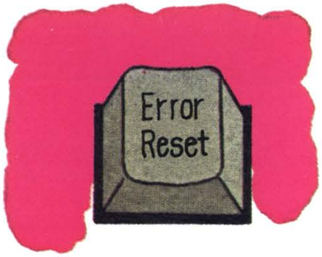
13 **Type: 456**

As soon as you typed more digits than the field was looking for, the computer recognized that something was wrong and "*beeped!*" It also put an action code and error code on the status line.



If you checked your *System Messages* book for error code 6125, you would find that you have typed too many characters into an input field.

Notice the position of the cursor. It is *stuck* at the end of the field. As soon as you tried to advance it past the end of the field, the error was recognized. Therefore, to correct the error:

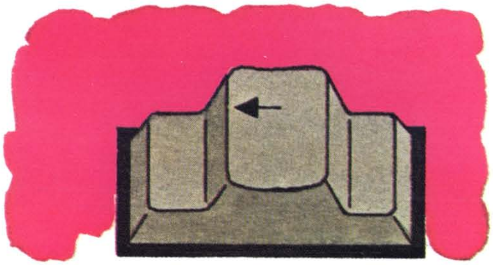


14 **Press the Error Reset key.**

This clears the error condition . . .

The blinking action code disappears. The highlighted error code isn't highlighted anymore.

Then:



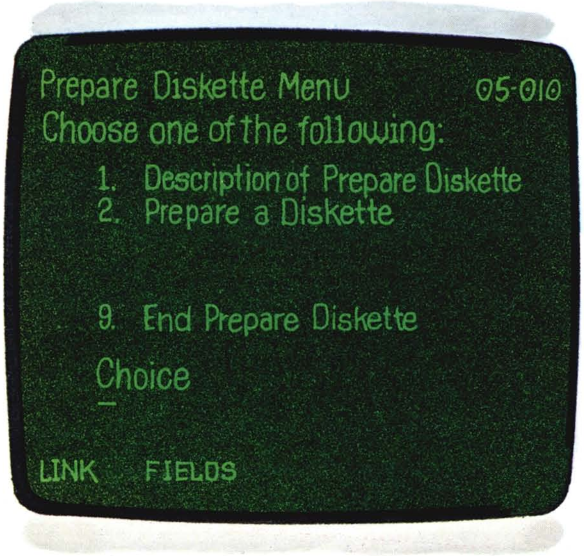
15 **Press the Backspace key once.**

In effect, this returns the cursor to the last position *in* the field (since the error occurred in the first position *past* the field). If this were a longer field instead of a one-position field, you would continue to backspace until the cursor was back at the beginning so that you could type into the field again (correctly this time, of course).

Now that you can handle this type of error, let's do a PREPARE!

Exercise 7A - Preparing a diskette

Screen 05-010, the Prepare Diskette menu, asks you to choose one of the following functions:



Prepare Diskette Menu 05-010
Choose one of the following:
1. Description of Prepare Diskette
2. Prepare a Diskette

9. End Prepare Diskette

Choice

LINK FIELDS

You would:

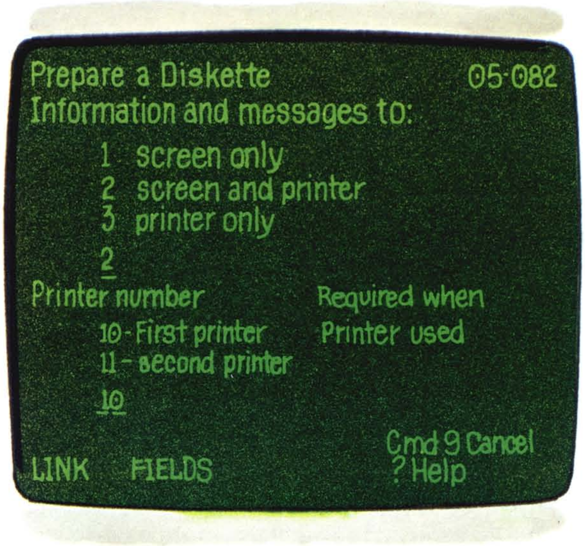
1. Type a 1 for a description of the Prepare Diskette Customer Support Function
2. Type a 2 for the actual procedure to prepare a diskette
9. Type a 9 to end the Prepare Diskette Customer Support Function

You have already read the description screens, and now are ready to prepare a diskette; therefore:

16

On screen 05-010,
Type: 2
Press the Enter key.

You should now see screen **05-082.**



```
Prepare a Diskette                     05-082
Information and messages to:
          1  screen only
          2  screen and printer
          3  printer only
          2
Printer number              Required when
          10-First printer  Printer used
          11-second printer
          10
                                 Cmd 9 Cancel
LINK   FIELDS                    ? Help
```

Note: The numbers that appear on certain screens as selections have been chosen for you. In some cases, you will use them; in others, it might be necessary to change them. You will be told when to choose a number other than the one selected by the computer. If you don't make the choice, the computer will use the number already filled in.

Screen 05-082 asks:

When this program communicates with you, do you want that communication to appear on the screen? on the printer? or on both the screen and the printer?

You would type a 1 to have the communication appear only on the screen.

You would type a 2 to have the communication appear on the screen and printed on paper.

You would type a 3 to have the communication appear printed on paper only.

If you choose 2 or 3, you must make sure your printer is loaded with paper and ready to print.

You must also tell the computer which printer you want to use. Some systems have two printers; yours might not. Your first printer is specified by the number 10; your second printer is specified by the number 11.

You don't need a printed output from this function; so:

17

On screen 05-082,
Type: 1
Press the Enter key.

Note: The 2 in the first field of this screen will be replaced by a 1; the 10 in the second field will stay the same, and the program will proceed to the next screen (05-092).

Exercise 7A - Preparing a diskette

You should now see screen **05-092** . . .

The first choice you are asked to make is called *format.*

Most diskettes will be prepared in IBM System/23 format because that is the most efficient layout for this computer.

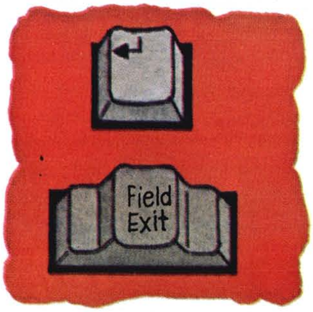
The other two formats are only used to make a diskette compatible with other IBM systems that have slightly different languages. When in doubt, use the IBM System/23 format.

You are then asked to supply the VOLID (name) you want this diskette to have. In this exercise, we have chosen a name for you. Other times when you prepare a diskette, you will supply the VOLID.

To choose IBM System/23 format and supply a VOLID of CSF001,

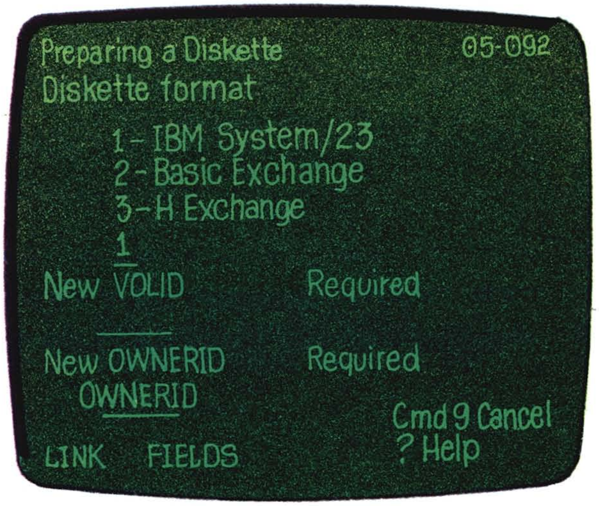
18

On screen 05-092,
Leave the 1 in the first field.
Press the New Line key once.
Type: csf001



The New Line key advances the cursor to the next field.

The Field Exit key removes information from the rest of a field and advances the cursor to the next field.



```
Preparing a Diskette                05-092
Diskette format
      1-IBM System/23
      2-Basic Exchange
      3-H Exchange
      1
New VOLID           Required
_______
New OWNERID         Required
   OWNERID
                           Cmd 9 Cancel
LINK   FIELDS              ? Help
```

Note: To learn more about VOLID, you should now go to the "Diskettes and disk" chapter of *Operator Reference* in binder 2.

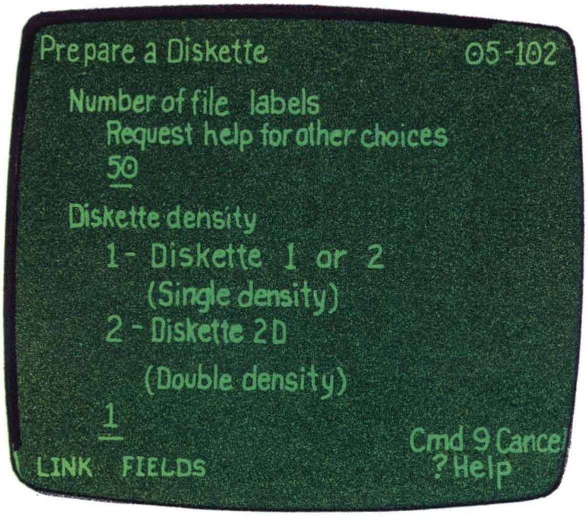
OWNERID is a further means of identifying your diskette. In some cases, you might want to use OWNERID as a key or a password to restrict the use of a diskette. Remember, you can only use up to 14 letters or numbers with no spaces between them for OWNERID.

19

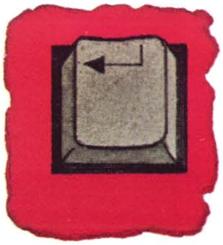
Then,
Press the New Line key once.
Type your first name for OWNERID.
Press the Field Exit key.

