

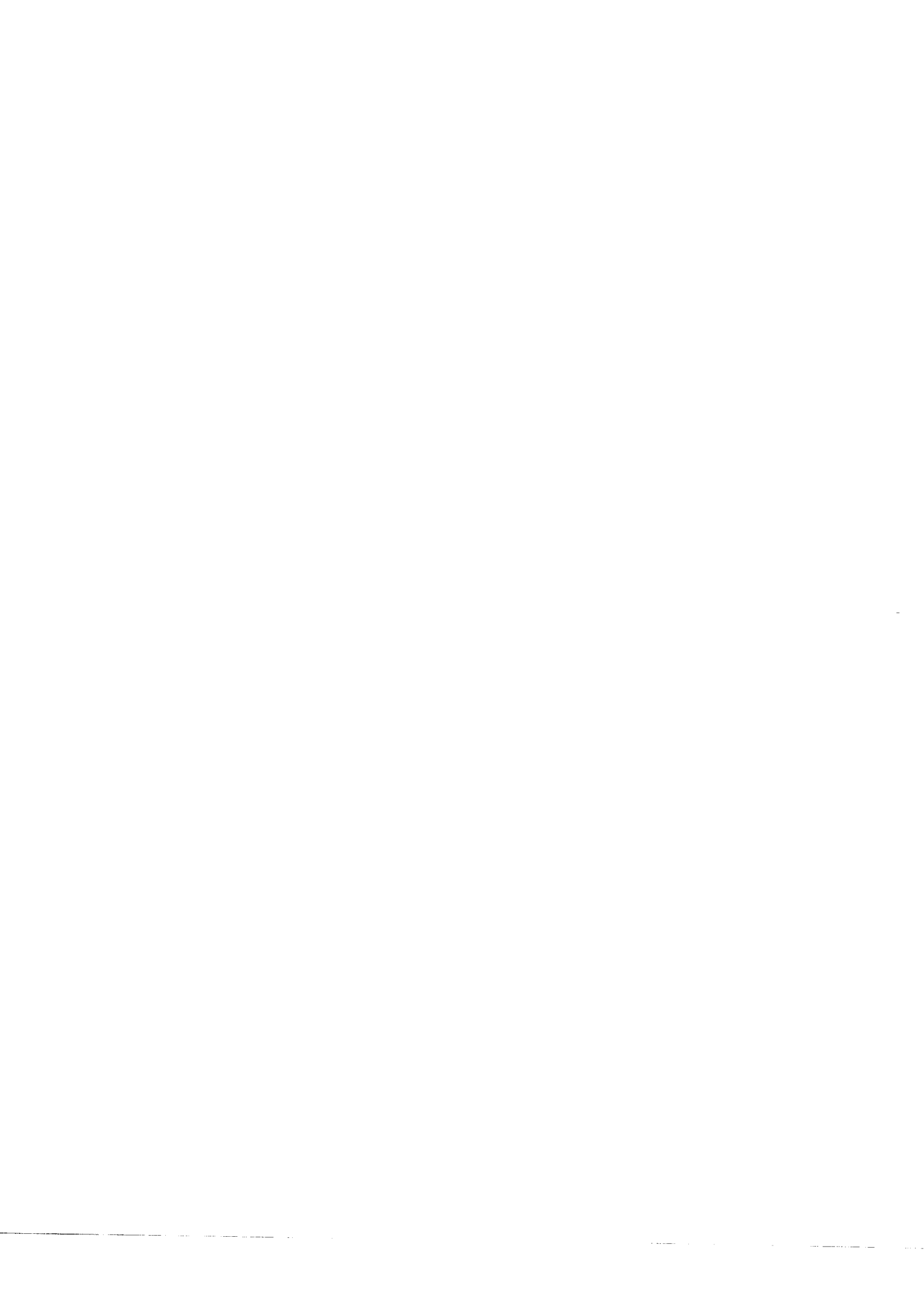


IBM System/3 Communications Control Program Terminal Operator's Guide

Program Numbers:

- 5702-SC1 (Models 8 and 10)
- 5703-SC1 (Model 4)
- 5704-SC1 (Model 15)
- 5704-SC2 (Model 15)
- 5705-SC1 (Model 12)

Feature 6011/6012/6033/6070/6071



**IBM System/3
Communications Control Program
Terminal Operator's Guide**

Program Numbers:

5702-SC1 (Models 8 and 10)

5703-SC1 (Model 4)

5704-SC1 (Model 15)

5704-SC2 (Model 15)

5705-SC1 (Model 12)

Feature 6011/6012/6033/6070/607

Fourth Edition (November 1977)

This is a major revision of, and obsoletes, GC21-7580-2 and Technical Newsletter GN21-5459. Changes are indicated by a vertical line at the left of the change.

This edition applies to the System/3 program versions listed below and to all subsequent versions and modifications until otherwise indicated in new editions or technical newsletters.

<u>SCP Program Number</u>	<u>System/3 Model</u>	<u>Feature No.</u>	<u>Version</u>	<u>Modification</u>
5702-SC1	Models 8 and 10	6033	14	00
5703-SC1	Model 4	6033	14	00
5704-SC1	Model 15	6033/6070/6071	06	00
5704-SC2	Model 15	6011/6012	02	00
5705-SC1	Model 12	6070/6071	03	00

Changes are made to this information periodically. Before using this publication to operate an IBM system, refer to the latest *IBM System/3 Bibliography*, GC20-8080, for the edition that is applicable and current.

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Address comments concerning the contents of this publication to IBM Corporation, Publications, Department 245, Rochester, Minnesota 55901. Comments become the property of IBM.

This publication contains information about using the IBM System/3 Communications Control Program (CCP) from a terminal. You should be familiar with the operating procedures and terminology of the terminal you are operating.

There are two types of terminals; command and data. Command terminals are capable of entering CCP commands, receiving messages from CCP, and requesting application programs. Command terminals can also send and receive data under control of an application program.

Data terminals operate only under control of an application program. Data terminals may be capable of only sending data, only receiving data, or sending and receiving data.

This manual is principally directed to the operator of a command terminal: it describes the CCP commands, and online test procedures. Data terminal operators can use the operating procedures described and reference the online test procedures.

There is a glossary at the back of this manual to define the important terms.

SYSTEM/3 MODEL 8

The System/3 Model 8 is supported by System/3 Model 10 Disk System control programming and program products. The facilities described in this publication for the Model 10 are also applicable to the Model 8, although Model 8 is not referenced.

It should be noted that not all devices and features which are available on the Model 10 are available on the Model 8. Therefore, Model 8 users should be familiar with the contents of *IBM System/3 Model 8 Introduction*, GC21-5114.

Related Publications

The following publications contain additional information about the CCP.

Model 4

- *IBM System/3 Model 4 Introduction*, GC21-5146
- *IBM System/3 Model 4 CCP Concepts and System Design Guide*, GC21-5148
- *IBM System/3 Model 4 Operator's Guide*, GC21-5149
- *IBM System/3 Model 4 Programmer's Reference Manual*, GC21-5150

Model 10/Model 12

- *IBM System/3 Models 10 and 12 Communications Control Program System Reference Manual*, GC21-7588
- *IBM System/3 Communications Control Program Programmer's Reference Manual*, GC21-7579
- *IBM System/3 Models 10 and 12 Communications Control Program System Operator's Guide*, GC21-7581

Model 15

- *IBM System/3 Model 15 Communications Control Program System Reference Manual*, GC21-7620
- *IBM System/3 Communications Control Program Programmer's Reference Manual*, GC21-7579
- *IBM System/3 Model 15 Communications Control Program System Operator's Guide*, GC21-7619

Models 4, 8, 10, 12, and 15

- *IBM System/3 Communications Control Program Messages Manual*, GC21-5170
- *IBM System/3 Communications Control Program System Design Guide*, GC21-5165

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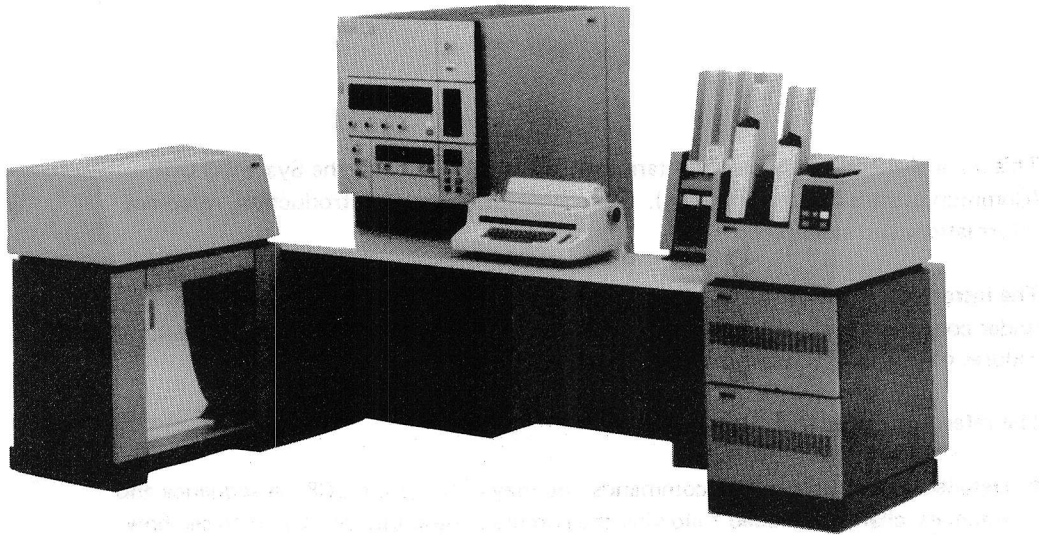
This manual describes the use of a terminal that is controlled by the System/3 CCP (Communications Control Program). The manual contains an introduction, reference information, and examples.

The introductory material lists general and special considerations for operating terminals under control of the CCP. These considerations supplement the standard operator's procedures given in the operator's guide for your terminal.

