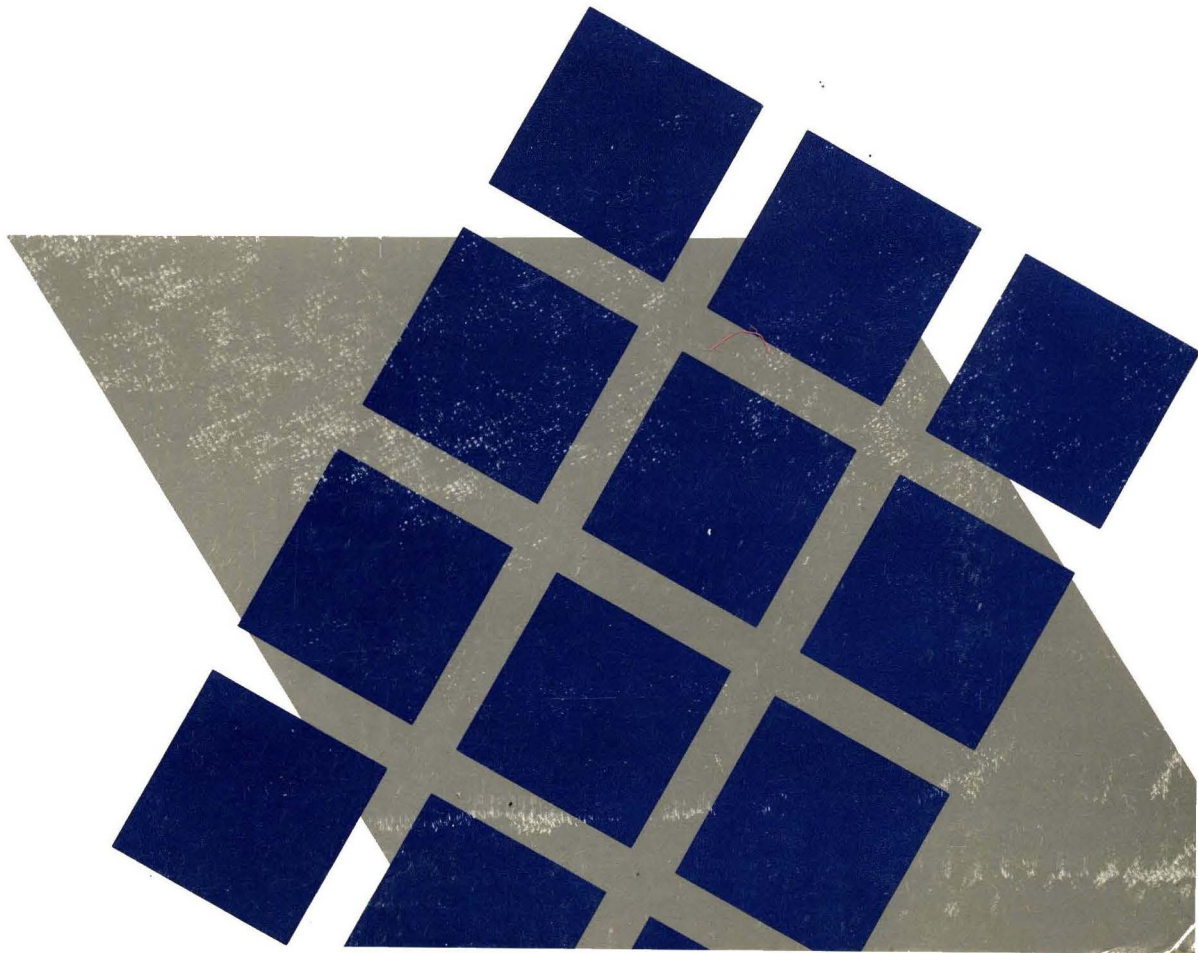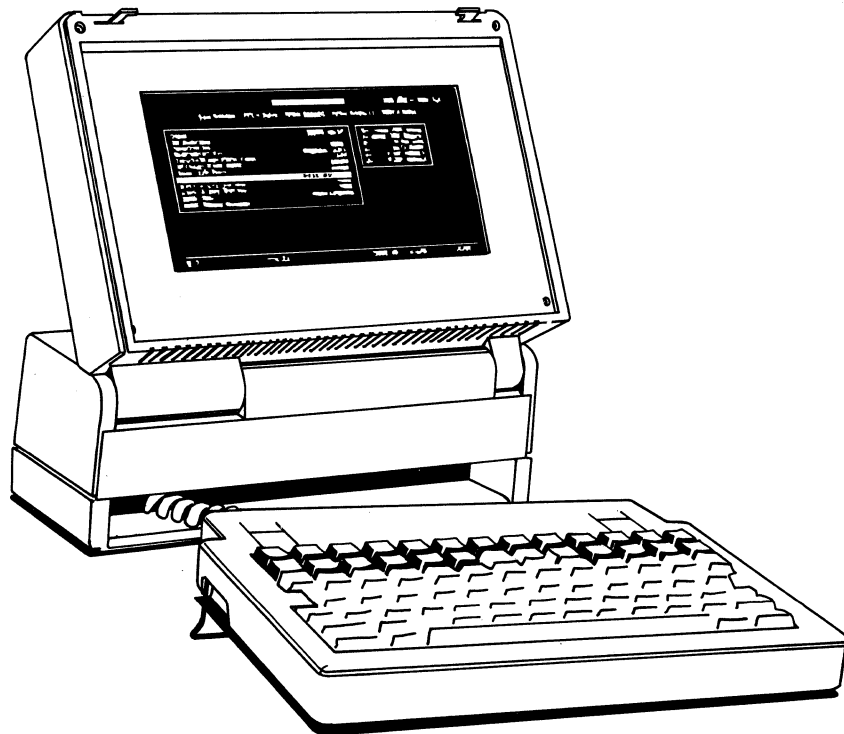# INFORMER®

Computer Terminals, Inc.

USER'S GUIDE

213 Portable Workstation

Informer Computer Terminals

213 Portable Workstation
User's Guide

USA - FCC Rules and Regulations, Part 68

Modems used in workstations manufactured by Informer Computer Workstations, Inc. are registered with the Federal Communications Commission (FCC), for direct connection to the general switched telephone network. The following rules apply.

1.   All direct connections to the telephone network are to be made with standard plugs and jacks.

2.   Connection to pay phones or party lines is prohibited.

3.   You are required to notify the local telephone company prior to the connection and upon the final disconnection of the modem. You must also supply the telephone company with the make, model number, FCC registration number, ringer equivalence and particular line to which the connection is to be made. See Appendix A for this information.

4.   You must disconnect the modem from the telephone line if it appears to be malfunctioning. Reconnect it only when it can be determined that the modem is not the cause of trouble. If the modem requires service, return it to Informer Computer Terminals, Inc.