20 **Press the Enter key.**

You should now see screen **05-102** . . .



```
Prepare a Diskette                    05-102
  Number of file labels
    Request help for other choices
    50
  Diskette density
    1 - Diskette 1 or 2
         (Single density)
    2 - Diskette 2D
         (Double density)
    1
                                   Cmd 9 Cancel
LINK  FIELDS                        ? Help
```



The New Line key advances the cursor to the next field.

This screen allows you to choose whether you want to have a diskette with many small files, or a diskette with only a few large files, or an average number of average-sized files. The PREPARE function will then build a space for a directory to hold your filenames which you will assign as you fill the diskette with information. This will enable the computer to locate your files as they are written on the diskette.

The number *50* has been filled in for you and works well in most cases. The number 50 means that the PREPARE program will build a directory (similar to a table of contents) that can hold 50 filenames.

The PREPARE program must know what *type* of diskette you are preparing. A double-density diskette can hold twice as many characters in a given space as a single-density diskette can.

Therefore, to format the diskette to hold 50 files and tell the program the diskette type you are using . . .

21

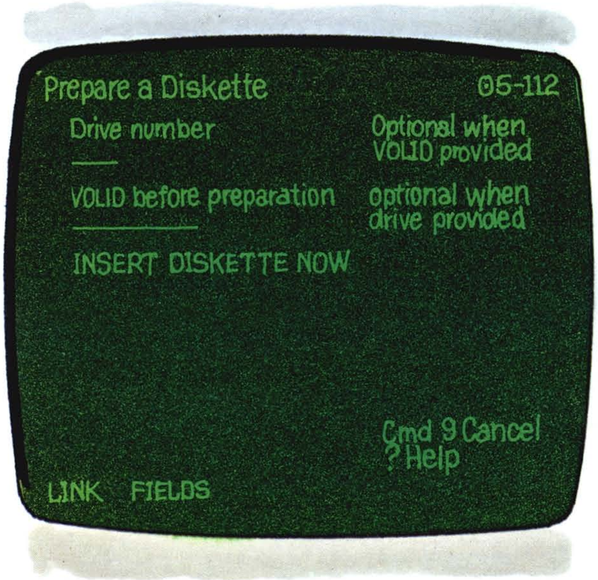
On screen 05-102,
Press the New Line key once.

Type: 1

Press the Enter key.

Exercise 7A - Preparing a diskette

You should see screen **05-112** . . .



```
Prepare a Diskette                              05-112
   Drive number                        Optional when
                                       VOLID provided
   ___
   VOLID before preparation            optional when
                                       drive provided
   ______________
   INSERT DISKETTE NOW



                                       Cmd 9 Cancel
                                       ? Help
 LINK   FIELDS
```

Now, you must tell the computer the number of the drive containing the diskette that will be prepared. Remember, the number is written on the handle of the drive.

As long as you tell the computer which drive contains the diskette to be prepared, it is not necessary to tell the computer the old VOLID of that diskette.

22 **On screen 05-112,**
Type the number of the drive into which you will insert your diskette.

23 **Insert the diskette that will be prepared into the diskette drive you selected in step 22.**

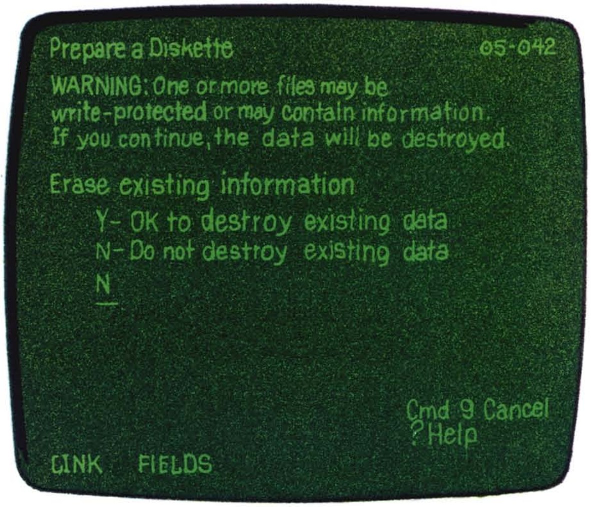
Close the handle.

Once you press the Enter key, the PREPARE program will begin to do the PREPARE.

24 **Press the Enter key.**

Exercise 7A - Preparing a diskette

Screen 05-042 is a warning screen. Other warning screens are: 05-122, 05-132, and 05-192.

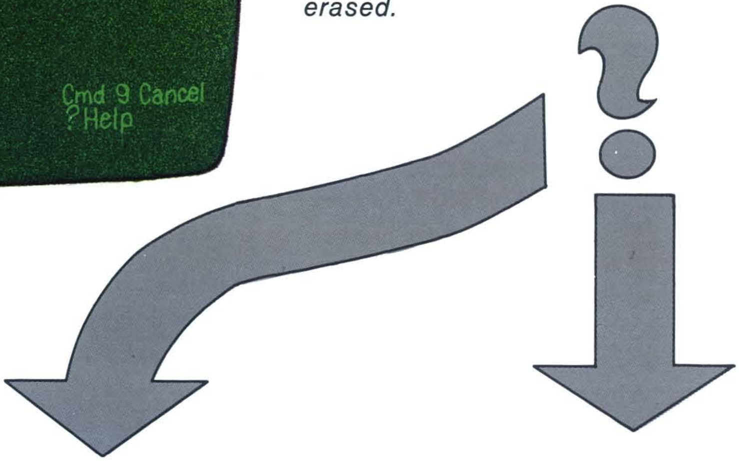


```
Prepare a Diskette                              05-042
WARNING: One or more files may be
write-protected or may contain information.
If you continue, the data will be destroyed.

Erase existing information
     Y- OK to destroy existing data
     N- Do not destroy existing data
     N
     _

                                   Cmd 9 Cancel
                                   ? Help
CINK   FIELDS
```

25 **If no warning screen appears, skip over to step 26 on the next page.**

Screen 05-042 tells you that the diskette you are trying to prepare has information on it.

At this time, you should check to be sure that you are preparing the correct diskette. If this is a used diskette, be sure the data on it is no longer needed. If you continue, all information on this diskette *will be erased.*



25 A **To continue the PREPARE,**
Type: y
Press the Enter key.

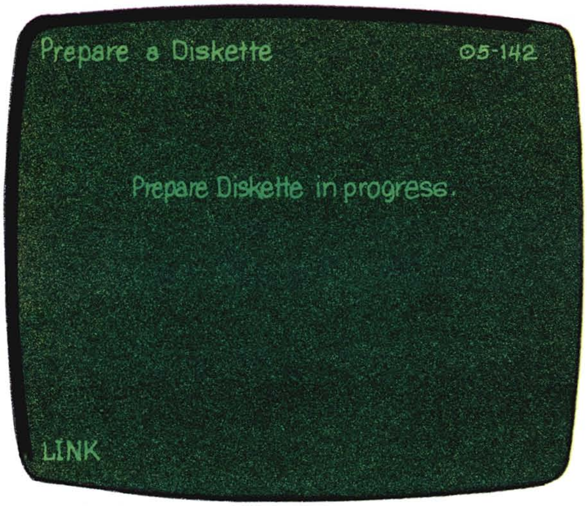
25 B **To stop the PREPARE, press the Enter key.**

You will go to screen 05-052, *"unsuccessful prepare."*

Then follow directions on screen 05-052.

Exercise 7A - Preparing a diskette

You should see screen **05-142** . . .

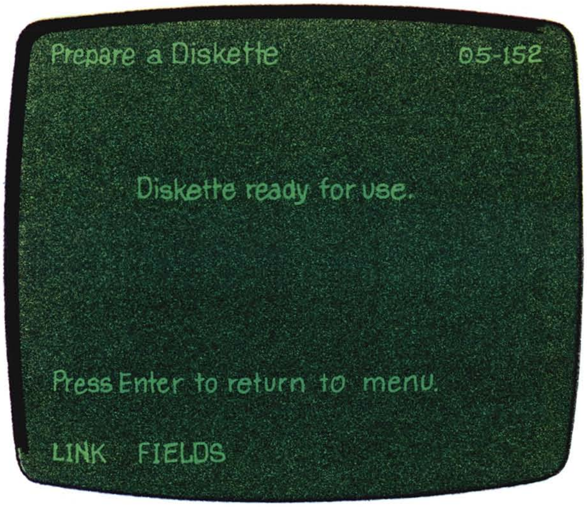


```
Prepare a Diskette                    05-142

        Prepare Diskette in progress.




LINK
```

The PREPARE program is being run at this time. Please wait until it is completed.

If you do not see screen 05-152 following screen 05-142, go to the "HELP" section at the end of this exercise.

followed by this screen **05-152.**



```
Prepare a Diskette                    05-152

        Diskette ready for use.



Press Enter to return to menu.

LINK   FIELDS
```

The PREPARE program has completed preparing this diskette.

26 **Your diskette preparation is complete.**

Follow directions on the screen to return to the menu.

27 **When you see the Prepare Diskette menu on the screen,**

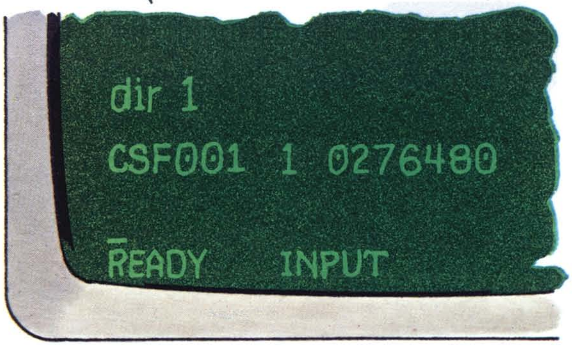
Type: 9
Press the Enter key.

You used the DIR command in Exercises 5 and 6 to display a diskette's directory.

To verify that the diskette you just prepared has been prepared correctly:

28 **Type: dir**
Space once.
Type the number of the drive containing your prepared diskette. Press the Enter key.