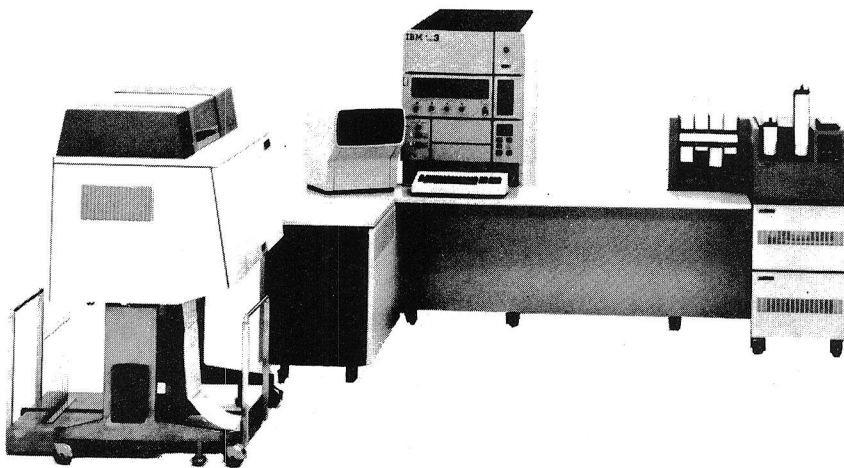
The reference material includes:

- Detailed descriptions of the commands you may enter to the CCP. A sequence and summary chart is included following the command descriptions. Use it to see how all the command information fits together.
- Terminal test procedures for checking proper operation of your terminal.
- A brief description of the spool file copy program, \$QCOPY.

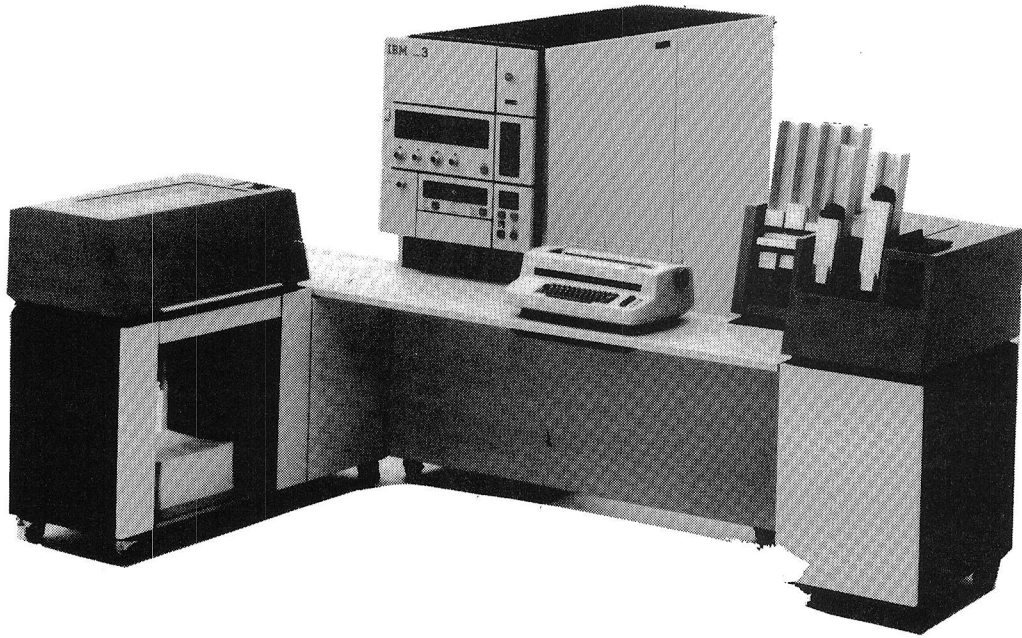
Example work sessions of varying complexity are shown to help you understand CCP operations. A sample sheet showing the steps taken to process an application program follows. Here, you can insert your own document showing the steps to follow while operating the terminal.



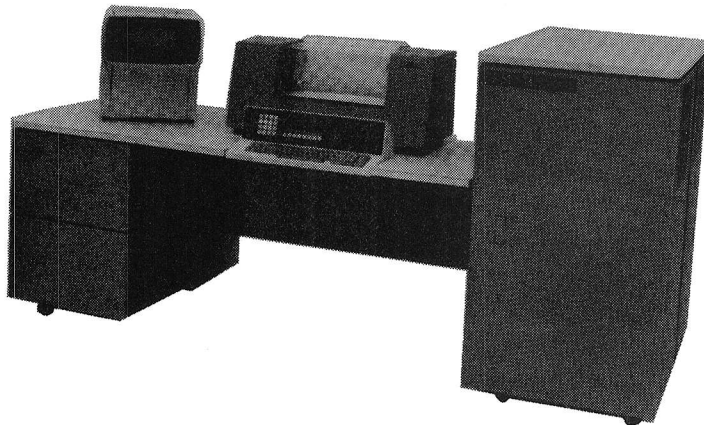
IBM System/3 Model 10 Disk System



IBM System/3 Model 15



IBM System/3 Model 12



IBM System/3 Model 4

CCP is the communications control program for the IBM System/3 Model 4, IBM System/3 Model 8, IBM System/3 Model 10 Disk System, IBM System /3 Model 12, and IBM System/3 Model 15.

The CCP lets you use the facilities of System/3 via terminals. A terminal is a device that is capable of sending and/or receiving information over a communication channel such as a telephone line. The terminal may be in the same room as the computer, in the same building, or in another city. The computer can process work from many terminals because of the speed at which it operates. Therefore, when working on your terminal, it may seem as though you have exclusive use of the computer.

The work you perform at a terminal is processed by computer programs that may be unique to your installation. These are *application* programs. They are designed to accept the kind of data you present, and to send back the kind of information required for your work. These application programs run under control of CCP.

CCP provides the computer control necessary to let you call on those programs, and to permit those programs to communicate with your terminal. In order to call upon application programs, you must communicate with CCP by a set of commands entered from your *command terminal* (see *Preface*). A *command* is a group of characters, which order CCP to perform some action. The command entered most often is one which tells CCP to start running a certain application program. But there are other commands as well, and they too are described in this manual.

CCP responds to commands by either performing the action ordered, or telling you why it cannot perform the action. The messages sent to you by CCP are explained in the *IBM System/3 CCP Messages Manual*, GC21-5170. When you call upon an application program and CCP starts it, that program may send you messages which are unique to that program. These messages can be explained to you by your location's data processing personnel.

Read this entire manual first to familiarize yourself with terminal operation using CCP. Then, after you are experienced in using your terminal with CCP, you may need this manual only for reference purposes.

A *terminal session* is the duration of time from sign on (start) until sign off (stop). Signing on and signing off tell CCP that you are ready to begin or end work at your terminal. Before you begin a terminal session, you must know:

Terminal Session

- ✓
- How to operate your terminal.
 - Your work schedule.
 - Current system information.
 - Application program information.
 - How to use the CCP commands.

Checklist

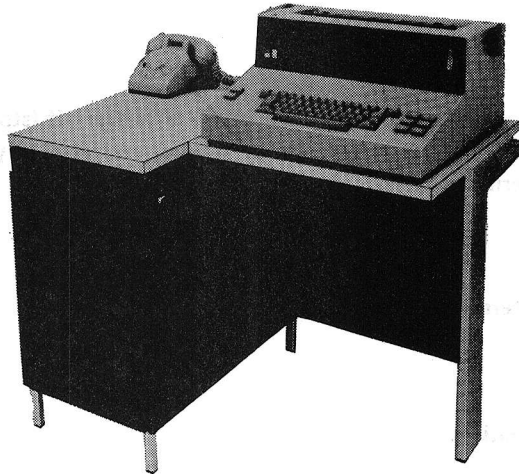
HOW TO OPERATE YOUR TERMINAL

The general procedure for beginning operations on most terminals is:

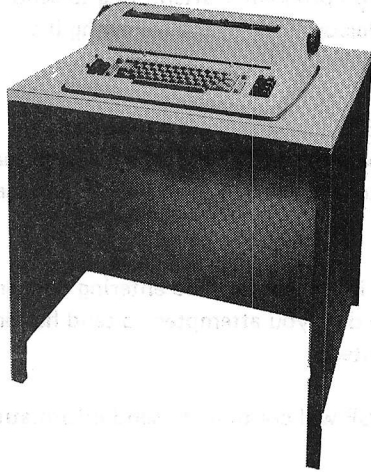
1. Turn power on.
2. Place terminal in communicate mode.
3. Enter data or CCP commands.
4. Send data or CCP commands to the system.

Operating Procedures

In order to use CCP, you must first be familiar with the operating procedures for your terminal. The following pages show photos of the terminals supported by CCP. Beneath each photo is the title of a publication that describes the operating procedures for that terminal. Refer to that publication if you do not know how to operate the terminal. Also listed with each terminal are the special operating considerations for using it with CCP.



- *IBM 1050 Operator's Guide, GA24-3125.*
- Supported by CCP for Models 10, 12, and 15.
- It is more efficient to end each input from the terminal by pressing carriage RETURN, using the automatic EOB feature, than to let output sent to the terminal cause the carriage return.
- If the automatic EOB feature is not used, it is still more efficient to press carriage RETURN before EOB rather than to let the carriage return occur at the beginning of output to the terminal.



- *IBM 2740/2741 Communications Terminal Operator's Guide, GA27-3001.*
- Supported by CCP for Models 10, 12, and 15.
- The dial-disconnect feature of the 2740 Model 1 should be used only to disconnect the terminal from the communication line after the terminal has been logically disconnected from the CCP system; that is, /OFF DROP has been issued (see index entry: /OFF). Using the key at any other time can cause unpredictable results.

2740 Model 1 with Station Control and Checking

- Except where your procedures indicate otherwise, use the EOB key rather than the EOT key at the end of each input from your terminal.
- It is somewhat more efficient to end each input from your terminal by pressing carriage return before EOB, than to let the carriage return occur at the beginning of output to your terminal.