5.   The modem contains protective circuitry to prevent harmful voltages from being transmitted to the telephone network. If however, such harmful voltages do occur, the telephone company may temporarily discontinue service to you. In this case, the telephone company should:

        Promptly notify you of the discontinuance.

        Afford you the opportunity to correct the situation which causes the discontinuance.

        Inform you of your rights to bring a complaint to the FCC concerning the discontinuance.

        The telephone company may make changes in its facilities and services which may affect the operation of your equipment. However, you are to be given adequate notice in writing by the telephone company to allow you to maintain uninterrupted service.

        Important! Notify your local telephone company with the following:

        FCC Registration Number: GAV4FG-10384-DT-E
        Ringer Equivalence: 0.2A

British Telecommunications Statutory Information

The Informer Workstations contain a built in modem which is approved for the use with Telecommunications Systems run by British Telecommunications in accordance with the conditions in the instructions for use. The following section provides the statutory information that relates to this approval.

Modem Model Number

The unit referred to in this guide as the modem is the Informer computer workstation. See your User's Guide for modem model numbers.

Type of Circuits

The modem is approved for connection to telecommunications systems specified in the instructions for use subject to the conditions set out in them. It can be used on Direct Exchange Lines or Direct Exchange Lines via a PBX but is not approved for use on shared service, 1+1 carrier systems, or as an extension to a pay phone.

Dialing

The modem may be used with either pulse (LD), or tone (MF) signalling BT lines.

Bell Tinkle

During dialing, this modem may tinkle the bells of other telephones using the same line. This is not a fault: you are advised not to call the fault repair service.

Mark of Origin

The modem is manufactured in the USA by Informer Computer Terminals, Inc., Garden Grove, CA.

Functions

The modem is an autodialing (tone and pulse), modem conforming to CCITT standards. It supports V25 autodialing and autoanswering recommendations.

Echo Suppressor

The modem is equipped with echo-suppressor tone (V.25) when autoanswering.

REN:

The modem has a REN of TBD.

Explanation of REN:

Equipment for attachment to the Public network is assessed to determine its "ringer equivalence" number (REN). The REN relates to the performance of the apparatus when used

in combination with other apparatus. The REN is a customer guide indicating approximately the maximum number of items that should be connected simultaneously to the line.

To determine the maximum number of items of apparatus that should be connected simultaneously to an exclusive line, the total REN obtained by summing the REN values of each of the items of apparatus connected to the exclusive line should not exceed the maximum REN value of 4. This value includes any BT approved instrument each of which is assumed to have a REN value of 1.0 unless otherwise marked.

The Informer workstation modem has a REN of TBD and care must be taken not to use it with other telephone equipment that would result in the maximum figure of 4 REN being exceeded.

Because of the wide spread of ringing detector characteristics, a guarantee of successful operation of mixed types of ringing detectors may not be given by the supplier.

PBX Use

This apparatus have been approved for use with the following facilities:

o Automatic dialing facilities.
o Automatic call initiation.
o Multi-frequency (tone) dialing and looo disconnect (pulse) dialing.
o Operation in absence of proceed indication.
o Automatic storage of last number dialed.
o Storage of Telephone numbers for retrieval by a pre-determined code.
o Detection of V.25 answer tone.
o No recall.

Any other usage will invalidate the approval of the apparatus if as a result, it then ceases to conform to the standard against which the approval was granted.

The modem is only approved for use on compatible PBX's. It cannot be guaranteed that the modem will operate correctly under all possible conditions to compatible PBX's. Any case of difficulty should be referred in the first instance to the PBX supplier. The connection of the modem to an exchange line or PBX extension is via a BT modular socket. If this is not already available please use the form shown at the end of this guide to request one from British Telecom. If your PBX was not installed by British Telecom then contact your authorized maintainer.

Approval Number:

TBD. This approval applies to the Informer workstation with built in modem.

<div align="center">

CAUTION!

</div>

The approval of the Informer workstation for connection to the British Telecom public switched telephone network is invalidated if the apparatus is subject to any modification in any material way not authorized by BABT or if it is used or connected to:

1.   Internal software that has not been formally accepted by BABT.

2.   External control software or external control apparatus which causes the operation of the modem or associated call set-up equipment to comply with the requirements of the standards set out in BABT/SITS/82/0055/D and BABT/SITS/82/01/C.

All apparatus connected to this modem and thereby connected directly or indirectly to the British Telecom public switched telephone network must be approved apparatus as defined in section 22 of the British Telecommunications Act 1984.

WARNING!

There are dangerous voltages inside the computer. The telephone must also be regarded as potentially dangerous. It is essential that the instructions in this guide are carefully followed.

Request for Connection of Apparatus to B.T. Lines

Name: **Address:**

Post Code:

Product: **Serial Number:**   **Approval Number:**

                                                                NS/1397/3/H/600496

Tick in brackets as required:

[   ] **Please supply B.T. installation socket(s)**   _____
                                        (Quantity)

[   ] **Please supply extra installations socket(s)**   _____
                                        (Quantity)

Informer Computer Terminals (U.K.), Ltd. will not be responsible for any installation costs or misuse of this product.
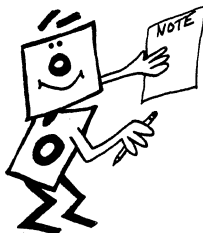
When you have completed this form mail it to your nearest British Telecom office.

Table of Contents

Table of Contents

Operation

Appendix

List of Figures

Table of Contents

List of Forms

Quick Connect

The Quick Connect section is for those of you that are in a REAL hurry to get things "up and running"! This section's "bare essentials" approach makes installation quick.

Quick Connect will be easier to use if you're already familiar with SNA and BSC installations, but take a look anyway. **You** *decide if you need more information.*

If you decide you'd rather use the standard installation and operation procedures, start with the **Before You Start** *section. Either way, the 213 is* **Quick** *and easy to* **Connect***!*

To start Quick Connect, turn the page.

Connecting and using the 213 Workstation

[ ] 1.   Check the contents of the shipping carton.

(Package Contents, page 2.5.)

[ ] 2.   Make sure the Communication Controller at the host site has been GEN'd for the 213 Workstation.

[ ] 3.   Complete the 213 Setup Sheet for the protocol you're using.

(Before You Start, page 3.1-3,.)

[ ] 4.   Plug the modular telephone and power cables in.

(Connecting Cables, page 3.4.)

[ ] 5.   Turn the 213 ON.

[ ] 6.   Hold down the ALT key and press the TEST key to display the Setup Menu. Use the Arrow Keys to move the highlight bar up and down.

[ ] 7.   Enter and save configuration values for each host you add.

(How to Enter Configuration Values, page 3.42.)

[ ] 8.   Hold down the ALT key and press the TEST key to exit the Setup Menu.

[ ] 9.   Dial the host. Hold down the ALT key and press the DIAL key to initiate dialing.

(Dialing the Host, page 4.1.)

[ ] 10. Logon and initiate the application you want to use.