The directory on the screen should look like this.



```
dir 1
CSF001  1  0276480
READY   INPUT
```

On this screen, the VOLID is CSF001, and the diskette type is 1. Don't worry if the long number following the diskette type is different from the number on your screen.

29 **Compare the directories. Make sure the VOLID is CSF001.**

Is the diskette type shown on your screen correct?

Make a note of this diskette's VOLID and type. You will need it later in this exercise.

30 **Remove the diskette named CSF001 from the drive.**

You have just prepared your first diskette. Congratulations! Because it is so important that you be able to do this, we will go through the prepare operation again. This time, using the same diskette, we will change the number of files and the directory size.

Exercise 7A - Preparing a diskette

31 **Insert the Customer Support Functions diskette VOL001 into any drive.**

Close the handle.

32 **Type: link prepare**
Press the Enter key.

When the Prepare Diskette menu is on the screen:

33 **Remove the Customer Support Functions diskette from the drive.**

Note: Failure to remove your Customer Support Functions diskette could result in the accidental erasing of that diskette.

34 **To prepare a diskette**
Type: 2
Press the Enter key.

You will see screen 05-082. This screen wants to know where you would prefer to receive information and messages.

Even though the 2 is filled in for you, choose 1.

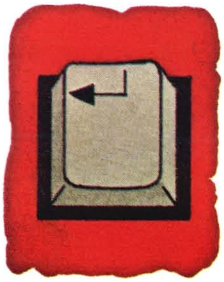
35 **Type: 1**

36 **Press the Enter key.**

You are looking at screen 05-092. First, it asks you what diskette format you want. Since you are not trying to prepare diskettes for any other type of system, you will use IBM System/23 format.

1 is already selected; so:

37 **Press the New Line key.**



The New Line key advances the cursor to the next field.

Now, you will tell the computer the name (VOLID) you want to give the diskette you are preparing. You will use the diskette you just prepared and give it the same name; so, type in CSF001.

38 **Type: csf001**
Press the New Line key.

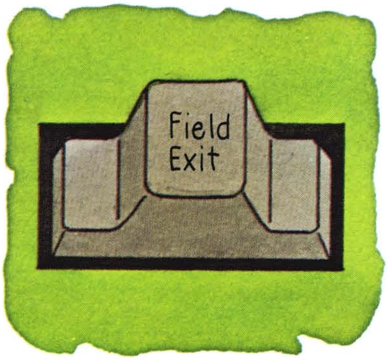
Exercise 7A - Preparing a diskette

The last item on the screen asks you for an OWNERID. This is an additional level of diskette identification. The OWNERID can be your name, your company name, or any identification of 14 characters or fewer. For this exercise, type your first name.

39

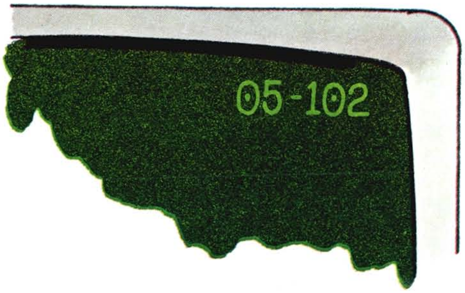
Type your first name.
Press the Field Exit key.

Press the Enter key to go to the next screen.



The Field Exit key removes information from the rest of a field and advances the cursor to the next field.

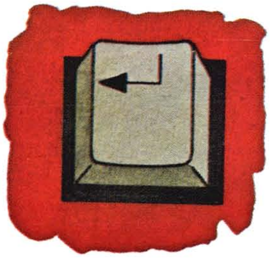
You are looking at screen 05-102. This is where you tell the PREPARE program how many file labels you want on your diskette. Although 50 is usually enough, let's say that this time we would like to have 100. To make sure that is not more than the diskette can hold, type a ? into the first position of the field and press the Enter key. This will tell you the limits for the type of diskette you are preparing.



Once you have checked that 100 is OK,

40

Type: 100
Press the New Line key.



The New Line key advances the cursor to the next field.

The cursor is now in the next field.

The computer must know the density of the diskette you are preparing. You made a note of your diskette type earlier in this exercise.

Just in case you've forgotten, your diskette is a type 1, single-density diskette; so, you will enter a 1.

41 **Type: 1**
Press the Enter key.

Now you are looking at screen 05-112. This screen wants to know the number of the drive into which you will put the diskette you are preparing.

42 **Insert the diskette you want to prepare into a drive.**

This is the same diskette you just finished preparing (CSF001).

Close the handle.

43 **Type the drive number of the diskette you are preparing.**

Next, the computer wants to know the *old* VOLID (name) of the diskette you are going to prepare. You could enter CSF001 here, but it is not necessary to supply the old VOLID as long as you have told the computer what drive the diskette will be in when you prepare it. Since you have done this, you can move on.

44 **Press the Enter key.**

You are now looking at screen 05-142. The PREPARE function is in progress. At this time, the program is erasing old information, checking the surface of the diskette for defects, and building a new directory from the information you have supplied.

When the PREPARE program has completed preparing your diskette, it will display screen 05-152 telling you that the operation has been done successfully.

45 **Press the Enter key.**

When you have the Prepare Diskette menu on the screen,

46 **Type: 9**
Press the Enter key.

READY INPUT is displayed.

Now you have performed the Prepare Diskette Customer Support Function twice and should start feeling a little more confident about it.

To make sure that this diskette has been prepared properly:

47 **Type: dir**
Space once.
Type the drive number.
Press the Enter key.

48 **Look at the directory.**
Make sure the VOLID is CSF001.

If the VOLID isn't CSF001, you might have incorrectly entered the new VOLID on screen 05-092. Go to the "HELP" section at the end of this exercise.

Exercise 7A - Preparing a diskette

49 **Remove the diskette named CSF001. Write CSF001 on an adhesive label and apply it to the diskette.**

You will use this diskette that you just prepared later, in Exercise 8A. Put it aside until then.

Exercise 8A will require another diskette. It must be prepared now. This time, you will do the PREPARE on your own.

Don't forget that the "? Help" feature is there for you to use. Also, you can look up any screen by its number in the "PREPARE screens" section of Chapter 2 in binder 5.

50 **Insert the Customer Support Functions diskette, VOL001.**

Close the handle.

51 **Type: link prepare**
Press the Enter key.

52 **When the Prepare Diskette menu appears, remove your Customer Support Functions diskette.**

Note: Please observe proper diskette handling procedures when writing and applying adhesive labels. For information on diskette handling procedures, refer to "Handling and storing diskettes" in the "Diskettes and disk" chapter of *Operator Reference* in binder 2.

PREPARE
Prepare Screens
CUSTOMER SUPPORT FUNCTIONS
VOL 001

53 **Since you have the Prepare Diskette menu on your screen,**

Type: 2
Press the Enter key.

Make the following selections as you go from screen to screen.

If you have any problems doing this PREPARE, go to the "PREPARE screens" section of binder 5.

(Note your diskette type first.)

- At screen 05-082, select information to "screen only."
- At screen 05-092:
  - — Choose the IBM System/23 format.
  - — Use CSF002 as your new VOLID.
  - — Use a name, such as your company's, (if it doesn't have more than 14 characters) for new OWNERID.
- At screen 05-102:
  - — Request 75 file labels.
  - — Indicate your diskette type.
- At screen 05-112, type in the number of the drive containing the diskette you will prepare.

After your PREPARE is completed, you should have the Prepare Diskette menu on your screen (screen 05-010).

54 **Type: 9**
Press the Enter key.

Note: If you have a question about any Customer Support Functions screen, use the number in the upper right corner of that screen to find the description of that screen in the chapter of the *Customer Support Functions* book for the function you are using (binder 5 or binder 6).

To make sure that this diskette has been prepared properly:

55 **Type: dir**
Space once.
Type the drive number.
Press the Enter key.

56 **Check the screen.**
Is the VOLID now CSF002?
Is the diskette type correct?

If the VOLID isn't CSF002, you might have incorrectly entered the new VOLID on screen 05-092. Go to the "HELP" section at the end of this exercise.

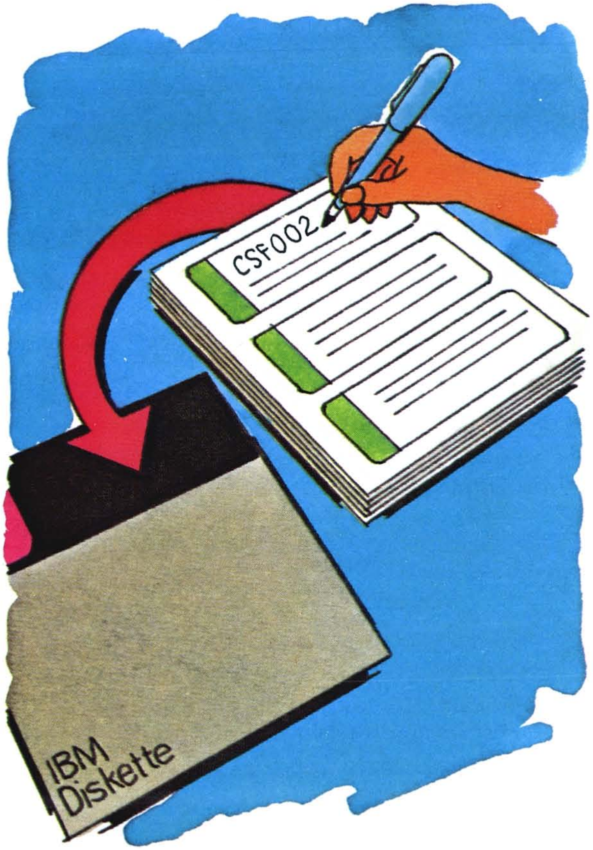
57 **Remove the diskette named CSF002.**

Exercise 7A - Preparing a diskette

58 **Write this diskette's name, CSF002, on an adhesive label and apply it to the diskette.**

Note: Please observe proper diskette handling procedures when writing and applying adhesive labels.