2740 Model 1 with Automatic EOB Feature

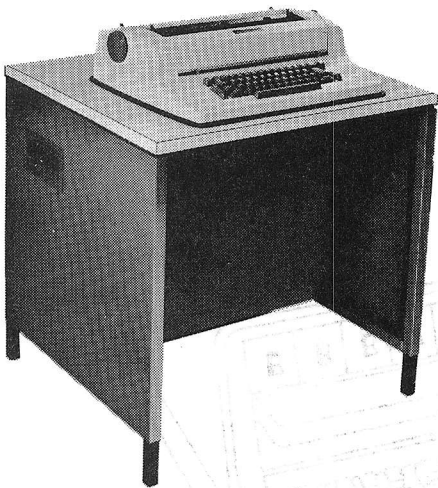
- It is more efficient to end each input by pressing carriage RETURN, which causes EOB to be sent automatically.

2740 Model 2

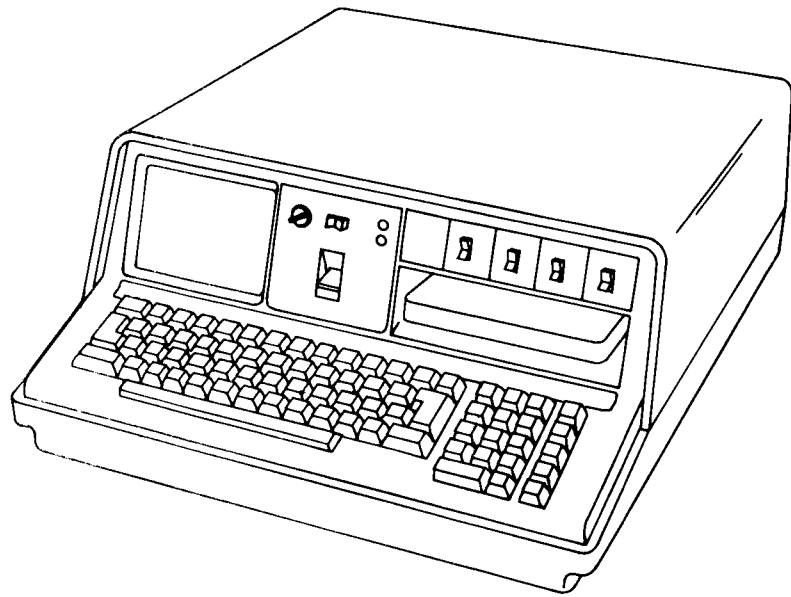
- Do not key in data unless your terminal is being polled (STANDBY and TRANSMIT lights flashing alternately).

2740 Model 2 with Buffered Receive Feature

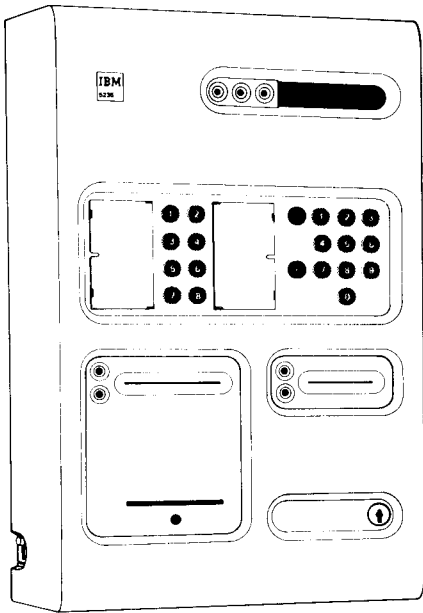
- The ATTN light and alarm turn on when your terminal is in local mode, when it is out of paper, or when CCP or an application program is attempting to send you information while the terminal is busy. Perform one of the following if a program is attempting to send information to you:
 - Press the carriage RETURN key, then the BID key if you are entering data (ENTER light on). Your message cannot be sent to CCP until the message that CCP is attempting to send is printed. Reenter your data after the CCP message is printed.
 - Wait until CCP finishes sending its message if you are finished entering data and have pressed BID (BID light on). Since the data you attempted to send has been lost, reenter it after the CCP message is printed.
 - If you are not entering data, do nothing; CCP will continue to send information.



- *IBM 2740/2741 Communications Terminal Operator's Guide, GA27-3001.*
- Supported by CCP for Models 10, 12, and 15.
- Pressing the ATTN key while data is being printed at your terminal causes the message being sent to you to terminate immediately. This results in an error code being returned to the program that is sending the data. Pressing the ATTN key in this manner is not recommended, because the program may not be prepared to handle this type of error code.
- From the time your keyboard unlocks until you press carriage RETURN, no output can be sent to you. If you are operating the 2741 as a command terminal, and you are not communicating with a program, but are expecting a message from the system operator, occasionally press carriage RETURN to permit output to reach your terminal. This yields an error message, but it is the only way to permit such output to reach your terminal. After all messages are printed, you are again allowed to enter a command.

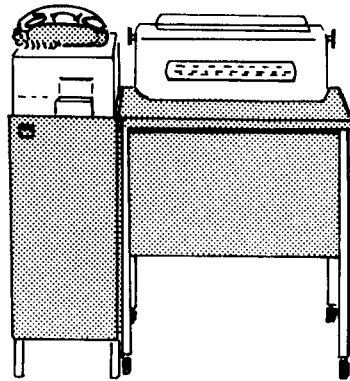


- *IBM 5100 Communications Reference Manual, SA21-9215.*
- Supported as a 2741 Communications Terminal.
- Supported by CCP for Models 10, 12, and 15.

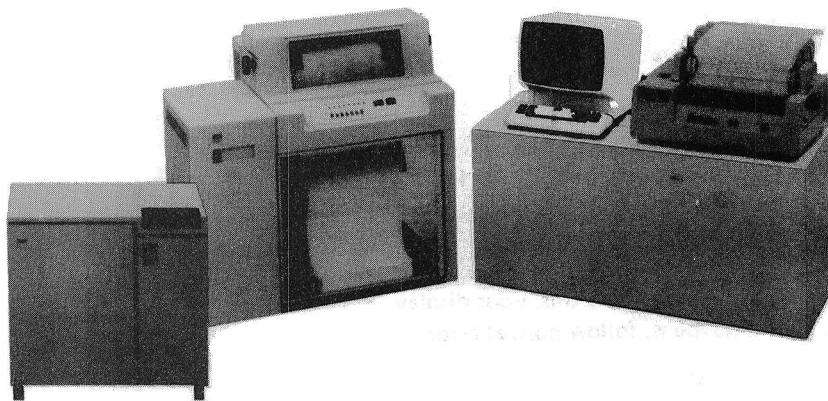
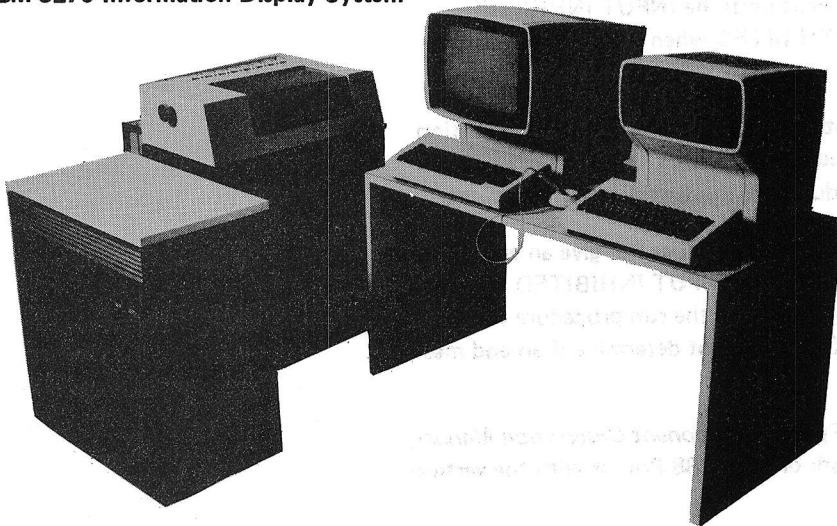


5235-001

- Supported as a 3741 Model 2 or 4, noncommand capable, input only terminal.



- *IBM Communicating Magnetic Card User's Guide, G543-0609.*
- Supported by CCP for Models 10, 12, and 15.



- *IBM 3270 System Operator's Guide, GA27-2742.*
- Supported by CCP for Models 4, 10, 12, and 15.
- To request online test, press CLEAR immediately followed by RESET so that the screen is blank when entering the test request parameters. (See index entry: *test for 3270*).
- When you are communicating with the CCP, positions 2 through 81 are used for your input. The next 78 positions (82 through 160) are used to return CCP responses. If you are using the program request under format (PRUF) option, positions 161 through the end of the screen can also be used for input to CCP for data with a program request.
- To initiate a session or to interrupt communication with an application program, the first 80 positions on the screen should be blank. If there are fields currently defined in these first 80 positions, press CLEAR to clear the screen.
- When CLEAR is used, wait for CCP instructions to appear on the screen before entering your command or data mode escape characters (see *Data Mode Escape* in Chapter 3).

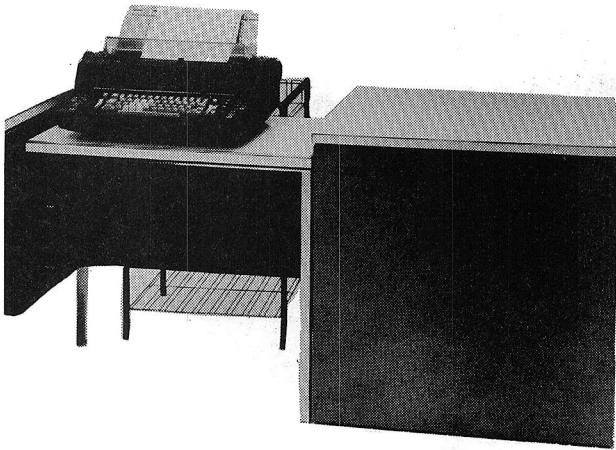
- When communicating with CCP, always wait until the INPUT INHIBITED indicator is off. CCP turns off INPUT INHIBITED when it recognizes your input and is ready for your next input.