(Appendix B - The Keyboard, page B.1, and Appendix C - Status Line Definitions, page C.1.)

[ ] 11. To switch sessions (applications), hold down the ALT key and press the SPACEBAR.

(To Switch Sessions, page 4.4.)

[ ] 12. To quit the session hold down the ALT key and press the DISCON key.

(To Quit a Session and Disconnect from the Host, page 4.4.)

Thank You

Thank you, and congratulations on your purchase of the 213 Portable Workstation.

The 213 Portable Workstation truly represents "Technology on the Move". It's lightweight, compact size travels anywhere you do. Its quick to connect and easy to use. In just minutes you can have the 213 set up and ready to do business.

We believe the Informer 213 Portable Workstation satisfies both your business and personal needs by offering a convenient, low cost solution to dial-up networking.

How to Use This Guide

This guide is written for people that are familiar with the basics of IBM SNA and BSC Networks, IBM 3278 Display Stations and IBM 3174/3274 Control Units. If you need additional information regarding these products, refer to **Appendix E, Additional Reading.**

The instructions in this User's Guide are divided into five sections for easy use.

Quick Connect

Quick Connect is written for those of you that are in a hurry to get things up and running. If you'd like to try Quick Connect, it's located just after the Table of Contents.

Introduction

This section includes general information that will help you understand the purpose of your 213 workstation and how you can benefit from it. A list of product features, specifications, package contents, and instructions on how to care for your 213 are also included in this section.

Installation

This section provides the information you need to install and configure the 213. Be sure to read over this section carefully so installation will be successful the first time around. We recommend installing the 213 in the same sequence the instructions are presented.

Operation

After you've installed and configured the 213, this section will teach you how to use the 213. Even though many of you have differing applications, the 213's basic operation will be the same. Be sure to read this section before you begin operating your 213.

Appendix

The Appendix functions as a reference section. Items such as keyboards, keycaps, operating and error symbols are illustrated and explained in this section. A list of additional reading is also included.

About the 213 Portable Workstation

Product Purpose

The Informer 213 Portable Workstation is a lightweight, portable, IBM compatible device, which emulates an IBM 3278 Display Station attached to a 3174/3274 Control Unit (Model 1C, configuration support level C).

The 213 is used as a workstation in an IBM SNA/SDLC (System Network Architecture/Synchronous Data Link Control), or BSC (Binary Synchronous Communications) Network.

It's a low cost, easy to use alternative to more expensive units.

Package Contents

---

1   ICT 213 Portable Workstation

2   Six foot modular phone cord

3   AC power cord

4   ICT 213 User's Guide

5   **Optional** six foot modem cable (part number 94643-006)

6   *****Optional** six foot printer cable (part number 94646-009)

7   Carrying case (Not illustrated)

To verify that you received the type of modem you ordered, check the Informer label at the rear of the Workstation. Package contents are illustrated in Figure 1.0.

---

*Informer offers a complete line of **compatible** networking products. Items such as our:*

371 E Port Expander/Security Control Unit,
Stand alone modems,
Printers, and Interface Cables

help you build your network easily and efficiently because everything "fits" together.

Contact your sales representative for additional information about these products.

*****This cable is configured for use with the Brother, model 1109 printer. Both items may be purchased from Informer.**
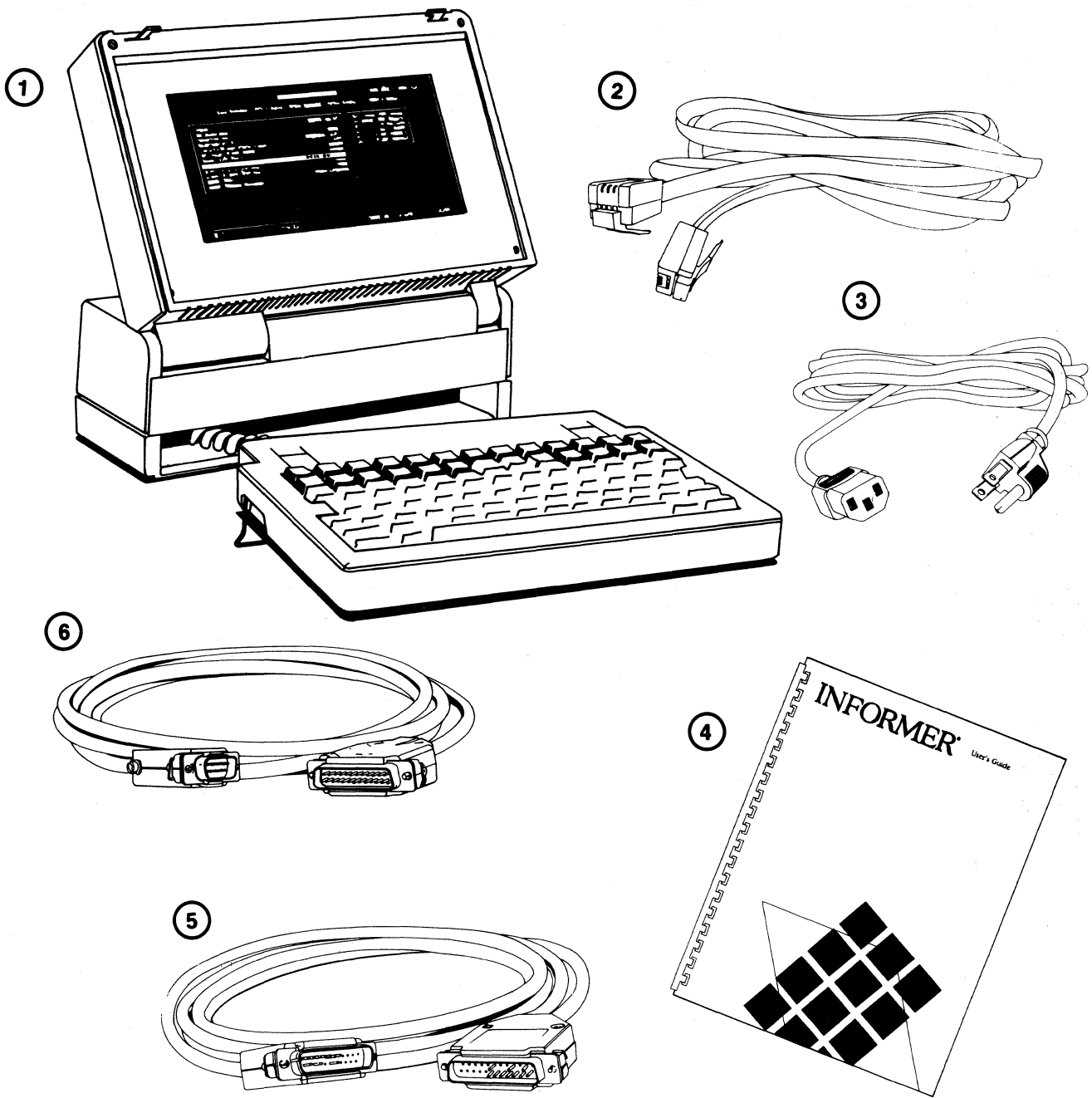
Figure 1.0   Package Contents

Features

- Portable IBM Compatible with a Control Unit, display, keyboard, and built in modem all in one unit.