Note: Save the diskettes called CSF001 and CSF002. They will be needed in Exercise 8A.



Congratulations!

Performing the steps necessary to prepare a diskette involves using many of the same skills that you need to successfully operate your system on a day-to-day basis. Having come this far along, you have shown that you can use the books supporting your system to do productive work.

Much of the remainder of this course is aimed at sharpening the skills you have developed as well as building new ones.

You should now read the summary and answer the review questions at the end of this exercise.

Summary

Summary

In this exercise, you learned:

- How to find your diskette type
- Where to find information about PREPARE in binder 5
- Why you need to prepare diskettes
- The steps in PREPARE:
    - Go through the "Starting up" steps.
    - Insert the Customer Support Functions diskette, VOL001.
    - Type: link prepare
    - Press the Enter key.
    - Remove the VOL001 diskette.
    - Choose 2 on the Prepare menu.
    - Enter the correct information on the PREPARE screens.
    - Remove the diskette after it has been prepared.
    - Label the prepared diskette.

Exercise 7A - Preparing a diskette

Review

Please write the answers to the following questions on a piece of paper. Compare your answers to ours.

Question 1. Preparing a diskette will tell you if your diskette is damaged.

True or false?

Question 2. A brand new diskette must be prepared.

True or false?

Question 3. The PREPARE procedure completely erases all information stored on a diskette.

True or false?

Question 4. Which diskette contains the program and screens for PREPARE?

a. Learning diskette, VOL003
b. Customer Support Functions diskette, VOL001
c. Customer Support Functions diskette, VOL002
d. all of the above

Question 5. Which book contains the steps and screens for PREPARE?

a. *Operator Reference* (in binder 2)
b. *System Messages* (in binder 3)
c. *Customer Support Functions,* Volume I (in binder 5)
d. *Customer Support Functions,* Volume II (in binder 6)

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Exercise 7A - Preparing a diskette

Answers

Question 1. The *correct* answer is: True.

If your diskette is damaged, you will see screen 05-162 or 05-172.

This question is covered in the "PREPARE" chapter of *Customer Support Functions,* Volume I.

Question 2. The *correct* answer is: True.

You must prepare brand new diskettes so that they are set up for the computer system you have.

This question is covered in "About this exercise."

Question 3. The *correct* answer is: True.

PREPARE erases all information stored on a diskette.

This question is covered in the block marked "IMPORTANT" after step 1.

Question 4. The *correct* answer is: b.

The Customer Support Functions diskette, VOL001, contains the program and screens for PREPARE.

The other answers are *incorrect* because:

Answer a: The Learning diskette contains the screens for the Learning book.

Answer c: The Customer Support Functions diskette, VOL002, updates the computer and lets you enter the date and time.

This question is covered in step 6.

Question 5. The *correct* answer is: c.

Customer Support Functions, Volume I (in binder 5), covers the Customer Support Functions: PREPARE (DISKETTE), COPY, LABEL, RECOVER (DISKETTE), REPLACE, SELECT, UPDATE, PREPARE.DISK, ADD.DELETE, BACKUP.RESTORE, and DISK.RECOVER.

The other answers are *incorrect* because:

Answer a: *Operator Reference* (in binder 2) gives information about equipment, commands, and diskettes for your computer system.

Answer b: *System Messages* (in binder 3) explains what the error and action codes mean.

Answer d: *Customer Support Functions,* Volume II (in binder 6), discusses the Customer Support Functions: RECOVER (DISKETTE), SORT, PRESORT, INDEX, COLSEQ, LISTFILE, LISTSTOR, LISTDISK, and DISK.RECOVER.

HELP

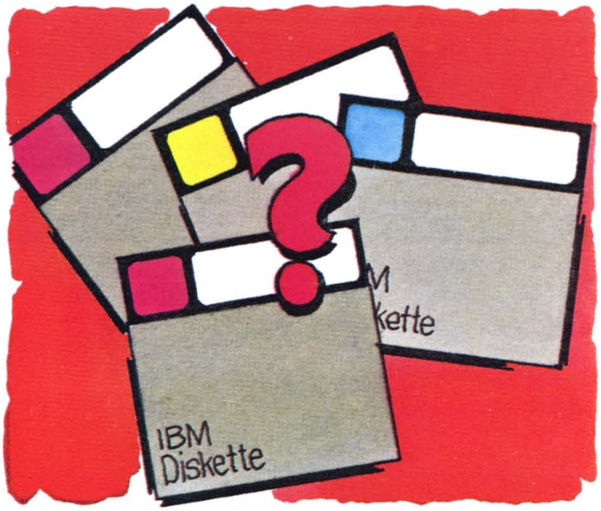
HELP

On the next few pages, we have tried to provide some helpful hints to guide you through situations that might occur during this "Preparing a diskette" exercise.

If you have a problem, read through these pages for help. If you still have a problem, call IBM for technical support.

You can locate the instructions for correcting your problem by noting the number of the step where you had the problem, then looking for that step number in this HELP section.

You are at step **2**



You cannot determine the diskette type from the diskette label in the upper left corner.

You must look at the diskette's internal directory.

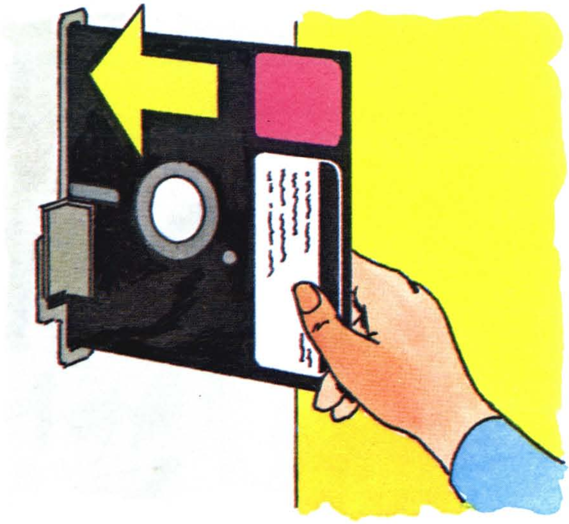
Follow these steps to display the diskette directory.

At this time, make sure your system is started up, no program is running, and all diskettes are removed. All diskette drive handles should be open.

The screen should show READY INPUT on the status line.

1 **Insert the diskette you are going to prepare into any drive.**

Close the handle.



Exercise 7A - Preparing a diskette

HELP (continued)

2 **Type: dir**
space once, and type the number of the diskette drive into which you inserted the diskette to be prepared.

For example, if you put the diskette into diskette drive 1, you would have typed:

dir 1

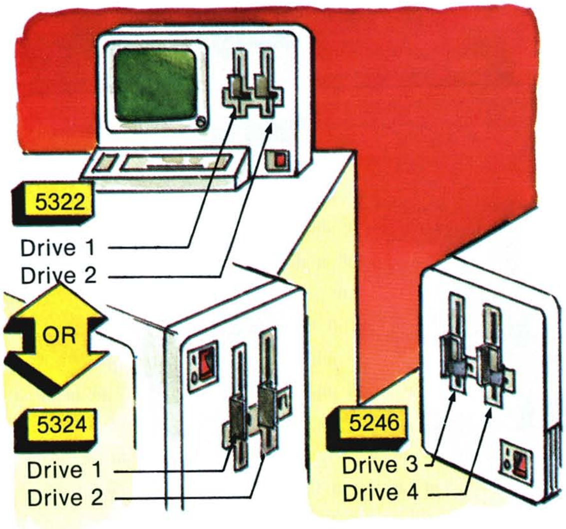
drive 2 would have been **dir 2**
drive 3 would have been **dir 3**
drive 4 would have been **dir 4**

3 **Press the Enter key.**

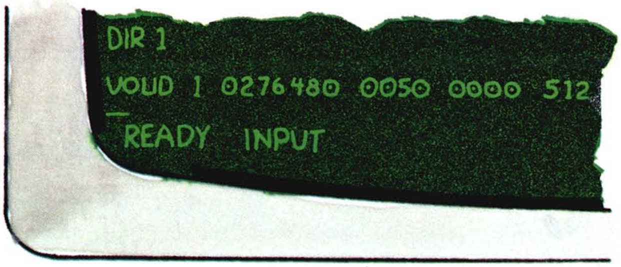
The directory information from the diskette should appear on your screen.

Use DIR when you want to see the contents of a diskette's directory.

Note: The DIR is explained fully in the "Commands" chapter of *Operator Reference* in binder 2.



Note: The diskette drive number is written on each drive handle.

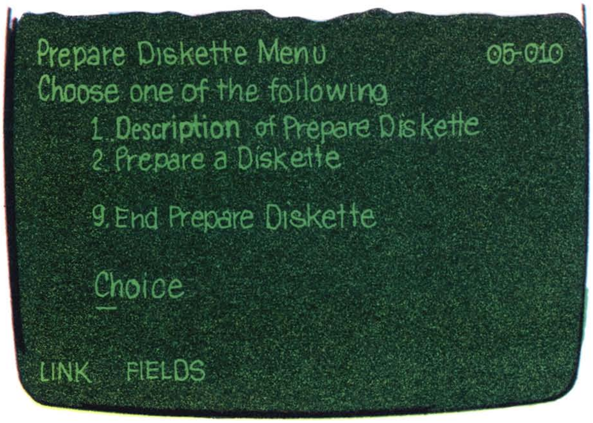


```
DIR 1
VOLID 1 0276480 0050 0000 512
_
 READY  INPUT
```

The 1 following the VOLID shows the diskette type.

You are at step **9**

But you do not see the Prepare Diskette menu.