Note: If the INPUT INHIBITED indicator is *not* turned off by the application program (an option that may be specified), press RESET to turn it off. This should be documented in the run procedures for these application programs.

- When you are running a program for which the CCP does not give an end message when the program completes, press RESET if the INPUT INHIBITED indicator is on, and continue. This should be documented in the run procedure for the program. Specifications made during CCP assignment determine if an end message is sent.
- Refer to the *3270 Information Display System Component Description Manual, GA27-2749*, when setting the forms length on the 3288 Printer with the vertical forms control feature.
- When you have a message on your screen while using a 3275 with the dial feature, the SYSTEM READY indicator is on. If you press ENTER then but the computer does not receive the data, the SYSTEM READY light goes off. If this happens:

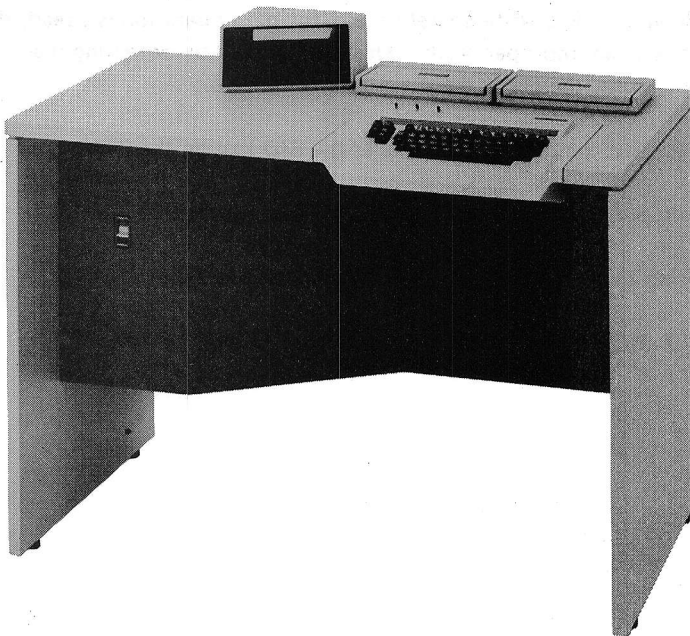
1. Press RESET.
2. Momentarily raise and release the DISCONNECT switch.
3. If you do not have the auto-answer feature installed, hang up the phone.
4. Try again to contact the computer and send the message.

If the STATUS indicator light comes on while you are doing this, your display station has detected something wrong. If this happens, follow normal error recovery procedures.

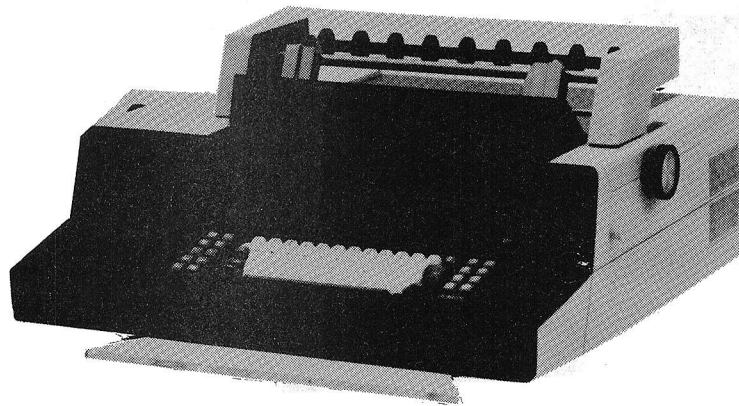


- *IBM 3735 Terminal Operator's Guide, GC20-7011.*
- Supported by CCP for Models 4, 10, 12, and 15.
- Commands cannot be entered from this terminal.
- The 3735 should not be placed in communicate mode until the terminal operator is ready to transmit or receive data with the CCP.

IBM 3741 Data Station Models 1 and 2/Programmable Work Station Models 3 and 4



- *IBM 3741 Data Station Operator's Guide, GA21-9131.*
- Supported by CCP for Models 4, 10, 12, and 15.
- Commands cannot be entered from this terminal.
- The 3741 should not be placed in communicate mode until the terminal operator is ready to transmit or receive data with the CCP.



- *IBM 3767 Terminal Operator's Guide, GA27-3106.*
- Supported by CCP for Models 10, 12, and 15.
- With the proper emulation feature, the following terminals can be emulated: 2740-1, 2740-2, or 2741.
- At least one of the following emulation features must be ordered: 2740-1 (#7111), 2740-2 (#7112), 2741 (#7113).
- If a line goes down during a write operation and the next operation is a read, the terminal might be in an improper mode. This can be fixed by switching the terminal to local mode, then back to communicate mode.
- The SYS REQ key on the 3767 is the same as the BID key on the 2740-1.
- The EOM key on the 3767 is the same as the EOT key on the 2740-1.
- The ATTN key on the 3767 is the same as the ENTER key on the 2740-2.
- Unlike the 2740, the 3767 does not stop printing at the right margin.

OTHER INFORMATION YOU NEED

Your Work Schedule

It is important to know your work schedule. You should know the answers to the following questions before using your terminal:

- Are certain jobs to be run each day?
- Must certain jobs be run at special times of the day?
- Must jobs be done in any particular order?
- Is the use of the terminal limited to certain hours or a certain length of time?

Schedules

Current System Information

This information is determined by your data processing personnel. They must tell you if it is applicable to your terminal.

- Is a *password* required to use the terminal? Password checking allows only authorized personnel to use a terminal. If it is required, you must know the current password and enter it when you sign on (see index entry: *sign-on command*). If you cannot enter it correctly, CCP will not accept commands.
- Does your installation permit a terminal operator to interrupt the processing of a requested application program? Such an interruption might be made in order to send a message to the system operator, or to release the terminal from control of the program. If it is permitted, you must know the six characters to enter at your terminal to interrupt a program. These are called the data mode escape characters (see index entry: *data mode escape*).
- Is there a procedure to be followed when leaving a terminal? Must you sign off whenever you leave the area of the terminal? (See index entry: *sign off command*.)

System Information

Application Program Information

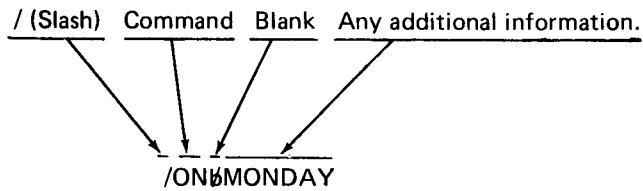
Program Information

Your data processing installation may use different application programs to do different jobs, such as order entry and inquiry against inventory. During your work session, you communicate with these programs through the CCP. You must know what type of information is required by the application program. The following example shows information you might need before you communicate with an application program. Items 2 and 3 in the example are described in Chapter 3, *Using The CCP From A Terminal*. Use this example only as a guide; it can be expanded based on the needs of your installation.

Application	<u>Parts Inquiry</u>	Date	<u>June 1, 197X</u>		
Program Name	<u>INVTRY</u>	Number	<u>1234</u>	Programmer	<u>John Doe</u>
1.	Programs function <u>Reads a part number.</u> You key in <u>part number and it responds with on hand quantity.</u>				
2.	Queue program request	Yes	<input checked="" type="radio"/>	No	
3.	Any /FILE commands	Yes	<input checked="" type="radio"/>	No	/FILE _____, _____ /FILE _____, _____ /FILE _____, _____ /FILE _____, _____
4.	Any input data to be included with the program request <u>Include</u> <u>part number with program request.</u>				
5.	Any exceptional conditions	Yes	<input checked="" type="radio"/>	No	
	Send message to system operator _____				
	Error recovery _____				
	Data mode escape _____				
	/NAME _____				

HOW TO ENTER A CCP COMMAND

Commands can be entered in uppercase or lowercase, except data mode escape and online test commands, which require uppercase characters. The command must begin with a / in data position 1, and be separated from any additional information by one or more blanks. The space bar is used to enter a blank (\backslash =blank). Enter the command using this format:



This example shows how a sign-on command with a password is entered. CCP responds by telling you if the command is accepted. When accepted, CCP sends the message A01 SIGNED ON-PROCEED. If your command is not accepted, a message is sent telling you why.

Some special considerations may apply when using your terminal with the CCP. See *How to Operate Your Terminal* in Chapter 2 for a listing of the considerations.

Entering Commands

Example of Sign-On

Special Considerations

CCP COMMANDS FOR THE TERMINAL OPERATOR

The following list of commands is used to communicate with CCP. Each command is described in more detail.

Command/Operation	Description
/ON	Sign-on to start a terminal session
/ON#password	Sign-on using a password for security purposes
program-name	Requests an application program with no data.
program-name#input-data	Requests an application program with data (Only one blank separates the program name from the input data.)
/OFF	Ends current work session using installation default
/OFF#HOLD	Ends current work session and returns the terminal to pre-sign-on status
/OFF#DROP	Ends current work session and disconnects the terminal from CCP
/MSG#message-text	Sends a message to the system operator
/NAME#terminal-symbolic-name	Changes the <i>doing-business-as</i> name of the terminal.
/NAME	Resets the terminal name to its standard <i>doing-business-as</i> name
/FILE#reference-name,actual-name	Associates the reference-name used by a program for a file with the name of the actual file that you want the program to use
/FILE#reference-name	Cancels that particular reference-name association
/FILE	Cancels all reference-name to actual-name associations
/Q	Indicates willingness to wait for a program that cannot be started immediately
/NOQ	Indicates unwillingness to wait for a program that cannot be started immediately

Command/Operation	Description
data-mode-escape-characters	Interrupts an application program to communicate with CCP
/RUN	Resumes communication with the program after data mode escape
/RELEASE	Ends your communication with a program after data mode escape

Note: Commands begin in position 1. At least one blank must separate the command from any additional information.

SIGN-ON COMMAND

Enter this command when you are ready to begin a session on the terminal. The only input accepted by CCP from the terminal before you sign on is a message command (/MSG), which allows you to communicate with the system operator.