- Uses IBM SNA/SDLC or BSC protocol.

- Weighs only eight pounds.

- Comes with its own carrying case.

- Electroluminescent light emitting screen lets you operate in dim light without eyestrain.

- Easy to use Setup Menu allows you to program dialing for up to four different hosts.

- Easy installation: plug it in, set it up and dial.

- Runs up to three sessions at the same time:

  - two sessions emulate a 3278 MOD2 session,
  - one session emulates a 3287 printer session.

- Offers both NRZ and NRZI data encoding.

- Your choice of built in modem models.

- Supports external synchronous modems with data rates up to 48000 bps.

- Foreign language keyboard options available.

- Supports BSC Transparent Mode.

- Supports Extended Highlight

  - Underline
  - Reverse Video
  - Blink

- Supports extended 2-byte character set through the use of the GE (Graphics Escape) order.

- Supports the Write Structured Field (WSF) command.

- Supports the Query Reply Structured field.

Specifications

Physical Characteristics

- Measurements: 3.5" x 11" x 11.3"
- Weight: 8.0 pounds
- Power Consumption: 28 watts

Environmental Characteristics

- Operating Temperature: 5 to 40 degrees Celsius
- Storage Temperature: -30 to 65 degrees Celsius
- Humidity: 20% to 90% (Non-condensing)

Other Facts

- Printer Port: RS-232-C Asynchronous DTE interface
- Printers Supported: Serial ASCII
- External Modem Port: RS-232-C Synchronous DTE interface

Maintenance

Do not block ventilation openings by placing papers or other items on top of the unit. This causes heat buildup that can damage the workstation.

Avoid areas where there is excessive dust or ashes.

Do not place paper clips or other metallic items on the workstation or keyboard. They may drop between the keys and cause a malfunction.

Do not place liquids that could easily spill, on or near the workstation or keyboard.

Cleaning Procedures

Always **UNPLUG** and **TURN** the 213 Workstation **OFF** before you clean the screen or cover.

Use separate clean, soft cloths to wash, rinse, and dry the screen. When cleaning the workstation, **make sure the cloth is damp, not wet**.

Do NOT use acid solutions or abrasive products such as cleansers or scouring pads. These products will damage the screen's anti-reflective coating.

To clean the screen, use one of the following suggested procedures.

- Water Only - use one cloth to clean and a separate one to dry.

- Water and Detergent - use one cloth to clean, one cloth to rinse, and one to dry.

- Ammonia-Based Glass Cleaner - apply the cleaner with one cloth and dry with a separate cloth.

Service and Warranty Information

With Informer products you get superb quality and excellent support. All hardware is extensively pretested and burned-in prior to shipping. In addition, Informer products meet the stringent requirements set forth by the NSTA Pre-shipment Program, which includes extensive vibration, drop and environmental testing.

All products are backed by a one year warranty and supported both nationally by Informer's field service organization and internationally by Informer and its authorized distributor network. Questions regarding service and support should be directed to Technical Support at one of the following addresses:

USA

Informer Computer Terminals   (714) 891-1112
12781 Pala Drive
Garden Grove, CA 92641

Canada

Gloucester, Ontario   (613) 749-8415

Europe

West Midlands, England   (021) 550-5678

See "Request for Technical Support" form on the next page.

Request for Technical Support

Serial Number   **Model Number**

Describe Problem

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Please have this form completed before you call for technical support. When returning a unit include a copy of the completed form.

Before You Start

1. If you're connecting a printer or external modem, you'll need a flat edge screwdriver to fasten the cable connectors to the 213 Workstation.

2. Make sure the network administrator (or system programmer), has GEN'd the communication controller at the host site to support the 213 workstation and any other equipment you're adding to the network. When this is completed, continue with step 3.

3. Complete the **213 Setup Sheet** for the protocol version you're installing.

   If you don't know which options to select for the configuration parameters shown on the form, read the section on **Configuration Parameters - SNA or Configuration Parameters - BSC** (depending on the protocol you are using). These sections explain what the configuration parameters mean. Another resource is your network administrator or telecommunications manager at the host site.

213 Setup Sheet -SNA

Workstation ID:

Host Name:	Show Highlight as:	Case:	CU Address:
	0 = Normal 1 = Blink	0 = Upper/Lower	
	2 = Reverse 3 = Underline	1 = Upper Only	

Host Port:	Modulation Type:	Character Set:		
0 = RS232	[ ] NRZ	0 = English (US)	4 = Norwegian/Danish	8 = International
1 = Modem	[ ] NRZI	1 = English (UK)	5 = Norweg/Danish alt	
		2 = Austrian/German	6 = Finnish/Swedish	
		3 = Aust/German alt	7 = Finnish/Swedish alt	

Which Session is the Printer?	Invalid EBCDIC Codes:	Printer Baud Rate:			
1 = Session 1 (LU3)	0 = Reject	0 = 300	1 = 600	2 = 1200	3 = 2400
2 = Session 2 (LU4)	1 = Hyphenate	4 = 4800	5 = 9600	6 = 19200	

Modem Protocol:	Auto Answer:	6 LPI String:	8 LPI String:
See available options in	0 = Disabled		
the section on Configuration	1 = Answer		
Parameters - SNA	3 = Originate		

XID:	Enter XID Number here:
0 = Edit	
1 = Conceal	

Phone Number:	Enter Phone Number here:
0 = Edit	
1 = Conceal	

Notes

213 Setup Sheet -BSC

Workstation ID:

Host Name: **Show Highlight as:**   **Case:**   **CU Address:**

0 = Normal   1 = Blink   0 = Upper/Lower

2 = Reverse   3 = Underline   1 = Upper Only

Host Port: **Modulation Type:**   **Character Set:**

0 = RS232	[ ] NRZ	0 = English (US) 4 = Norwegian/Danish 8 = International
1 = Modem	[ ] NRZI	1 = English (UK) 5 = Norweg/Danish alt
		2 = Austrian/German 6 = Finnish/Swedish
		3 = Aust/German alt 7 = Finnish/Swedish alt

Which Session is the Printer?   **Invalid EBCDIC Codes:**   **Printer Baud Rate:**