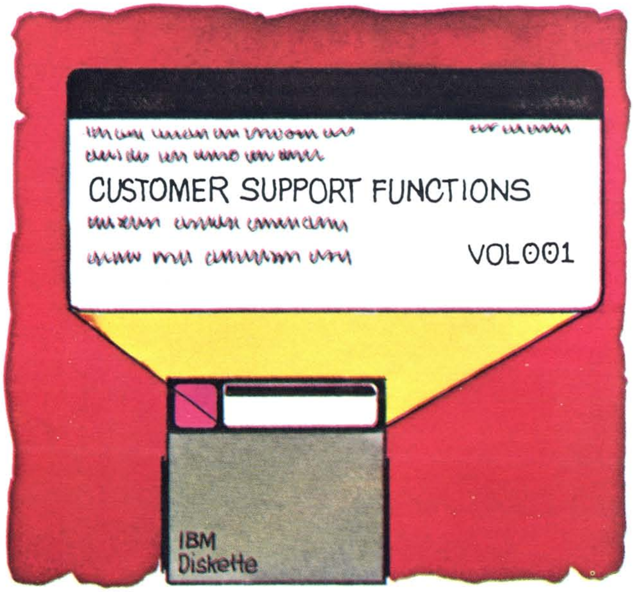
```
Prepare Diskette Menu                      05-010
Choose one of the following
    1. Description of Prepare Diskette
    2. Prepare a Diskette

    9. End Prepare Diskette

    Choice

LINK   FIELDS
```

1. You typed link prepare incorrectly. Check your spelling and correct any mistakes.

2. You inserted the wrong diskette.

   Pull out the diskette you did insert. The correct diskette should be the Customer Support Functions diskette, VOL001.

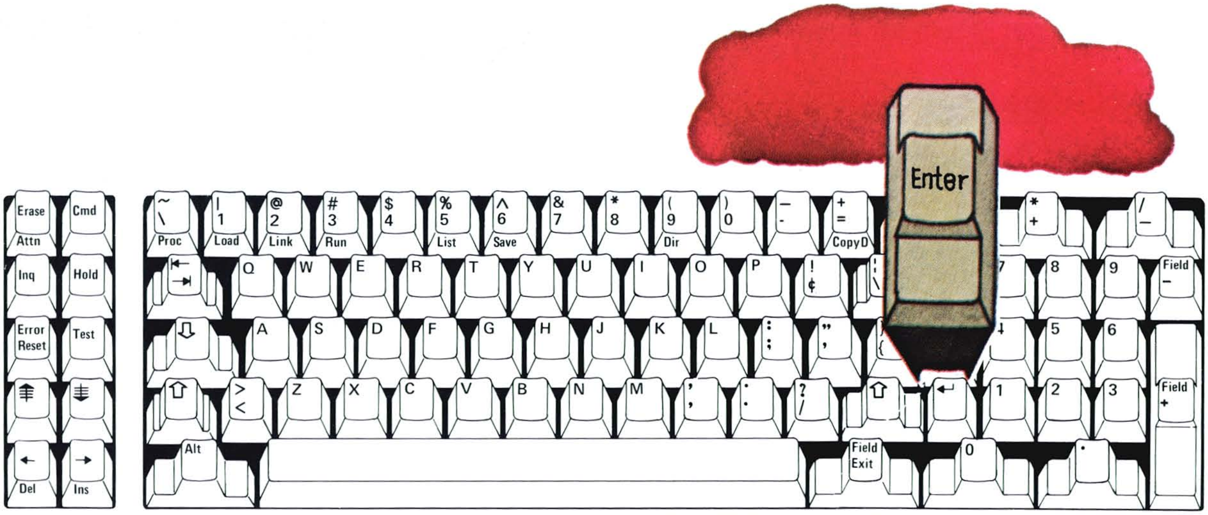
   Insert the correct diskette.



HELP (continued)

3. You forgot to press Enter.

   Press Enter when you're sure you have typed link prepare correctly.



You are at step **26**

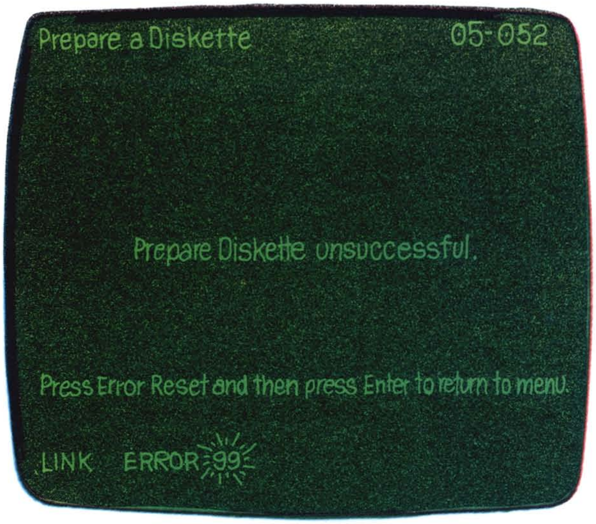
in "Preparing a diskette" and . . .

1. You expected to see screen 05-152, but screen 05-052 or 05-162 is displayed.

When one of these screens is displayed, PREPARE was unable to continue preparing the diskette and had to stop.

Look up the error code in *System Messages* (in binder 3) to determine the reason PREPARE stopped.

If you can, correct the condition that caused the problem. Then press Error Reset and Enter to return to the menu. Then try again to prepare the diskette.

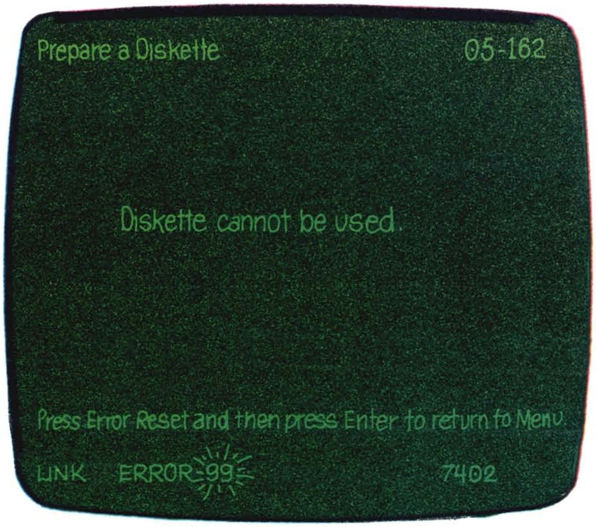


Prepare a Diskette 05-052

Prepare Diskette unsuccessful.

Press Error Reset and then press Enter to return to menu.

LINK ERROR 99



Prepare a Diskette 05-162

Diskette cannot be used.

Press Error Reset and then press Enter to return to Menu.

LINK ERROR 99 7402

Note: If screen 05-162 appears, you will have to use another diskette for the PREPARE procedure.

▷

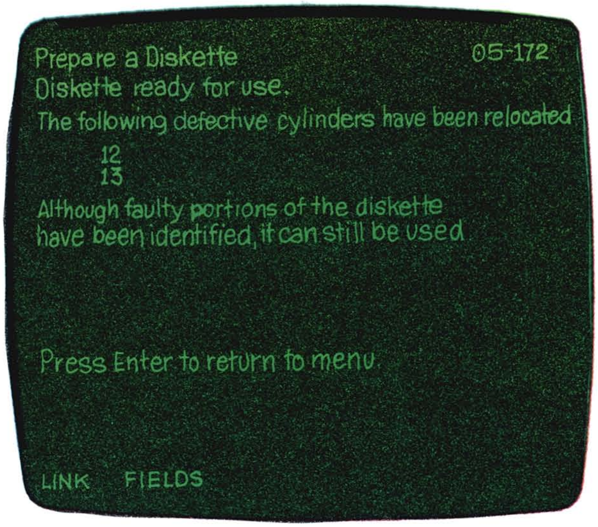
HELP (continued)

2. You expected to see screen 05-152, but screen 05-172 is displayed.

This screen is displayed to tell you that PREPARE found a defective area (cylinder) on the diskette.

A diskette may have no more than two defective areas. If more than two areas are found to be defective, screen 05-162 is displayed.

Even though a diskette is usable with a defective area, you should consider using another diskette when storing important files. A defective area may be an indication of a worn diskette.



```
Prepare a Diskette                                05-172
Diskette ready for use.
The following defective cylinders have been relocated
     12
     13
Although faulty portions of the diskette
have been identified, it can still be used

Press Enter to return to menu

LINK   FIELDS
```

You are at step **48**

in "Preparing a diskette" and . . .

- The directory shows that the VOLID is not CSF001.

When screen 05-092 was displayed as you were preparing the diskette, you might have incorrectly typed the VOLID into the "New VOLID" field.

To prepare the diskette to have a VOLID of CSF001, do the following:

1. Remove the diskette you want to prepare from the diskette drive. (This is the diskette on which you just did a DIR.)
2. Repeat "Preparing a diskette," steps 31 through 48. (Be sure to type CSF001 when you are at step 38.)

When you have completed step 48 and the VOLID is CSF001, continue with step 49.

HELP (continued)

You are at step **56**

in "Preparing a diskette" and . . .

- The directory shows that the VOLID is not CSF002.

When screen 05-092 was displayed as you were preparing the diskette, you might have incorrectly typed the VOLID into the "New VOLID" field.

To prepare the diskette to have a VOLID of CSF002, do the following:

1. Remove the diskette you want to prepare from the diskette drive. (This is the diskette on which you just did a DIR.)
2. Repeat "Preparing a diskette," steps 50 through 56. (Be sure to type CSF002 as your new VOLID on screen 05-092.)

When you have completed step 56 and the VOLID is CSF002, continue with step 57.

Exercise 8A - Copying a diskette

IMPORTANT: This exercise "Copying a diskette," is to be used only if your System/23 came with a two Customer Support Functions diskettes.

Note: The information in this exercise is part of a structured learning package that has been designed to teach you how to operate your computer.

To gain maximum benefit from this course, you should:

- Take each exercise in order if this is your first time through the course.
- Follow all directions in this book and on the screens.
- Read all the material presented in each exercise. (Don't skip any steps.)