After you have successfully signed on, you may enter the following commands as required:

- Program request
- Name command (/NAME)
- Queue command (/Q)
- No-queue command (/NOQ)
- File command (/FILE)
- Message command (/MSG)

When you complete the terminal session, sign off with the sign-off (/OFF) command.

The format of the sign-on command depends on whether sign-on security checking is used by your installation. Your installation management can tell you which format to use. The possible formats are:

Command		Required Information	Notes
/ON	␣	Password	1
/ON	␣	None	2

Sign-On Command

Commands you can enter after signing on.

Passwords

- 1** Your installation makes use of sign-on security checking. Enter the characters /ON along with the correct password (see index entry: *How To Enter a CCP Command*, for an example). Your installation management can tell you the password. If you omit or enter the password incorrectly, the sign-on attempt is rejected by the CCP. You can sign on again using the correct password.
- 2** Your installation does not make use of sign-on security checking. Enter /ON with no additional information.

Signed on until . . .

After correctly signing on, you remain signed on until you sign off, or until one of two exceptional conditions occurs:

- The system operator places the terminal *offline*, that is, cuts off its communication with CCP. The system operator might do this, for example, if the terminal is encountering severe hardware problems.
- You are communicating with CCP via a switched telephone line which becomes disconnected either physically (hardware) or via error recovery programming.

Your Terminal and Security

Security

The system operator is informed by CCP of any sign-on attempt at your terminal. If password checking is used by your installation, the password is checked to ensure that it has been entered correctly.

Once you successfully sign on, however, the CCP assumes other commands entered at your terminal are being issued by someone authorized to use the system. CCP accepts these commands until the terminal is signed off. When the sign-off command is issued, CCP assumes the authorized person has left the terminal, and rejects further commands until the terminal is properly signed on again.

Do not leave a record of the password at your terminal.

If your installation is using sign-on security checking to prevent unauthorized access to the system, your management may instruct you to sign off when you leave the terminal unattended. You should also consider that your sign-on command with the proper password is displayed at your terminal. Leaving that information on your terminal could permit someone else to gain access to the system.

PROGRAM REQUEST

You may request application programs after signing on.

Once you have signed on, you can request application programs. The programs you can request, their names, and the data each program expects you to provide, are determined by your installation.

When you request an application program, the system may take one of the following six actions:

1. It may start the program immediately.
2. If resources are *temporarily* unavailable, and you specified that you will wait for your request to be satisfied, the system accepts your request and suspends use of the terminal until the requested program can be started. Such delays can occur when other terminal operators request programs before you, and one of the following conditions exists:
 - There is not enough main-storage space free in the system to run your program.
 - A disk file your program needs is being used by another program and the file cannot be shared.
 - A terminal your program requires is being used by another program.
 - The requested program is already servicing the maximum number of terminals.
 - Unit record device or required terminal is unavailable.

You can tell the CCP that you are willing to wait for your program request to be satisfied by entering a queue command at your terminal (see index entry: *queue command*). If you are using System/3 Model 15 CCP, you can request the system operator (perhaps by telephone) to cancel your program request from the waiting list (that is, the *queue*). If you are using System/3 Model 4, Model 10, or Model 12 CCP, however, your request cannot be canceled from the queue.

3. It may reject your request because of an error (for example, the program name may have been keyed incorrectly).
4. It may reject your request because the system operator is starting to shut-down the system, or is temporarily preventing the system from accepting any commands from terminal operators.
5. It may reject your request because some resource required by the program is not available (for example, a disk file used by the program or the use of some other command terminal).
6. It may reject your request because some resource required by the program is temporarily unavailable and a *no-queue command* (see index entry) is in effect, indicating that you do not want your request to be placed on a waiting list.

The format of the program request is:

Program Request		Optional Information
Program name	b	Input data

What happens after a program is requested.

Program Name

The program name can be from one to six characters long. The name can contain any of the alphabetic characters, numerals, or the characters #, \$, and @. The name may not contain embedded blanks and may not begin with the character \$. Your operating procedures define the program name(s) you can enter.

Optional Information

Your operating procedures for the program indicate if input data is to be entered along with the name. If input data is required, enter it after a *single* blank following the program name; any blanks beyond the first blank are considered by the program to be part of the input data. The format and content of the data to be entered is determined by your operating procedures.

SIGN-OFF COMMAND

Sign-Off Command

Enter this command when you complete the required work for a session. It causes CCP to reject commands from your terminal until it is signed on again, and causes any file, name, or queue commands in effect for the current session to be canceled. You can enter this command any time after you sign on providing you are not running an application program or waiting a program request that has been placed on a queue.

There are three reasons why it is important to sign off whenever you complete a work session:

It is important to sign off.

1. If your installation uses sign-on security checking to control access to the system, leaving your terminal without signing it off could permit unauthorized persons to use the system.
2. If your installation has programs that need to communicate with your terminal when requested by the operator of another terminal, CCP does not consider your terminal available to those programs if it is still signed on.
3. If you are on a switched (dial) line and your terminal is signed on, your installation is charged for use of the line.

When you sign off, you can specify an option which determines your terminal's status. The three formats of the sign off command are:

Command		Optional Information	Notes
/OFF	b	HOLD	1
/OFF	b	DROP	2
/OFF	b	Blank	3

1 The HOLD option instructs CCP to maintain the connection with your terminal so that you can sign on again and begin another work session at any time. If your terminal is connected to the system by a switched line, the line is *not* disconnected.

HOLD Option

2 The DROP option instructs CCP to break the connection with your terminal.

DROP Option

- If your terminal is connected to the system by a switched line, the line is disconnected and the terminal is placed offline.
- If your terminal is on a nonswitched line, the DROP option instructs CCP to place your terminal offline. When a terminal is offline, the system ignores it. It cannot even send a message to the system to sign on again. You may wish to take this option when leaving your terminal at the end of the day if that terminal is not to be used again by anyone.

Switched Line

Nonswitched Line

3 You may also sign off without specifying an option. Your installation management has defined the option (HOLD or DROP) that the system takes when you sign off.

Installation Default

Whenever you sign off, the CCP informs the system operator of your action. It also informs him of the option taken (HOLD or DROP), and if you have specified it. If your terminal has been signed off DROP and is connected by a nonswitched line, the system operator can place it back *online* at any time; that is, change its status so that it can be signed on again and used for another work session.

MESSAGE COMMAND

Use this command when it is necessary to communicate with the system operator. This command causes your message text to be sent to the system operator. CCP informs him that the message came from your terminal.

Message Command

You can enter a message command anytime (even when your terminal is not signed on), except:

When to send a message.

- When you are actually running (under control of) an application program.
- When you are waiting for a program request that has been placed on a queue by CCP.

The format of the message command is:

Command		Required Information
/MSG	b	Message text

The maximum length of the message text is defined by your installation and can be a maximum of 67 characters with the Model 10 Disk System and Model 12, or 63 characters with the Model 4 and Model 15. The first character of the message text is the first nonblank character following /MSG.

Note: If you are operating under control of Model 15 CCP and send a message text of exactly 21 characters or exactly 57 characters, the last character of the message will not be visible to the system operator.

NAME COMMAND

Name Command

Use this command only when it is necessary to specify the name of your terminal for requested programs.

Terminal Names

Terminal Names

Every terminal operating in a CCP system is known to the CCP system, and to each program it communicates with, by a *terminal name*. Normally you are not concerned with that name. However, for security reasons, there may be certain application programs in your system that run only when requested by a terminal which has a specific name. The program determines, from the terminal name, if that terminal is authorized to use the program.

When you sign on a terminal, that terminal is known by a standard name (*doing-business-as* name) assigned to it by your installation management. If you sign on the terminal you regularly use, you may never need to enter a name command. The programs you request normally run when requested from that terminal. Should a name command be required, however, your procedures indicate the requirement and tell you what name to specify for the terminal.

Example of using the name command.

For example, suppose you are performing your work on a terminal other than the one you normally use. That terminal is known to the system by a different name than your regular terminal. Certain programs might not be prepared to run from that terminal. Your procedures, or a supervisor, may tell you to enter a name command after signing on; perhaps the name of your regular terminal. When the name command is accepted by CCP, the name you specify becomes the new *doing-business-as* name of the terminal you are using. The command is accepted only if the terminal is authorized to operate under that name. Your installation management has defined not only the standard name of each terminal, but also any alternate names that each terminal may use.

Designating Your Terminal's Name

To designate the name of your terminal, enter a command in the following format:

Command		Additional Information
/NAME	Ø	Terminal name

When the command is accepted, the terminal name you have entered becomes the *doing-business-as* name of your terminal, and any program you request is informed of that name. The name remains in effect until the terminal is signed off or:

- You enter another name command specifying a different terminal name.
- You enter a name command without specifying a terminal name. This resets the name of the terminal to its standard name.

If the command is rejected by CCP, you should first communicate with the system operator. Use a message command to inform him that a name you were told to use for your terminal was not accepted by CCP. The system operator can reassign the alternate names each terminal may use. If your terminal should be allowed to operate under the name you specify, the system operator can make that name available to your terminal. After the system operator makes the name available to you, reenter the name command, and it will be accepted by CCP.

Resetting Your Terminal Name

To reset the name of your terminal to its standard name, enter a command in the following format:

Command	Additional Information
/NAME	None

This name command is accepted by CCP whenever your terminal is signed on.

FILE COMMAND

File Command

Enter this command only when you must specify which disk data file should be used by a requested program.

File Reference Names

File Reference Names

The requested programs typically reference data files stored on magnetic disk. Programs generally reference specific disk data files, and do not need an indication of which files to use.

Example of using the file command.

Some programs, however, are written to access information in one of several similar disk files; you are expected to specify which file to access on a particular run. Suppose, for example, you work in a school district office. The system you use has a separate file for each school in the district. Each file contains information about the students in that school. A certain program you request from your terminal accesses one of those files in order to list the students who are absent from school today. Since the program can access any one of the files, it expects you to specify which school's file to use. If you do not specify the file name, the program cannot know what information to access, and the CCP rejects your request for the program.