1 = Session 1 (Dev 1)   0 = Reject   0 = 300   1 = 600   2 = 1200   3 = 2400

2 = Session 2 (Dev 2)   1 = Hyphenate   4 = 4800   5 = 9600   6 = 19200

Modem Protocol: **Auto Answer:**   **Printer Init String:**

See available options in the section   0 = Disabled

on Configuration Parameters - BSC   1 = Answer

     3 = Originate

Phone Number: **Enter Phone Number here:**

0 = Edit

1 = Conceal

Notes

Connecting Cables

[ ] 1. The illustration in **Figure 1.1** shows where all the connectors and switches are located on the 213. The following pages explain how each connector and switch is used.
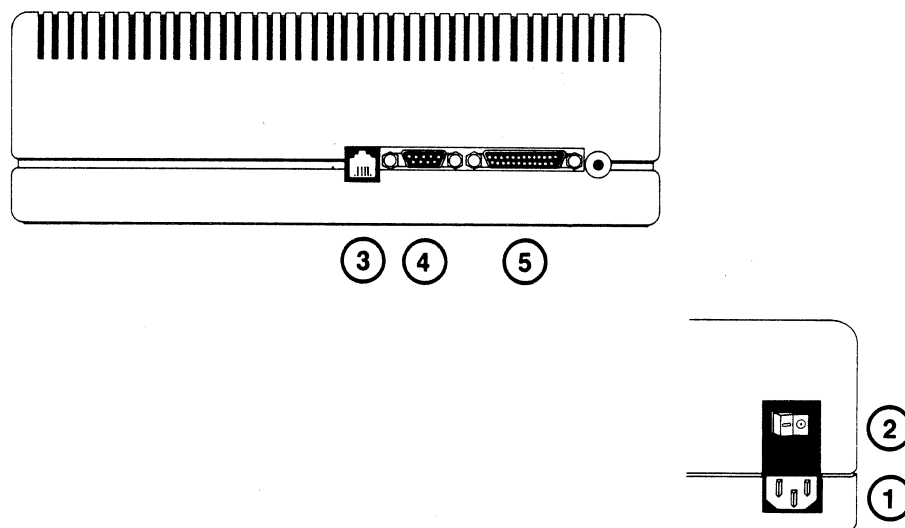
Figure 1.1. Connector Locations on the 213

1   AC Power Connector

The AC power cord must be plugged into the 213 workstation and an AC power outlet.
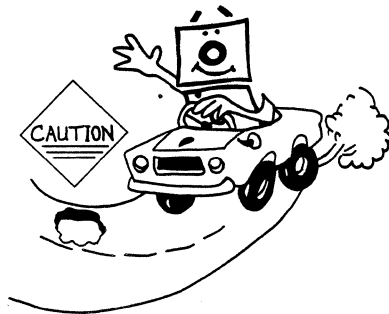
Some of you will travel between countries that use different voltages. Be sure to purchase the proper voltage (power) converters to accommodate the differences between countries. Voltage converters may be purchased at your local electronics store. It is important that you do this. Plugging the workstation into a power outlet with the incorrect line voltage can damage the workstation.

2   ON/OFF Switch

Turns the power on or off.

3   Built in Modem Port Connector

RJ-11 Female Connector

Supports the "portability" feature of the 213 by plugging into the telephone line and enabling the built in modem to dial up the host.

To access the host via the built in modem:

1.   plug one end of the RJ-11 modular telephone cord into the RJ-11 connector (number **3** in Figure 1.1).

2.   plug the other end into the telephone line's wall jack.

4 Printer Port Connector

DB-9 connector wired as an RS-232-C asynchronous DTE interface. The printer must be a serial printer. The 213 Workstation will not support a parallel printer.

Printer Setup

- 8 data bits, 1 stop bit and no parity
- *READY/BUSY* signaling (not xon/xoff)
- Pin 5 of the (213) printer port is the *BUSY* line.

*Printer Port Pinouts

Pin	Function	Mnemonic
1	Frame Ground	FG
2	Transmit Data	TD
5	Printer Busy	
7	Signal Ground	SG
9	+12 Test Voltage	

*Signals provided by Informer

**Printer Cable Pinouts

DB-9 Male Connector (Terminal Side)		DB-25 Male Connector (Printer Side)	
***FG	1		
TD	2	3	RD
CTS	5	20	BUSY
SF	7	7	SG
+12	9	6	DSR
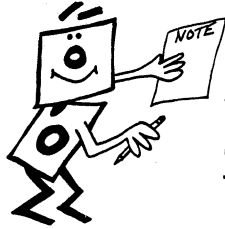
**The printer cable pinouts are for the cable used to connect a Brother, model 1109 printer to the 213. Both the cable and printer may be purchased from Informer.

Be sure to consult your printer's installation guide to determine whether or not your printer is compatible with the 213.

Follow the installation instructions in your printer's installation guide when installing your printer.

If your printer port pinouts are different from the 213's, you will have to assemble your own printer cable to accommodate the pinouts of both devices.

***If you are building your own cable and the RS-232-C cable your using has a shield, make sure the wire attached to pin 1 is also attached to the shield.

If you'd like, Informer can build a cable to your specifications. Contact your sales representative for the detail.

5   External Modem (Direct Host Connection) Port Connector

DB-25 Female Connector wired as an RS-232-C synchronous DTE interface.

Used to hook up an external modem to the 213 workstation. This connector is designed to be plugged directly into a synchronous modem (i.e. Bell 208B), or a modem eliminator. The cable may be purchased from Informer. Port pinouts are shown below.

Cable pinouts are standard RS-232-C.

External Modem Port Pinouts

Pin	Function	Mnemonic
1	Frame Ground	FG
2	Transmit Data	TD
3	Receive Data	RD
4	Request to Send	RTS
5	Clear to Send	CTS
6	Data Set Ready	DSR
7	Signal Ground	SG
8	Data Carrier Detect	DCD
9	+ 12 Test Voltage	
10	-12 Test Voltage	
15	Transmit Clock	TC
17	Receive Clock	RC
20	Data Terminal Ready	DTR

The Setup Menu

The Setup Menu is used to enter the information that will enable you to communicate with up to four different hosts (only one at a time though). The process of entering these values is called "configuration" or "setup".

To explain the Setup Menu and how to use it, we've separated it into three functional sections. The following information provides a brief overview of each section, followed by the title of the sections providing in depth definitions of the data fields within each section.

The Setup Menu for **SNA** *protocol is illustrated in Figure 1.2.*

The Setup Menu for **BSC** *protocol is illustrated in Figure 1.3.*

---

1   The Command Section

This section displays the commands used to manipulate the Setup Menu screen. You will use these commands to save data, display data previously entered, display default values, move from one screen of information to the next, and select the screen background (dark or light).

Read the **How to Use the Command Section.**

2   The Parameter Section

The Parameter section is used to enter values for each configuration parameter listed on the screen.

Once the information is saved, the 213 is programmed for automatic dial.

Read **How to Use the Parameter Section - SNA** or **How to Use the Parameter Section - BSC** (depending on the protocol you're using).

3   The Status Line Section

The Status Line displays symbols, alpha, and numeric codes representing the status of operations. This line tells you when the system is working correctly, what it is in the process of doing, and when something is wrong.

The modem status also displays in this section of the screen.