In this exercise, you will learn:

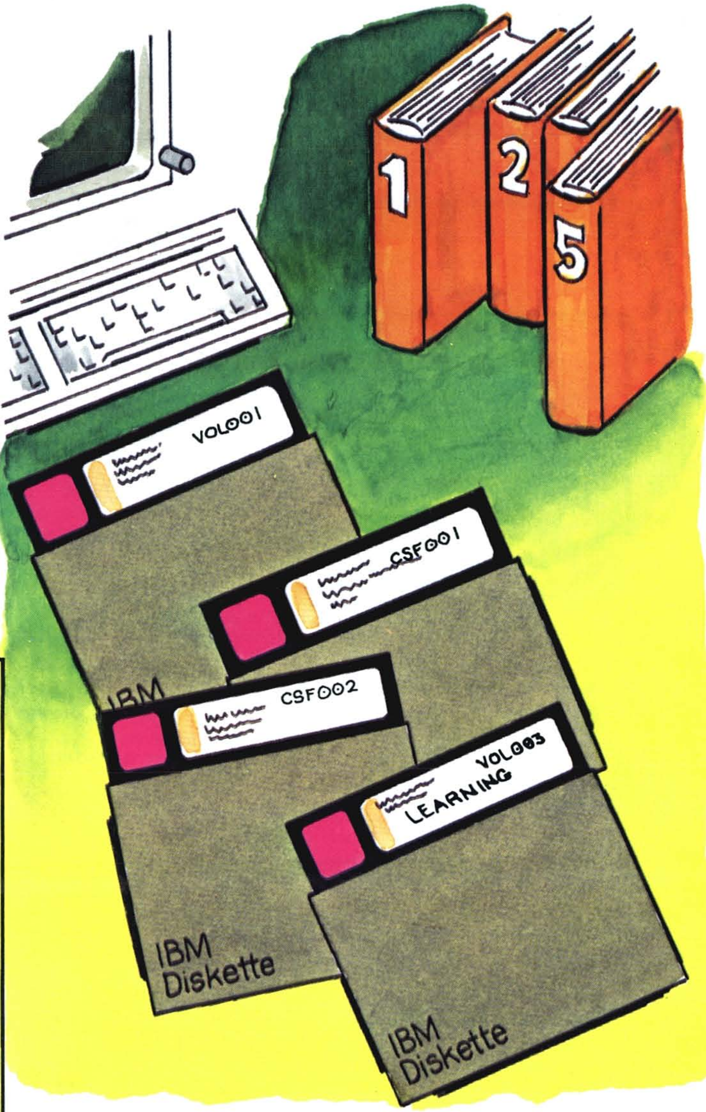
- Why you need to copy diskettes
- When to use each kind of COPY
- Where to find information about COPY in *Customer Support Functions*, Volume I (in binder 5)
- How to perform these two COPYs:
  - — COPY all files
  - — COPY one or a group of files

If your System/23 has only one diskette drive, we recommend that you do not do the COPYs now. With only one drive, these procedures take a great deal of time. To learn about COPY, you might like to read the steps in this book and binder 5. That way, you will be familiar with COPY if you have to copy a diskette after this course. Then come back to this exercise and follow the instructions on page 8A-20 for the "Course review."

Exercise 8A - Copying a diskette

In addition to this book, you need the following to complete this exercise:

- Your System/23 Computer (This exercise is written describing the steps to copy a diskette using a system with *two* diskette drives available.)
- The Customer Support Functions diskette, VOL001
- The Learning diskette, VOL003
- Binder 5, containing *Customer Support Functions,* Volume I
- The two diskettes named CSF001 and CSF002 that you prepared in Exercise 7A



Note: Before you go any further, be sure that the two diskettes you prepared in Exercise 7A have VOLIDs of CSF001 and CSF002.

If you don't know the VOLID, use the DIR command.

If the VOLIDs are not CSF001 and CSF002, link the PREPARE Customer Support Function into the computer and complete steps 16 through 58 in "Preparing a diskette," Exercise 7A.

When do you use COPY?

COPY is another Customer Support Function like PREPARE. It is used to make copies of your diskettes. You may choose to copy part of a diskette or the entire diskette.

There are several reasons you will need to use COPY.

As you begin to use your computer to help your business run more efficiently, you will be putting important information on your diskettes. Diskettes can get lost, damaged, or just wear out. Without a backup copy, the information would be gone. It might be difficult to get it back, if you could get it back at all. A backup copy of a diskette is good insurance.

If you are using a diskette on which you have files that are no longer needed, you can copy new information over the old. The COPY procedure gets rid of the old files and makes room for your new ones.

Because you will be using your Customer Support Functions diskette daily, you will need a backup copy. You will be shown how to make one in this exercise.

In this exercise, you will perform two COPYs:

- COPY all files
- COPY one file or a group of files

Remember, COPY is a function that you will probably use many times in your job; so, it is important that you go through this exercise step-by-step.

Also, don't forget that a diskette must be prepared before information can be copied onto it the first time.

Exercise 8A - Copying a diskette

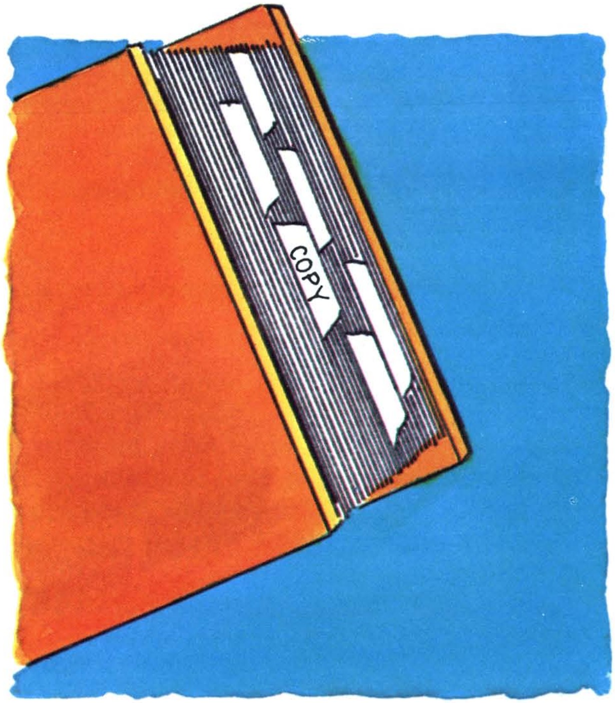
Before you actually copy some diskettes,

1

Locate binder 5.
Open *Customer Support Functions,* Volume I to Chapter 3, "COPY." Read:

- **"What COPY does"**
- **"COPY choices"**
- **"Why and when to use COPY"**

Return here.



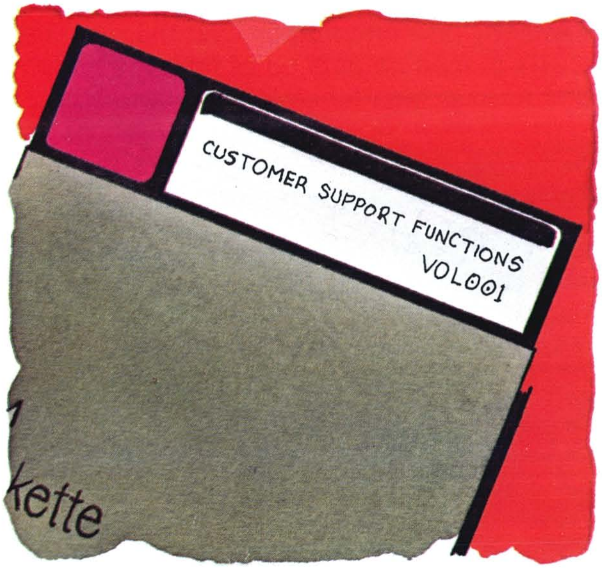
Your system should be started up (steps 1 - 20 in Exercise 1). READY INPUT should be on the status line.

All diskettes should be removed from the drives, and all handles should be open.

2

Locate your Customer Support Functions diskette marked VOL001.

Insert it into drive 1 (or 3). Close the handle.



3

Type: link copy
Press the Enter key.

Your screen should show the Copy menu.

4 **Type: 1**
Press the Enter key.

You should read all the COPY description screens and return to the main menu.

The first operation we will do is:

COPY all files

or

just "COPY all"

We will duplicate your Customer Support Functions diskette marked VOL001.

The Customer Support Functions diskette has a VOLID of VOL001. (Sound familiar?) This will be your *input* diskette.

In the last exercise, you prepared a blank diskette and named it CSF001. This will be your *output* diskette.

At this point, let's talk about *input* and *output* diskettes.

An input diskette contains information you will put into the computer. Its information (files) will then be copied onto another diskette.

An output diskette receives the information from the computer.

REMEMBER, *input* refers to information going into the computer; *output* refers to information coming out of the computer.

As you perform the COPY function, read each screen. Remember, additional information is available to you by either:

Typing a ?
and pressing the Enter key as you did in Exercise 7A, "Preparing a diskette,"

or

Looking up each screen by the number in the upper right corner in the "COPY screens" section of your *Customer Support Functions*, Volume I (binder 5).

Exercise 8A - Copying a diskette

You are looking at screen 03-010, the Copy menu.

5

On screen 03-010,
Type: 4
Press the Enter key.

You are looking at screen 03-084.

6

On Screen 03-084,
Type: 1
Press the Enter key.

You will request that information appear only on the screen.

You are looking at screen 03-114.

7

On screen 03-114,
Press the Enter key.

On this screen, you are going to use the selections already made by the computer.

You are looking at screen 03-124.

8

On screen 03-124,
Press the Enter key.

The output diskette you will use, called CSF001, does not contain any files.
It doesn't make any difference whether "n" or "y" is chosen for this copy; so, you will accept the selection made by the computer.

You are looking at screen 03-184.

On screen 03-184, you are asked to type the numbers of the diskette drives you are using and the VOLIDs of your diskettes.