The file command is used to associate the file name used in the program (reference name) with the name of the disk file to be used for a particular run of the program (actual-name). Your program run procedure tells you the file reference-name, the actual-names that may be chosen, and when to select one actual-name as opposed to another.

Associating File Names

To specify which disk file to use when requesting a program that needs this information, associate a file reference-name with the actual-name of a file by using a command in this format:

Command		Required Information
/FILE	Ø	Reference-name,actual-name

A file command remains in effect for the next program requested and for other programs that require a file specification and make use of the same file reference-name. The reference-name, actual-name association is canceled only when:

- The terminal is signed off.
- Another file command is entered associating the same reference-name with a different actual-name.
- A file command is entered using the same reference-name, but no actual-name (see *Canceling a File-Name Association* in this chapter).
- A file command is entered that specifies neither a reference-name nor an actual-name (see *Canceling All File Name Associations* in this chapter).

Because you may request a number of programs that need a file specification, and because each of those programs might use a different file reference-name, multiple file commands may be entered; that is, a terminal can have multiple file name associations in effect at the same time, each one associating a different reference-name with the actual-name of a disk file.

Canceling a File Name Association

You can cancel the association between a file reference-name and an actual-name by entering a command in the following format:

Cancel One File

Command		Additional Information
/FILE	Ø	Reference-name

This file command causes the association of this reference-name and any actual-name to be canceled. When this form of the file command is entered, the file reference-name used no longer refers to any specific file.

Canceling All File Name Associations

Cancel File Command

You can cancel all previous reference-names and actual-names by entering a command in the following format:

Command	Additional Information
/FILE	None

QUEUE COMMAND

Queue Command

Use this command to indicate that you are willing to wait for programs to start if they cannot start immediately. CCP then places your program request on a waiting list, or *queue*.

Unavailable Resources

Unavailable Resources

When you request a program that cannot start immediately because resources it needs are being used by other programs, CCP normally rejects your program request. In certain resource unavailability situations, CCP will always reject your program request. However, in other situations where the resource is only temporarily unavailable, CCP will honor your request provided you have previously entered a queue command.

CCP will allow a program request to be queued for unavailable resources only if those resources are being used by a CCP program and the unavailability is considered temporary. Thus CCP will not allow a program to be queued for resources being used by a program in the non-CCP partition, nor will CCP allow queuing for resources being used by a CCP never-ending program. Also, CCP will not allow program queuing for unit record devices that are not immediately available. (An exception is that System/3 Model 15 CCP will queue for an unavailable printer if the printer is spooled or permanently allocated to CCP and not in use by a never-ending program or multiple requesting terminal program.) In all other resource unavailability situations, CCP will allow a program request to be queued.

When you enter this command, you indicate that, if the program cannot start because resources are only temporarily unavailable, you wish to wait for those resources to become available. If the program does not have to wait for resources, it starts immediately. If it must wait for resources, CCP does not communicate with your terminal again until the program begins. You cannot enter other commands to CCP while you are waiting for a program to begin. If you are using the System/3 Model 15 CCP, you can request the system operator (perhaps by telephone) to cancel your program request from the waiting list. If you are using the Model 4, 10, or 12 CCP, however, your request cannot be canceled from the queue.

If resources are unavailable for a long time, it may not be wise to use the queue command. Your procedures indicate if the command should be used.

Entering The Queue Command

If you are willing to wait for programs to start when resources are temporarily unavailable, enter a command in the following format:

Command	Additional Information
/Q	None

Until you enter this command, CCP rejects a program request if resources it requires are not immediately available. Once you enter this command, it remains in effect until the terminal is signed off, or until a no-queue command is entered.

Note to Model 15 CCP Users: If you request a program that uses a unit record device other than a printer (that is, a punched-card device or a 3741) and that device is not immediately available to the program, your request is rejected, whether or not a queue command is in effect.

NO-QUEUE COMMAND

Use this command to cancel a queue command. If you previously have entered a queue command, but you are no longer willing to wait for programs to start, cancel the queue command by entering a command in the following format:

Command	Additional Information
/NOQ	None

When you enter this command, any program request you make is rejected if resources are not immediately available.

No-Queue Command

DATA MODE ESCAPE

Data Mode Escape

Your installation may permit a terminal operator requesting an application program to interrupt communication with that program. This capability is called data mode escape. Your installation management can tell you if your system supports this capability. Use data mode escape by entering six characters that are defined in your operating instructions. Use these characters when you find it necessary to interrupt your communication with the application program to communicate with the CCP. Data mode escape can only be performed when the terminal is communicating with the requested application program.

The format of the data mode escape command is six installation-defined uppercase characters.

When CCP starts the requested program, it monitors every input to that program from your terminal. On every input you send, CCP checks the first six characters to see if they are the data mode escape characters (see *notes*). If they are not, your data is passed directly to the application program. If they are, CCP informs you that your terminal has escaped control of the application program. Then, if you wish, you can:

Commands you can enter after data mode escape.

- Send one or more messages to the system operator (/MSG), then
- End your terminal's communication with the interrupted program (/RELEASE), or
- Resume your terminal's communication with the interrupted application program (/RUN).

Notes:

1. If your terminal is a 1050, 2741, or 2740 Model 1, you must not use the BACKSPACE key or RETURN key when entering the six characters. If you use BACKSPACE or RETURN, CCP will not recognize your input as the data mode escape characters.
2. If you are using a 3270 terminal, press CLEAR before entering the data mode escape characters.

RUN COMMAND

Use this command to resume running under control of the application program interrupted by a data mode escape.

Run Command

The format of the run command is:

Command	Additional Information
/RUN	None

CCP responds by placing your terminal once again under control of the interrupted application program. The next input from your terminal is data to that application program.

RELEASE COMMAND

Use this command to release your terminal from the application program interrupted by a data mode escape so that you can again enter commands and make other program requests.

Release Command

The format of the release command is:

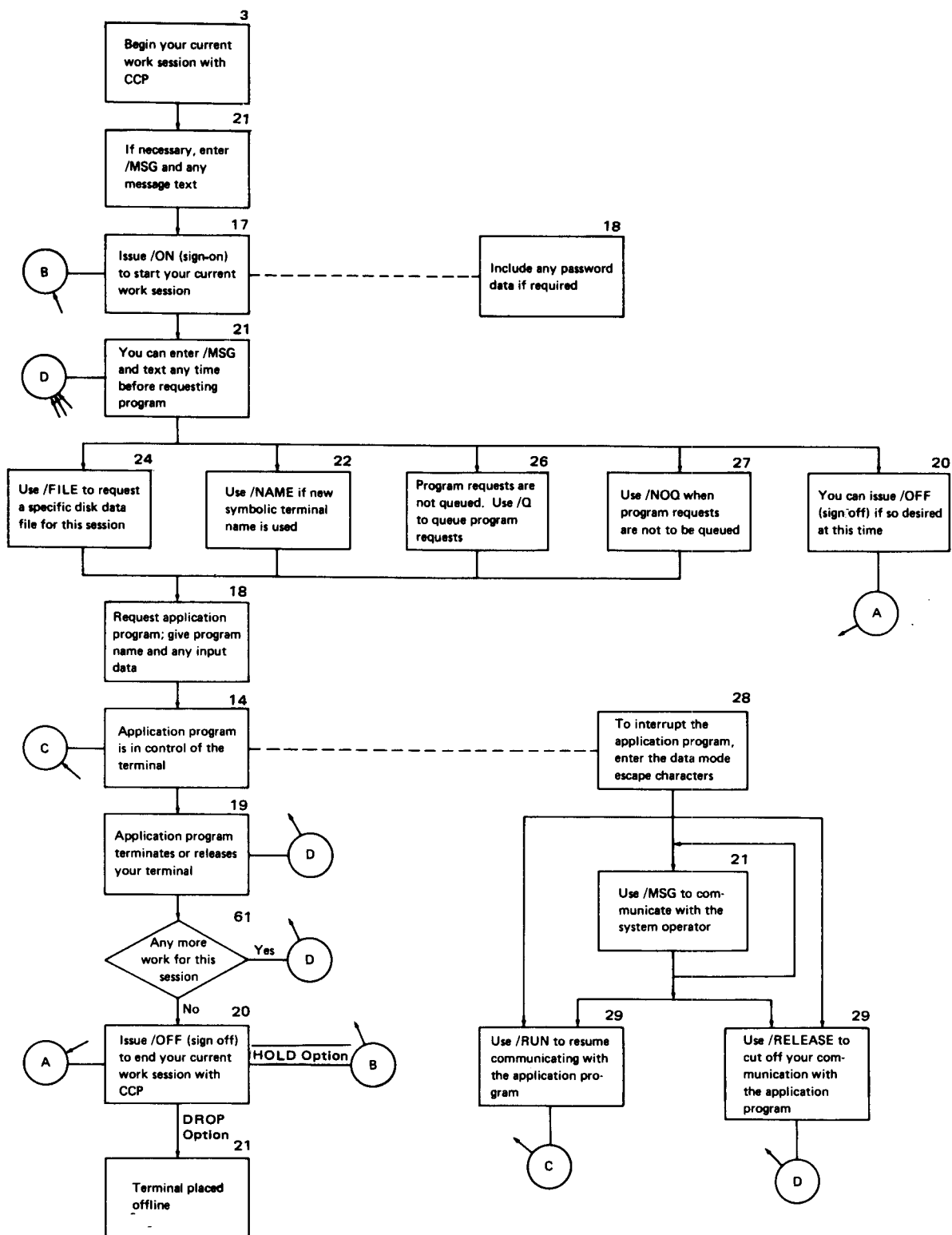
Command	Additional Information
/RELEASE	None

CCP responds by:

- Releasing your terminal from control of the interrupted application program.
- Placing your terminal in a status in which it can again issue normal commands and program requests.

SUMMARY AND SEQUENCE OF THE CCP COMMANDS

This illustration shows the sequence of the commands used in relation to an application program. It is also a summary of the functions of the commands and can be used for quick references.



The numbers listed at the upper right-hand corner of the blocks are page numbers where additional information can be found.