The Status Line is visible during both setup and operation mode.

Read **How to Use the Status Line Section.**

① ↑↓ = Select   PF1= Save   PF2= Recall   PF3= Default   PF4= Next Host   TEST= Exit

PF5= Background

Informer 213 SET UP MENU   **374 SNA - Rev. x.x**

Host Name	Host 0
Show Highlight as	Normal
Case	Upper Only
CU Address	40
Host Port	Modem
Modulation	NRZI
Character Set	English (US)
Which session is the printer?	02
Invalid EBCDIC Codes	Hyphenate
Printer Baud Rate	19200
Modem Protocol	
Auto Answer	1
6 LPI String	1B36
8 LPI String	1B38
XID	
Phone Number	

< ENTER > To Edit

②

③ 4   501   SESS 0   □—□ 02   □□   01/01

Figure 1.2 Setup Menu - SNA

① ↑↓ = Select   PF1= Save   PF2= Recall   PF3= Default   PF4= Next Host   TEST= Exit
                                   PF5= Background

Informer 213 SET UP MENU   374 BSC - Rev. x.x

<ENTER> To Edit

Host Name	Host 0
Show Highlight as	Normal
Case	Upper Only
CU Address	40
Host Port	Modem
Character Set	English (US)
Which session is the printer?	02
Invalid EBCDIC Codes	Hyphenate
Printer Baud Rate	19200
Modem Protocol	
Auto Answer	1
Printer Init String	1B36
Phone Number	

② ③

4   501   SESS 0   ☐—☐ 02   ☐☐   01/01

Figure 1.3 Setup Menu - BSC

How to Use the Command Section

```
                        Informer 213 SET UP MENU              374 SNA - Rev. x.x


  ↑↓ = Select      PF1= Save      PF2= Recall     PF3= Default    PF4  Next Host    TEST  Exit
                                   PF5= Background
```
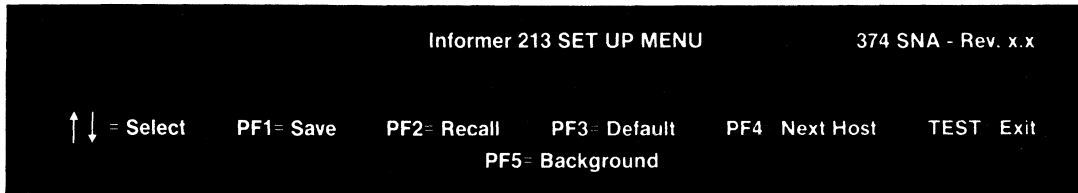
↑↓ = Select

Moves the highlight bar up and down, depending on the direction of the arrow on the key you press.

PF1 = Save

When you add, change, or delete values, you must press the PF1 key to save them to permanent memory. We recommend that you save the values you enter for each host before moving to the next host (setup screen). If you exit the Setup Menu before saving the values for each screen, the values will be canceled.

PF2 = Recall

Displays the values last saved to permanent memory. If you've changed a host value and want to review the "old" value, press the PF2 key to display it. This must be done before you save the changes you've made. Once you've saved a value, it replaces the previous value in permanent memory.

PF3 = Default

Displays the default values. Default values are assigned at the factory. These are the values that appear the first time you access the 213's Setup Menu and prior to your input. In most cases the default values must be changed before the 213 can communicate with the host system.

PF4 = Next Host

Moves forward to the next screen. There are four setup (host), screens. One for each host you enter. To display the first setup screen, hold the Alt key down and press the Test key. To move from the first to the second setup screen press the PF4 key. Press the PF4 key each time you want to move to the next setup screen. PF4 moves sequentially through the screens.

PF5 = Background

Selects the screen background. Dark or Light.

TEST = Exit

Exits from the Setup Menu. You must hold the ALT key down and press the TEST key at the same time. The Setup Menu should disappear from the screen. A "4" should be displayed on the left side of the status line.

How to Use the Parameter Section - SNA

```
┌─────────────────────────────────────────┐  ┌──────────────────┐
│                                          │  │ <ENTER> To Edit  │
│  Host Name                     Host 0    │  └──────────────────┘
│  Show Highlight as             Normal    │
│  Case                      Upper Only    │
│  CU Address                        40    │
│  Host Port                      Modem    │
│  Modulation                      NRZI    │
│  Character Set           English (US)    │
│  Which session is the printer?     02    │
│  Invalid EBCDIC Codes       Hyphenate    │
│  Printer Baud Rate              19200    │
│  Modem Protocol                          │
│  Auto Answer                        1    │
│  6 LPI String                    1B36    │
│  8 LPI String                    1B38    │
│  XID                                     │
│  Phone Number                            │
│                                          │
└──────────────────────────────────────────┘
```

The configuration values shown in the illustration above are the default values for a 213 Workstation using SNA protocol. **(The default for the modem protocol depends on the modem model you ordered.)**

The following information describes each configuration parameter and its options.

Configuration Parameters - SNA

Host Name   0 = Edit

You'll be prompted to enter the value for this parameter.
Type a name or phrase that will identify the host.
You may type up to twenty alpha and/or numeric characters
in this field. (You do not have to name the host. Accepting
the default value will not inhibit communications.)

Show Highlight as   0 = Normal
                                 1 = Blink
                                 2 = Reverse
                                 3 = Underline

The option you select will determine how the text that has
been highlighted will appear on the screen.

When the **Normal** option is selected, the text has **no
attributes**. It appears as "normal" text.

Select the **Blink** option and the highlighted text will blink on
and off.

Select **Reverse** and the highlighted text will appear in reverse
video.

Select the **Underline** option and the highlighted text will be
underlined.

Case   0 = Upper/Lower
                                 1 = Upper Only

The option selected determines whether the alpha characters
appear in upper case only, or in both upper and lower case.
Generally, this is a matter of preference, but some programs
are case specific. **If you have difficulty with data being
accepted, this may be the reason. If in doubt, check
with your system operator.**

CU Address

Control Unit Address. Sometimes called a PU (Physical Unit) address. The host uses this address to communicate with your workstation. You must enter a CU address that is assigned to the host. This guarantees that your workstation and the host are using the same line to transmit and receive data. Although 40 is the default, you'll be prompted to enter the CU Address.

Host Port

0 = RS232 (External Modem)
1 = Modem (Built in Modem)

If you are connecting an external modem and plan to dial the host through it, select option 0. If you plan to dial the host through the 213's built in modem, select option 1.

Modulation

0 = NRZ   (Non Return to Zero)
1 = NRZI   (Non Return to Zero Inverted)

The modulation type represents how the data is transferred back and forth between your workstation and the host. Make sure the modulation type you select matches that used by the host. **If you don't know the modulation type ask the network administrator at the host site.**

Character Set

0 = English (US)	5 = Norweg/Danish alt
1 = English (UK)	6 = Finish/Swedish
2 = Austrian/German	7 = Finish/Swedish alt
3 = Aust/German alt	8 = International
4 = Norwegian/Danish	

Select the option that represents the country specific characters on the keyboard you're using.