The number of the diskette drive in which you now have your Customer Support Functions diskette is the input drive number.

9 On screen 03-184
Type: 1 (or 3)
Press the New Line key.

10 Type: VOL001
Press the New Line key.

The number of the diskette drive into which you will put the diskette you prepared in Exercise 7A is the output drive number.

11 Type the number of the drive (2 or 4) into which you will put the output diskette (CSF001).
Press the New Line key.

12 Type: csf001.
Insert the output diskette into the drive you specified as the output drive (2 or 4). Close the handle.

Press the Enter key.

Exercise 8A - Copying a diskette

You should now hear the computer copying the diskette.

The names of the files will appear on the screen as they are copied.

You are looking at screen 03-144.

13

On screen 03-144,
Press the Enter key.

This screen shows you the number of files you just copied from VOL001 and tells you that the COPY is completed.

You are looking at screen 03-010, the Copy menu.

14

On screen 03-010,
Type: 9
Press the Enter key.

You will end the Copy function now.

READY INPUT should now be on the status line. To make sure that the COPY operation was successful,

15

Type: dir
Space once.
Type the drive number of the output diskette (2 or 4).

Press the Enter key.

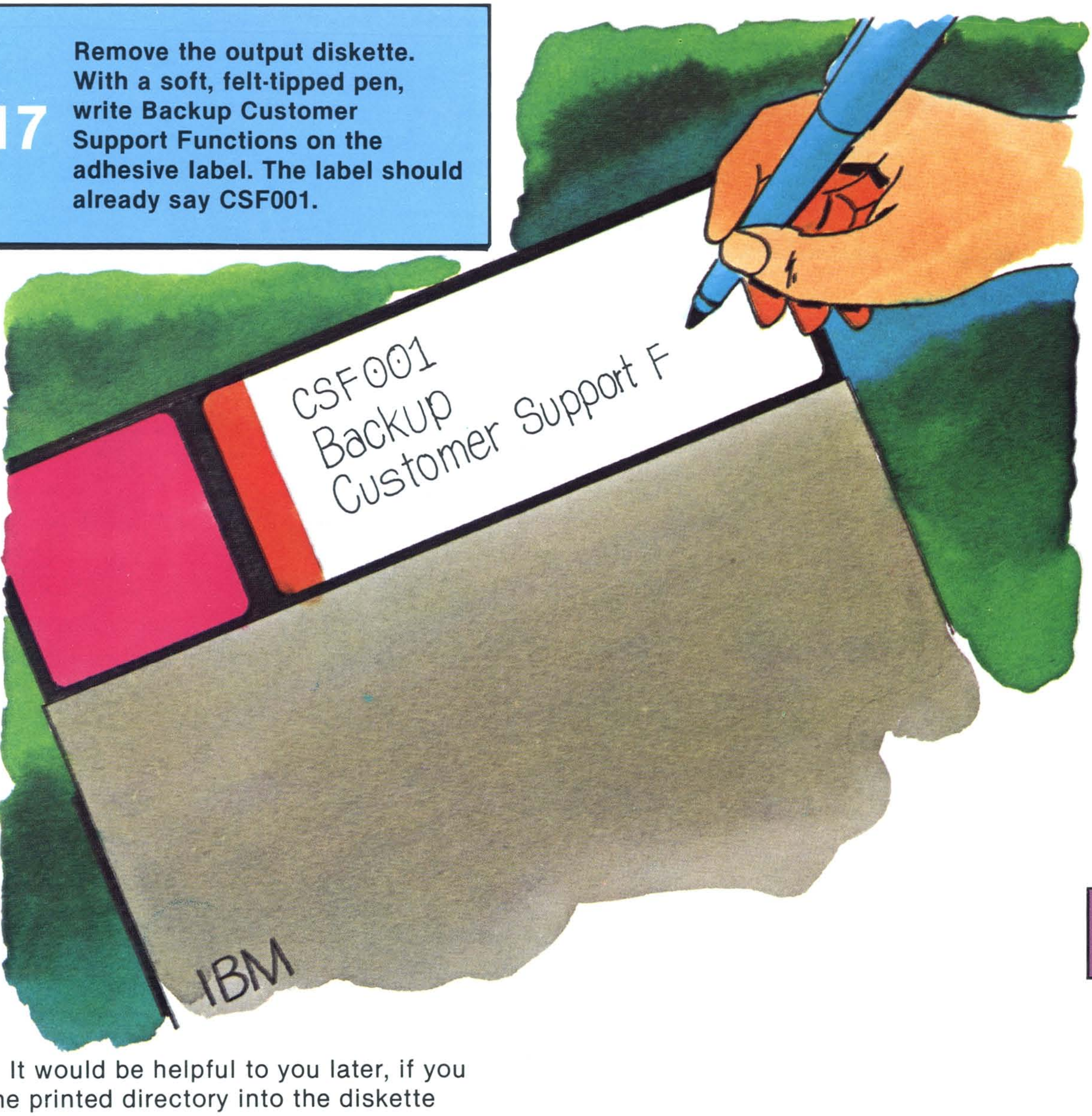
The screen should show the directory of the duplicate diskette. You should see the filenames of files copied from your Customer Support Functions diskette.

At this time, let's print a directory of your input diskette (VOL001) to compare it to the directory you just made. First, make sure that your printer is loaded with paper.

16

Type: dir
Space once.
Type the drive number of the input diskette (1 or 3).
Put a comma after the drive number.
Type: print
Press the Enter key.

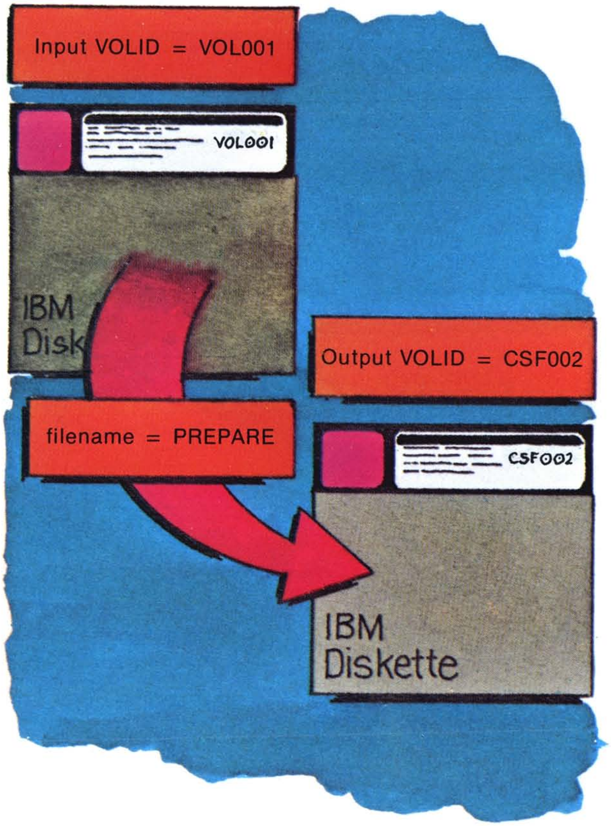
17 **Remove the output diskette. With a soft, felt-tipped pen, write Backup Customer Support Functions on the adhesive label. The label should already say CSF001.**



Hint: It would be helpful to you later, if you put the printed directory into the diskette envelope. That way, you would always know what files are contained on this diskette.

Exercise 8A - Copying a diskette

There may be occasions when you only need to transfer one file or a group of files to another diskette rather than copying an entire diskette.


Input VOLID = VOL001
VOL001
IBM
Disk
Output VOLID = CSF002
filename = PREPARE
CSF002
IBM
Diskette

Locate the diskette you prepared in Exercise 7A called CSF002. You are going to copy the file named PREPARE from your Customer Support Functions diskette (VOL001) onto CSF002.

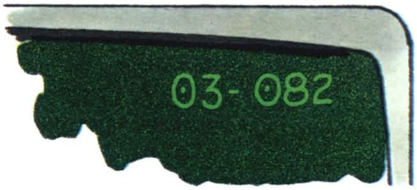
Your Customer Support Functions diskette (VOL001) should still be in drive 1 (or 3). The handle should be closed.

18 **Type: link copy**
Press the Enter key.

The Copy menu should be on the screen.

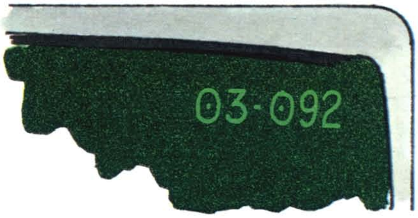
19 **On screen 03-010,**
Type: 2
Press the Enter key.

You are looking at screen 03-082.



20
On screen 03-082
Type: 1
Press the Enter key.

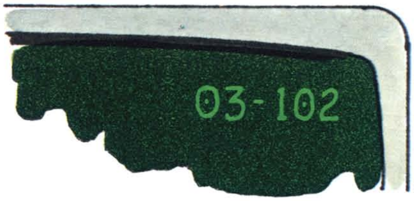
The next screen you will see is screen 03-092.



Under "Replace information in output file," you will type y. (All other selections will stay the same.)

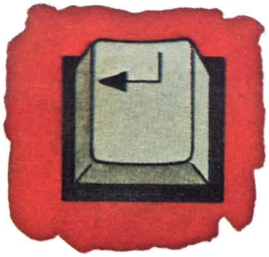
21
Type: y
Press the Enter key.

The next screen you will see is screen 03-102.



Your Customer Support Functions diskette, VOL001, is your input diskette. Your input drive number is either 1 or 3.

22
Type: 1 (or 3)
Press the New Line key.



The New Line key advances the cursor to the next field.

The input VOLID is not needed because you typed the drive number.

23
Press the New Line key.

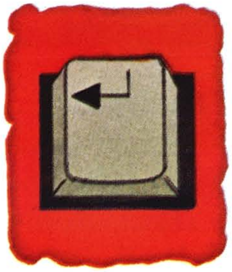
The input filename of the file you are going to copy is called PREPARE.