Chapter 4. Messages Received at Your Terminal

All CCP messages are contained in the *IBM System/3 Communications Control Program Messages Manual*, GC21-5170.

This section provides two examples showing typical terminal sessions. The first example shows a basic application using only the required commands. The second example uses more commands and conditions to show you a more complex application program.

Examples

Your installation data processing personnel will define to you the process for each application. These descriptions can be inserted in this manual as a handy reference. An example sheet is included to help you prepare the steps involved in using an application program during a terminal session. The steps should be brief enough to answer most questions that might arise during the running of application programs.

In case of difficulty, you may want to call other personnel to assist you with your problem. Note here your terminal number and frequently called telephone numbers.

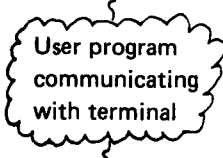
Telephone numbers

Terminal number _____

System operator telephone number _____

Example 1

/ON
A01 SIGNED ON – PROCEED
INVTRY AN1743



User program
communicating
with terminal

END1
S03 PROG END – PROCEED
/OFF
A10 SIGNED OFF – HOLD TERMINAL

Comments

Sign on without password security

Enter program request with input data

Enter END1 (end of data indicator for this program)

Sign off

Application Inventory Status Inquiry (Example 1)

Who to contact in case of difficulty Fred Jones

Step 1. Turn power on

Step 2. Reset terminal keyboard

Step 3. Sign on

Step 4. Key in program name - INVTRY

Step 5. Follow name with 1 space

Step 6. Key in part number

Step 7. Press ENTER key

Step 8. Repeat steps 6 and 7 as often as required

Step 9. Enter END1 (end of data indicator)

Step 10. Sign off

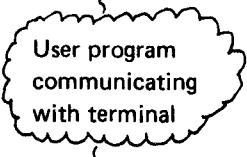
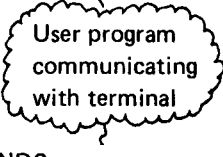
Step 11. _____

Step 12. _____

Step 13. _____

Step 14. _____

Step 15. _____

Example 2	Comments
<pre> /ON MONDAY A01 SIGNED ON--PROCEED </pre>	<p>Sign on using password</p>
<pre> /Q A03 Q STATUS--PROCEED </pre>	<p>Hold program request until it can be serviced</p>
<pre> /NAME TERM08 A05 ACCEPTED--PROCEED </pre>	<p>Change <i>doing-business-as</i> name of this terminal</p>
<pre> /FILE INVTRY, INVTF2 A06 ACCEPTED--PROCEED </pre>	<p>Select file to be used during this run</p>
<pre> INVPGM </pre> 	<p>Enter program request</p>
<pre> CCCCC A07 ENTER /MSG, /RELEASE, OR /RUN </pre>	<p>Enter data mode escape characters, which must be // for the Model 4</p>
<pre> /MSG HOW LONG BEFORE CCP WILL SHUT DOWN? A02 MESSAGE SENT </pre>	<p>Send message to system operator</p>
<pre> S10 CCP WILL SHUT DOWN IN TEN MINUTES </pre>	<p>Response from system operator</p>
<pre> /RUN A09 RESUME PROGRAM </pre>	<p>Return to data mode; continue with program</p>
	
<pre> END2 S03 PROG END--PROCEED </pre>	<p>Enter END2 (end of data indicator for this program)</p>
<pre> /OFF A10 SIGNED OFF--HOLD TERMINAL </pre>	<p>Sign off; standard sign-off option this terminal is HOLD</p>

Application Inventory Update (Example 2)

Who to contact in case of difficulty Fred Jones

Step 1. Turn power on.

Step 2. Reset terminal keyboard

Step 3. Sign on using current password

Step 4. Enter /Q

Step 5. Required terminal name is TERM08, enter /NAME if necessary

Step 6. Enter /FILE to select a file for this run

Step 7. Key in program name, INVPGM

Step 8. Enter inventory data as directed by program

Step 9. Press ENTER key

Step 10. Repeat steps 6 and 7 as often as required

Step 11. Enter END2 (end of data indicator)

Step 12. Sign off

Step 13.

Step 14.

Step 15.

Application _____

Who to contact in case of difficulty _____

Step 1. _____

Step 2. _____

Step 3. _____

Step 4. _____

Step 5. _____

Step 6. _____

Step 7. _____

Step 8. _____

Step 9. _____

Step 10. _____

Step 11. _____

Step 12. _____

Step 13. _____

Step 14. _____

Step 15. _____

The online terminal test is a method of checking the proper operation of a terminal. If your installation allows online testing you can request a test, whenever you are allowed to send data. The system operator can also request an online test on your terminal unless it is a 3270 or 3735. When the system operator requests an online test, the data is written at your terminal.

If you determine that your terminal is not operating properly, notify the system operator by using the message command or, contact the data processing personnel by telephone and inform them of the difficulty.

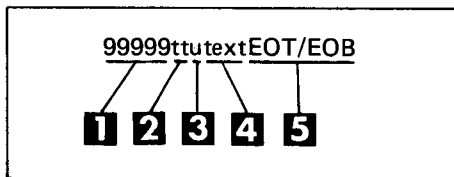
Online Tests

What to do in case of errors.

TEST PROCEDURE FOR THE 1050, 2740/2741, AND CMCST TERMINALS¹

The format of the test request submitted from a 1050, 2740/2741, or Communicating Magnetic Card SELECTRIC® Typewriter (CMCST) is:

Test Procedures:
1050
2740
2741
CMCST



- 1** Five 9s indicate an online test request.
- 2** Indicates the type of test. Enter 01, 02, 03, 04, 05, or 06. See the following chart for a description of the test.
- 3** For the IBM 1050 Data Communication System only, the u is the component select character. It indicates the address of the component which receives the return message. The component select characters are:

1050 Components

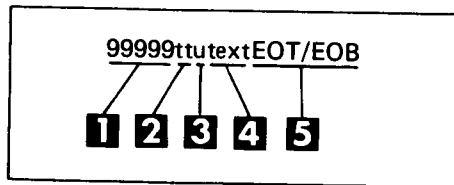
- 1 – Printer 1
- 2 – Printer 2
- 3 – Punch 1
- 4 – Punch 2
- 9 – Any of all output components

See the *IBM 1050 Operator's Guide*, GA24-3125 for additional information.

For non-1050 terminals enter one or more blanks.

Non-1050 Terminals

¹ These devices are not supported by the Model 4 CCP.



- 4** Enter variable information and the echo test (Test 01) transmits the information back to your terminal.
- 5** Enter the end of message character to begin the test.

Note: When the test is complete, follow it with input to CCP, such as a message command, to ensure proper completion of the test and resumption of normal CCP processing.

The following chart shows test results so that you can make a comparison to determine if the test was performed correctly. If test results are not correct, notify your system operator or appropriate data processing personnel. Record your test results.

Test Title	Number	Description	Enter	Example Entry With Results
Echo Test	01	Transmits the text portion of the test (indicated by ***) back to the terminal making the request	9999901#***	9999901 sample text sample text
All Characters Test	02	Prints the standard character set for checkout of the terminal	9999902#	9999902 0123456789abcdefghijklmnopqrstuvwxyz ABCDEFGHIJKLMNOPQRSTUVWXYZ
Tilt Test	03	Checks the IBM SELECTRIC print mechanism	9999903#	9999903 a/ctevgxhy&@bsdufwiz., \$r9o6m4k2-0q8p7n5l3j1
Rotate Test	04	Checks the IBM SELECTRIC print mechanism	9999904#	9999904 a.efhbj\$noqk/,v/ys156 8239740tzxu@lrpm-cigd&
Twist Test	05	Checks the IBM SELECTRIC print mechanism	9999905#	9999905 A?\$C9TrE6VoG4XmH2Yk+0 =.J,;iLz%fNw"dPu*bQsφ-
SELECTRIC Analyzer Test	06	Analyzes the carrier return mechanism to determine if it performs within specifications	9999906#	9999906 1234567890 space&bksp n1 1f 1 2 3

Some deviation in printed output occurs on the 1050, 2740, and 2741, but it should have little effect on the overall usefulness of the tests.

Error messages

Test Request Errors

If errors are encountered while the CCP decodes the request message, an invalid online request (INV OLT REQ) message is written back to the requesting terminal. The following is an explanation of the messages.

INV OLT REQ 0

Reason The test you requested cannot be run at your terminal.

Recovery Request one of the online tests that can be at your terminal. The test numbers you can enter are 01, 02, 03, 04, 05 or 06.

INV OLT REQ 1

Reason An area in main storage is reserved to contain the message you enter. Your message exceeds the reserved area in main storage.

Recovery Revise and shorten your message. Resubmit the test request.

INV OLT REQ 2

Reason You are specifying that the test is to be written to the 1050 Data Communications System by entering something other than a blank.

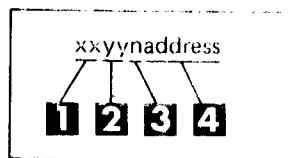
Recovery Resubmit the test request and enter a blank as stated in step 3 of the 1050 components test procedure.

3270 test

TEST FOR 3270

You can perform a test on your 3270 terminal at any time. Perform the following steps to initiate a test.

1. Press CLEAR and immediately press RESET to clear the screen. The cursor should be at position 1 and the screen should be blank. If the ATT CLEAR message appears, repeat CLEAR/RESET until the screen is blank.
2. Type in a message in this format:



- 1** A number from 23 to 34 specifying the desired test. (See *Test Types* in this chapter.)
 - 2** A number from 01 to 99 specifying the number of times the test is to be written. The test can be sent to a printer only once. It is normally sufficient to send the test to a display station only once. However, you may wish to send the test more than once, for example, in cases where an error occurs intermittently.
 - 3** The number four indicating the length of the address.
 - 4** The address of the terminal to receive the test message. The address is a sequence of four alphanumeric characters that specify the control unit and device to which the test is to be sent. Alphabetic characters must be uppercase. Your installation must tell you the addresses of your 3270 terminals. If the address you specify is not the correct address of the terminal to receive the test message, unpredictable results may occur to other terminals on the system.
3. Press TEST REQUEST. The INPUT INHIBITED indicator light comes on. If the indicator light remains on and no test pattern is received within 15 seconds, verify that your RFT (request for test) message and procedures were accurate. Then retry the test.
 4. When the test is complete, follow it with input to CCP, such as a message command or CLEAR key action, to ensure proper completion of the test and resumption of normal processing.