**Which Session
is the Printer?**

1 = Session 1 (LU3)
2 = Session 2 (LU4)

The value selected represents the LU (Logical Unit), address set aside for printing functions. The LU address is a location within the host's processor and the option you select **must** represent the LU address GEN'd at the host level. If you don't know which LU address was GEN'd for the printer session, ask the network administrator at the host site. **Session 0 (LU2) is always a display session.**

**Invalid EBCDIC
Codes**

0 = Reject
1 = Hyphenate

The option you select determines what will happen if an error is encountered when characters are printing out on the screen or printer.

Option 0 causes the system to reject the character in error. The character will not print out or be displayed.

Option 1 will print or display the character in error as a hyphen symbol.

Printer Baud Rate

0 = 300   1 = 600   2 = 1200   3 = 2400
4 = 4800   5 = 9600   6 = 19200

If you connected a local printer to your 213, enter the printer's baud rate. The baud rate selected tells the 213 Workstation how fast to send the data to the printer. You can find the correct baud rate to enter by referring to your printer's installation guide or ask your network administrator. **See Printer Setup in the Connecting Cables section.**

Modem Protocol

The Modem Protocol represents the rules and standards that govern the way a modem operates. Each option represents a different set of standards.

Select the option representing the protocol the modem at the host site uses. If you don't know, contact the person in charge of Telecommunications at the host site, or ask your network administrator.

The 213 modem models and their protocol options are listed below.

208B

0 = Bell 208 Short
1 = Bell 208 Long
2 = V.27 4800 Short
3 = V.27 4800 Long

212A

0 = Bell 212A
1 = V.22A 1200
2 = V.22A 600

V.22bis

0 = V.22bis 2400
1 = V.22bis 1200
2 = V.22A   1200
3 = V.22A   600
4 = Bell 212A

V.29

0 = V.29 9600 253ms
1 = V.29 4800 Short
2 = V.29 4800 Long

201C/208

0 = Bell 208 Short
1 = Bell 208 Long
2 = Bell 201C Short
3 = Bell 201C Long

4 = V.27 4800 bps
5 = V.27 2400 bps
6 = V.26 2400 bps
7 = V.26 1200 bps

Auto Answer

0 = Disabled   (No answer)
1 = Answer   (Answers in Answer mode)
2 = Originate   (Answers in Originate mode)

The 213 must be set to the mode opposite of that used by the host. If you don't know which mode the host modem is set for, contact the network administrator at the host site.

If you have a Dial-back Security System installed, the LA and LO command will override the option you select for this parameter. (See the section on Modem Commands.)

---

6 LPI String

Enter the hexadecimal code required by your printer to print six (6) lines per inch. You may enter up to six numbers. Each number takes up two positions. **The default code of 1B36 program an EPSON compatible printer to six lines per inch.**

Example

1B = the code for the ESC
36 = the code for 6

Unless the host has been configured for 8LPI, 6LPI is the default.

You have a maximum of six numbers or twelve positions in which to enter printer escape commands. This means in addition to "lines per inch" you may add other commands, providing no more than twelve positions are used.

The printer escape commands are sent to the printer before a print job is started.

---

8 LPI String

Enter the hex code that is required by your printer to print 8 lines per inch. **See the description for 6 LPI.**

XID

0 = Edit
1 = Conceal

The **Edit** command enables you to enter the XID number but, it will not be concealed from view.

The **Conceal** command enables you to enter the XID number and conceal it from view. The word <Concealed>! displays instead of the XID number.

To **undo** the Conceal command, use the Edit command and retype the phone number. Press the ENTER key, then press the PF1 key to save the XID number.

You **must** enter twelve alpha and/or numeric characters in this field. The XID number is found by combining the PU type (02000), the ID Block (017), and the ID Num (five digits), used to gen the host. The network administrator or system programmer at the host site will have the XID number you must use. The 213 cannot communicate with the host system unless you enter the correct XID number.

Phone Number

0 = Edit
1 = Conceal

Use the Edit and Conceal commands as you do for the XID parameter.

The phone number entered here applies only to the 213's built in modem. (Not applicable if using an external modem.)

Enter the modem telephone number(s) and modem commands required to dial the host's modem. You may enter up to sixty alpha and/or numeric characters in this field.

See the section on **Modem Commands** for help with this parameter.
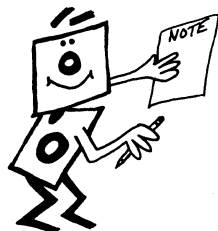
The 213 automatically initiates the D (Dial), and T (Tone) command. You may change the T to a P command (for pulse dial), by typing a P over the T.

See Appendix D for a list of Modem Messages and their meanings.

How to Use the Parameter Section - BSC

```
Host Name                        Host 0        <ENTER> To Edit
Show Highlight as                Normal
Case                             Upper Only
CU Address                       40
Host Port                        Modem
Character Set                    English (US)
Which session is the printer?    02
Invalid EBCDIC Codes             Hyphenate
Printer Baud Rate                19200
Modem Protocol
Auto Answer                      1
Printer Init String              1B36
 Phone Number
```

The configuration values shown in the illustration above are the default values for a 213 Workstation using BSC protocol. **(The default for the modem protocol depends on the modem model you ordered.)**

_____

The following information describes each configuration parameter and its options.

Configuration Parameters - BSC Protocol

Host Name   You'll be prompted to enter the value for this parameter.
Type a name or phrase that will identify the host.
You may type up to twenty alpha and/or numeric characters
in this field. (You do not have to name the host. Accepting
the default value will not inhibit communications.)

Show Highlight as   0 = Normal
1 = Blink
2 = Reverse
3 = Underline

The option you select will determine how the text that has
been highlighted will appear on the screen.

When the **Normal** option is selected, the text has **no
attributes**. It appears as "normal" text.

Select the **Blink** option and the highlighted text will blink on
and off.

Select **Reverse** and the highlighted text will appear in reverse
video.

Select the **Underline** option and the highlighted text will be
underlined.

Case   0 = Upper/Lower
1 = Upper Only

The option selected determines whether the alpha characters
appear in upper case only, or in both upper and lower case.
Generally, this is a matter of preference, but some programs
are case specific. **If you have difficulty with data being
accepted, this may be the reason. If in doubt, check
with your system operator.**

CU Address	Control Unit Address. Sometimes called a PU (Physical Unit) address. The host uses this address to communicate with your workstation. You must enter a CU address that is assigned to the host.
Host Port	0 = RS232 (External Modem) 1 = Modem (Built in Modem) If you are connecting an external modem and plan to dial the host through it, select option 0. If you plan to dial the host through the 213's built in modem, select option 1.
Character Set	0 = English (US) 5 = Norweg/Danish alt 1 = English (UK) 6 = Finish/Swedish 2 = Austrian/German 7 = Finish/Swedish alt 3 = Aust/German alt 8 = International 4 = Norwegian/Danish Select the option that represents the country specific characters on the keyboard you're using.
Which Session is the Printer?	1 = Session 1 (Dev 1) 2 = Session 2 (Dev 2) Option 1 represents Device Address 1. Option 2 represents Device Address 2. Select the option that matches the Device Address GEN'd at the host level. **Device 0 is always a display session.**
Invalid EBCDIC Codes	0 = Reject 1 = Hyphenate The option you select determines what will happen if an error is encountered when characters are printing out on the screen or printer. **Option 0** causes the system to reject the character in error. The character will not print out or be displayed. **Option 1** will print or display the character in error as a hyphen symbol.