24
Type: prepare
Press the New Line key.

Exercise 8A - Copying a diskette

Your output drive number is 2 or 4. This is the drive into which you will place your output diskette.

25 **Type: 2 (or 4)**
Press the New Line key.

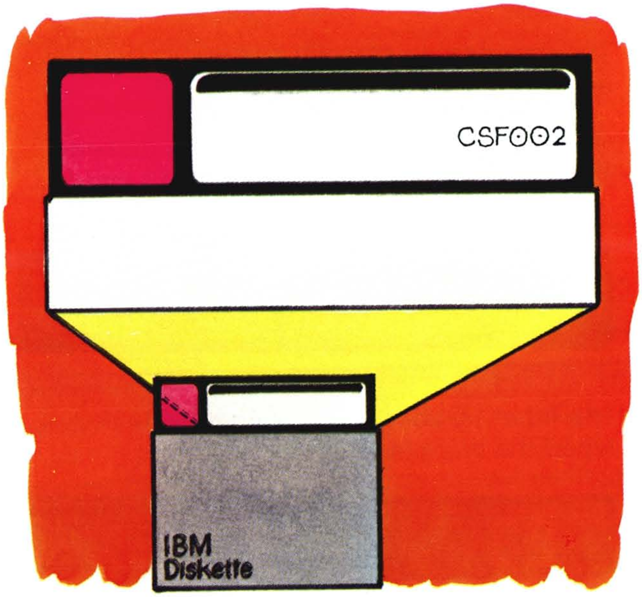


The New Line key advances the cursor to the next field.

Once again, since you have provided the output drive number, you don't need an output VOLID. You also don't need an output filename.

You must insert your output diskette now. This diskette is the one you prepared in the last exercise. It is named CSF002.

26 **Insert CSF002 into drive 2 (or 4).**
Close the handle.
Press the Enter key.



You should now hear the computer copying the file named PREPARE.

After the screen appears that tells you that COPY was completed, you will return to the menu.

27 **To get back to the menu, press the Enter key.**

The Copy menu should be on the screen.

28 **When you have completed copying PREPARE to CSF002, you should have the Copy menu on the screen.**

Type: 9
Press the Enter key.

You can use the DIR command to verify that you have put PREPARE on CSF002.

29 **Type: dir**
Space once.
Type: 2 (or 4)

Press the Enter key.

Earlier in Exercise 8A, you made a "COPY all" of your Customer Support Functions diskette, VOL001. That backup diskette can be put safely away to be used in case of loss or damage to your original.

As the final project in your training, you are going to make a backup copy of your second Customer Support Functions diskette (the one marked Customer Support Functions, VOL002). That way, you will have backup copies of both diskettes.

The COPY function is on your Customer Support Functions diskette, VOL001. Since it is still in a drive,

30 **Type: link copy**
Press the Enter key.

Once the Copy menu is on your screen, you may remove the Customer Support Functions diskette, VOL001, so that you can insert your input diskette into that drive.

31 **Remove the Customer Support Functions diskette, VOL001, from the drive.**

The Customer Support Functions diskette, VOL002, has a VOLID of VOL002 and will be your *input* diskette.

The diskette you prepared in Exercise 7A, called CSF002, (that you just put a PREPARE file on) will be your *output* diskette. You should still have that diskette in drive 2 (or 4).

Exercise 8A - Copying a diskette

Locate your Customer Support Functions diskette, marked VOL002.

32 **Insert your Customer Support Functions diskette, VOL002, into drive 1 (or 3).**

Now, with the Copy menu on the screen:

33 **Type: 4**
Press the Enter key.

Just follow the screens from here on.

IMPORTANT: As you follow the screens, screen 03-124 will be displayed. Type a y where it asks if it is OK to destroy all existing data on the output diskette. The only file now on CSF002 is PREPARE, and since you already have that on CSF001, you don't need it anymore.

When you get to screen 03-184 of the "COPY all" operation, you will be asked to INSERT DISKETTES NOW. At that time, your input and output diskettes must be put into the drives you specify for them. Make sure that your input diskette is VOL002 and your output diskette is CSF002.

After you have copied VOL002 and have ended the Copy function, use the DIR commmand to make sure that the same files are contained on each diskette.

34 **You should now remove your input diskette (VOL002) from the drive.**

35 **You may now remove the output diskette, CSF002, and write Backup Customer Support Functions on the adhesive label with a soft, felt-tipped pen.**

You have completed your last exercise in this book and should now read the summary and answer the review questions for Exercise 8A. There will also be a general course review after you have finished.

By this time, you know a great deal about your System/23 and computers in general. Now, it's up to you to use all the tools you received with your system, and practice, practice, practice.

Summary

In this exercise, you learned:

- Why you need to copy diskettes
- When to use each kind of COPY
- Where to find information about COPY in *Customer Support Functions*, Volume I (in binder 5)
- The steps in COPY:
  - — Go through the "Starting up" steps.
  - — Insert the Customer Support Functions diskette, VOL001.
  - — Type: link copy.
  - — Press the Enter key.
  - — Choose the COPY option you want from the menu.
  - — Enter the correct information on the screens.
  - — Insert the input and output diskettes into the specified drives when the screen tells you to do so.
  - — Remove the input and output diskettes.
  - — Label the output diskette.

Summary

Note: When you have finished reading the summary and have answered the questions for Exercise 8A, turn the page following the answers for the "Course review."

This page intentionally left blank.

Review

Please write the answers to the following questions on a piece of paper. Compare your answers to ours.

Question 1. The input diskette is the one that contains the information you want to copy.

True or false?

Question 2. If the adhesive label comes off, you can find the diskette VOLID on the diskette directory.

True or false?

Question 3. You can copy to a diskette:

a. one file
b. a group of files
c. the entire diskette
d. all of the above

Question 4. If you forget some of the steps in COPY, you can look them up in:

a. *Learning to Use System/23* (in binder 1)
b. *System Messages* (in binder 3)
c. *Operator Reference* (in binder 2)
d. *Customer Support Functions,* Volume I (in binder 5)

Question 5. What should you type to start the COPY procedure?

a. link prepare
b. PROC START
c. link copy
d. READY INPUT

Reminder: Don't forget to take the "Course review" on page 8A-20 after you've answered these questions.

Exercise 8A - Copying a diskette

Answers

Question 1. The *correct* answer is: True.

The diskette that contains the information to be copied is the input diskette. The diskette that receives information is the output diskette.

This question is covered in step 4 of this exercise.

Question 2. The *correct* answer is: True.

The diskette directory shows the diskette type and VOLID.

This question is covered in step 15 of this exercise.

Question 3. The *correct* answer is: d.

You can perform all these COPY procedures with your computer.

This question is covered under ''COPY choices'' in Chapter 3 of *Customer Support Functions,* Volume I (in binder 5).

Question 4. The *correct* answer is: a *or* d.

Both the Learning book and *Customer Support Functions,* Volume I, contain the steps for COPY. After training, *Customer Support Functions,* Volume I (in binder 5), is the best place to look up the steps.

Question 5. The *correct* answer is: c.

Typing the words link copy starts the COPY procedure.

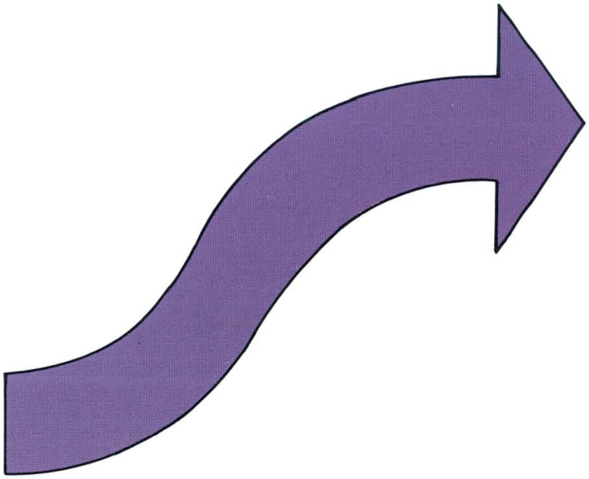
The other answers are *incorrect* because:

Answer a: Link prepare starts the PREPARE procedure.

Answer b: PROC START begins the "Starting up" procedures on the Customer Support Functions diskette, VOL002, and is used only when starting up your system.

Answer d: Your screen displays READY INPUT when it's waiting for you to enter something.

Turn to the next page for the "Course review."



Exercise 8A - Copying a diskette

Course review

Congratulations!

Now that you have completed the review for "Copying a diskette," it would be a good time to review some of the key points that you learned through this course.

The "Course review" is guided by your computer. To begin, the computer should be started up, the Learning diskette should be in diskette drive 1 (or 3), and the Course menu should be on the screen.

To get to the "Course review" from the Course menu, you will choose Exercise 8. Although that exercise is listed as "Copying a diskette," it is really your path to the review questions.

1

To get to the "Course review," At the Course menu screen,

Type: 8
Press the Enter key.

The remainder of the "Course review" is guided by your computer.

2

To end training, At the Course menu screen,

Type: 9
Press the Enter key.

If your computer is switched off . . .

Starting up steps reminder

1. Switch on printer, diskette unit, and computer (last).
2. When PROC START appears on the screen, insert Customer Support Functions diskette marked VOL002 and close handle.
3. Press Enter.
4. Set date and time.
5. Remove Customer Support Functions diskette, VOL002, when READY INPUT appears on the screen.

If READY INPUT is on your screen . . .

Learning diskette reminder

1. With READY INPUT on the screen, insert your Learning diskette and close the handle.
2. Type: proc learning
3. Press Enter.

(Follow directions on screens until Course menu appears.)

Note: After you finish this course and have taken the "Course review," if you have the 5247 Disk Unit, you must refer to *Using Your 5247 Disk,* in binder 4, to learn how to use that unit.

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