When the online tests are complete, the system operator and the operator at the receiving terminal have a list of the test results. The test results should be recorded. If no test pattern was received at the specified terminal, notify your IBM Customer Engineer.

If the online test was sent to a 3270 printer (such as the 3284, 3286, or 3288), the information logged for the online test at the CCP system operator console contains zeros; the results of the test must be determined at the terminal.

An example of a test request is: 25014 -- AA

25 = Test number
01 = Number of times test is to be sent
4 = Length of control unit/device address
-- = Control unit address
AA = Device address

Notes:

1. To resume communication with an application program you must press CLEAR, wait for message A11 CLEAR to appear, and then press the ENTER key. The application program is informed that you cleared the screen. If your terminal is in command mode at the time you enter online test, you can resume commands when A11 CLEAR appears.
2. If the system does not recognize your online test request and your terminal is in command mode, CCP returns an error message. If you are in communication with an application program when you make an unrecognized test request, the program should treat the test request as invalid data. (The program does *not* treat the test request as invalid data, however, if it is not designed to do so.)
3. If your application program communicates with 3275 switched line terminals, see the *IBM System/3 Communication Control Program Programmer's Reference Manual*, GC21-7559, for line control considerations and procedures to follow when acquiring and releasing terminals.
 - Use the DISCONNECT switch on the 3275 switched terminal only to disconnect the terminal from the communication line after the terminal has been logically disconnected from the CCP system; that is /OFF DROP has been entered. Using the DISCONNECT switch at any other time can cause unpredictable results.
 - Online test procedures with 3275 switched terminals:
 - a. Press CLEAR and RESET keys, key in the OLT request with a message count of 1, and press the TEST REQUEST key.
 - b. Only one test message will be sent to the 3275 switched terminal and it contains a start printer command. This start printer command will cause the test message to be printed if the printer is attached to the 3275 terminal.
 - c. The terminal times out and disconnects while the message is printing. Another call is necessary, when the OLT has finished printing, to reestablish communication with CCP.
 - d. The logging information for the OLT at the CCP end will contain zeros; therefore, the success or failure of the test is determined at the terminal location, not at the system console.
 - A retry count greater than the default value of seven (approximately 20 seconds) is available via \$SGFIX, through your Systems Engineer. This greater retry count will allow additional time to enter data without the switched line being disconnected.
 - On the initial line connection, make sure you press the RESET key on the terminal.

Test Types

Test Types

The abbreviations of the orders tested on the 3270 are:

EM	End of message
IC	Insert cursor
NL	New line
SBA	Set buffer address
SF	Start field
WCC	Write control character

Test Title and Description

Test 23	23	3270 Basic EBCDIC Test Message This test checks all alphameric characters at a display station or printer. It also checks the use of the WCC to sound the alarm and allows attribute field specifications to be checked at a display station. It prints 40 characters per line.
Test 24	24	3270 Model 1 Align EBCDIC Test Pattern This test checks position alignment for the 480-character display station. It also checks the WCC to sound the alarm and it prints 40 characters per line.
Test 25	25	3270 Model 2 Align EBCDIC Test Pattern This test checks position alignment for the 1920-character display station. It also checks the WCC to sound the alarm and it prints 80 characters per line.
Test 26	26	3270 Orders EBCDIC Test Message This test checks 3270 orders, the WCC to sound the alarm, and uses display and intensified brightness. It prints 64 characters per line.
Test 27	27	3270 EBCDIC Universal Character Set Test Pattern This test uses the erase/write command, displaying the universal character set in EBCDIC. It checks the WCC to start the printer, sounds the alarm (on a display), and prints 132 characters per line. NL and EM are used on a printer. SF, NL, and EM are used on a display.
Test 28	28	3270 NL/EM EBCDIC Test Pattern This test is mainly intended to test EM and NL on the printer. The WCC is checked to start the printer and sound the alarm on a display. It prints 132 characters per line.
Tests 29-34	29 - 34	3270 ASCII Test Pattern These tests correspond to tests 23 - 28 except that transmission is in ASCII.

Note: Your terminal is either EBCDIC or ASCII, not both, and you can find out which from your data processing personnel.

The 3735 online test provides a means of testing the communications facilities of that terminal. The following steps are followed to perform these tests:

1. Enter local mode.
2. Press the CODE and REQ key simultaneously.
3. Enter the 2-digit number that identifies the test to be run.
 - 09 This test transmits the entered message to the terminal the number of times specified in step 6.
 - 10 This test transmits 36 alphameric characters (A-Z and 0-9) the number of times specified in step 6. EBCDIC terminals transmit EBCDIC characters and ASCII terminals transmit ASCII characters.
4. Press the ENTER key.
5. A message requests that you enter the number of times the test message is to be transmitted.
6. Enter a 2-digit number from 01-99 indicating the number of times the test is to be run.
7. Enter your 3735 addressing characters if this terminal is on a nonswitched line.
8. Enter up to 225 characters for the test message if test 09 is selected. Back-space is not allowed.
9. Press END FORM. If this terminal is on a switched line, place the call to establish the connection.

Note: Online test does not work on the 3735 if CCP places the call to the terminal.
10. Following completion of the test, a message is printed indicating the number of blocks in error, if any. Record the test information.

application program. The instructions written by a programmer and stored in a computer that tell the computer how to process inventory, inquiry, order-entry, and other data processing jobs. You request and communicate with application programs when you operate a CCP terminal.

ASCII. American National Standard Code for Information Interchange.

CCP system run. The length of time that you are permitted to communicate with the CCP. It begins when the system operator starts the CCP and ends when the system operator shuts down the CCP.

command. The word you enter from a terminal that defines to the CCP the operation to be performed.

cursor. A movable spot of light on the cathode ray tube of a display terminal that indicates where the next character will be entered.

default. The selection of one alternative from a set of values. Selection is made by the system when you do not specify a value.

dialing. Establishing a connection using common communication lines between a computer and a terminal.

EBCDIC. Extended binary coded decimal interchange code.

filename. An arbitrary symbol created by the programmer to identify and reference a collection of related records.

inquiry. An application in which a request for information is entered from a terminal and a response is returned to the terminal. Airline personnel use an inquiry application when asking for the number of seats available on a flight.

inquiry with update. An application in which the transaction records, entered from a terminal, are used to interrogate and update one or more master files maintained by the system.

installation. A particular data processing system (System/3), the work it does and the people who manage it, operate it, apply it to problems, and use the results it produces.

message text. A series of words or symbols designed to convey information. Messages are routed to you at a terminal or you can send messages to the system operator.

never-ending program. A user application program which, after it has been initiated, remains in main storage and does not go to end of job until the CCP is shut down or the program is canceled by the system operator.

nonswitched lines. A connection between a terminal and a computer that does not have to be established by dialing.

offline. Pertaining to terminals that are not under control of the computer.

online. Pertaining to terminals that are under control of the computer and are allowed to interact with CCP.

order entry application. An application in which a transaction (such as a sales order) is entered into the computer from a terminal.

password. A security feature of the CCP that requires you to enter a predetermined name or group of characters. The password must be accepted by CCP before any input is accepted.

program request under format (PRUF). A method of requesting a program from a display format on a 3277. The entire screen can be used to pass data with the program request. The name of the program to be requested appears as the first field in the format.

queue. A waiting list in a computing system. Application program requests are placed on queue if they cannot be started immediately.

resources. Any facility of the computing system required by an application program, including main storage, input/output devices, and central processing unit. An application program can be placed on a queue when resources are not available.

switched lines. A communication line in which the connection between the computer and a remote station is established by dialing.

symbolic terminal name. The name or group of characters that identifies a terminal. The symbolic name is used by the CCP and the system operator to refer to a specific terminal. Symbolic terminal names are easy to use and remember. For example, your name could be used as the symbolic terminal name of your terminal.

system operator. The person attending the System/3 who has full responsibility for controlling a CCP work session.

terminal. A device used to receive and send information. Terminals are connected to a system on either switched or nonswitched lines. They are used to communicate with the CCP system at a remote location.

terminal session. The length of time that you are communicating with the CCP. It begins when you sign on the terminal and ends when you sign off the terminal.

The spool file copy program is an IBM system service program that enables either a CCP terminal operator or the system operator to access the spool queues. The program is available only with IBM System/3 Model 15 System Control Program (SCP) number 5704-SC2.

The functions provided by the spool file copy program differ somewhat, depending on whether the program is requested from a terminal or loaded by the system operator. The functions available to the CCP terminal operator are:

- Copy all or part of a spool print queue to a disk file
- Copy to the spool reader queue
 - from a disk file
 - from a 3275, 3276, 3277, or 3278 terminal
- Copy a display of the status of the spool queues
 - to a disk file
 - to a 3275, 3276, 3277, or 3278 terminal

The operating procedures for each CCP installation should dictate when and why to use the spool file copy program.

The spool file copy program can be requested from only the following 3270 terminals: 3275, 3276, 3277, and 3278. The program cannot be requested from other terminal types and cannot be requested by the system operator using the system console as a terminal.

For complete information on how to use the spool file copy program, see *IBM System/3 Model 15 SCP Concepts and Reference Manual*, GC21-5162. For information about spooling, see *IBM System/3 Model 15 User's Guide to Spooling*, GC21-7632. Spool file copy program messages are contained in *IBM System/3 CCP Messages Manual*, GC21-5170.

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International Business Machines Corporation

**General Systems Division
4111 Northside Parkway N.W.
P.O. Box 2150
Atlanta, Georgia 30301
(U.S.A. only)**

**General Business Group/International
44 South Broadway
White Plains, New York 10601
U.S.A.
(International)**

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