Printer Baud Rate

0 = 300	1 = 600	2 = 1200	3 = 2400
4 = 4800	5 = 9600	6 = 19200	

If you connected a local printer to your 213, enter the printer's baud rate. The baud rate selected tells the 213 Workstation how fast to send the data to the printer. You can find the correct baud rate to enter by referring to the printer's installation guide or by asking your network administrator.

Modem Protocol

The Modem Protocol represents the rules and standards that govern the way a modem operates. Each option represents a different set of standards.

Select the option representing the protocol used by the modem you're calling at the host site. If you don't know, contact the network administrator or telecommunications manager at the host site.

The 213 modem models and their protocol options are listed below.

208B	**212A**
0 = Bell 208 Short	0 = Bell 212A
1 = Bell 208 Long	1 = V.22A 1200
2 = V.27 4800 Short	2 = V.22A 600
3 = V.27 4800 Long	

V.22bis	**V.29**
0 = V.22bis 2400	0 = V.29 9600 253ms
1 = V.22bis 1200	1 = V.29 4800 Short
2 = V.22A 1200	2 = V.29 4800 Long
3 = V.22A 600	
4 = Bell 212A	

201C/208

0 = Bell 208 Short	4 = V.27 4800 bps
1 = Bell 208 Long	5 = V.27 2400 bps
2 = Bell 201C Short	6 = V.26 2400 bps
3 = Bell 201C Long	7 = V.26 1200 bps

Auto Answer

0 = Disabled   (No answer)
1 = Answer   (Answers in Answer mode)
2 = Originate   (Answers in Originate mode)

The 213 must be set to the mode opposite of that used by the host. If you don't know which mode the host modem is set for, contact the network administrator at the host site. If you have a Dial-back Security System installed, this parameter must be set to "answer" or "originate". Do not set a Dial-back system to "disabled". **Note: the LA and LO command will override the option you select for this parameter. (See the section on Modem Commands.)**

Printer Init String

Enter the hexadecimal code required by your printer to print six (6) lines per inch. You may enter up to six numbers. Each number takes up two positions. **The default code of 1B36 programs an EPSON compatible printer to six lines per inch.**

Example

1B = the code for the ESC
36 = the code for 6

Unless the host has been configured for 8LPI, 6LPI is the default.

You have a maximum of six numbers or twelve positions in which to enter printer escape commands. This means in addition to "lines per inch" you may add other commands, providing no more than twelve positions are used.

The printer escape commands are sent to the printer before a print job is started.

Phone Number

0 = Edit
1 = Conceal

The **Edit** command enables you to enter the phone number but, it will not be concealed from view.

The **Conceal** command enables you to enter the phone number and conceal it from view. The word < Concealed > ! displays instead of the phone number. To undo the Conceal command, use the Edit command and retype the phone number. Press the ENTER key then press the PF1 key to save the XID number.

The phone number entered here applies only to the 213's built in modem. (Not applicable if using an external modem.)

Enter the telephone number(s) and modem commands required to dial the host's modem. You may enter up to sixty alpha and/or numeric characters in this field.

See the section on **Modem Commands** for help with this parameter.
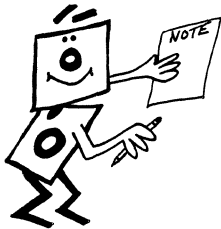
The 213 automatically initiates the D (Dial), and T (Tone) command. You may change the T to a P command (for pulse dial), by typing a P over the T.

See Appendix D for a list of modem messages and their meaning.

Modem Commands - Dialing

Place these commands before the host (modem) telephone number you want to call.

B	Blind Dial.
	Initiates dialing without a dial tone. Place at the very beginning of the phone number.
	Example: B714-891-1112

P	Pulse Dial
	If you're 213 is connected to a rotary telephone system, the P will precede the other commands to initiate pulse dialing from your modem. See the Sample Dial Sequence below.

T	Tone Dial Standards.
	If your terminal is connected to a touch tone telephone system, and you are using Tone dialing only, it is not necessary to enter the T command. A tone dial is automatically assumed.

Sample Dial Sequence

Example: P9,T714-891-1112

P is used to Pulse dial a 9, which accesses an outside line through the PBX at your terminal's site. T is used to initiate a Touch Tone dial to access the host. Important: The 9 represents the code used to access an outside line through the PBX. This number differs depending on the PBX standards you're using. If your call has to go through a PBX, find out what number accesses an outside line.

The comma in this example indicates a two second pause before the tone dial is initiated. See Modem Commands - Pauses and Waits.

S	Swedish Pulse Dial Standards.
	Used when dialing from Sweden. (Not available in UK version.)
	Example: **S9,T714-891-1112**

N	Norwegian Pulse Dial Standards.
	Used when dialing from Norway. (Not available in UK version.)
	Example: **N9,T714-891-1112**

Modem Commands - Answer Modes

Place the answer mode command before the host (modem) telephone number you want to call.

If the host you are dialing has a dial back security system, be sure to read the section on Modem Commands - Dial Back Security Systems. The Dial Back codes over ride all other answer mode commands.

R   Reverse Mode. Used to call an "Originate Only" modem at the host site. The R command forces the internal modem to go into Answer mode when the command sequence has finished processing the call.

This command can be placed anywhere in the dial sequence.

If the host you're calling has a dial back security system, do not use the R command. See Modem Commands - Dial Back Security Systems.

Example: **R**9,714-891-1112

Modem Commands - Timing

The best way to determine where the timing commands should be placed, and the length of time the pause should last, is to dial the modem (at the host site), from your telephone. As the call is processed, note where in the dialing sequence the pauses occur and how long they last.

We recommend that you write this information down so you'll have the correct timing sequence when you enter the telephone number during setup.

W*

Initiates a pause of up to 16 seconds. The * indicates the number of seconds the pause will last.

To initiate a 1 to 9 second pause, enter W followed by the number representing how many seconds you want the pause to last.

W7 represents a 7 second pause.

To initiate pauses lasting from 10 to 15 seconds, enter W followed by a letter A through F.

WB represents an 11 second pause.

W0 (zero) represents a 16 second pause.

Example: P9W3T714-891-1112

In the example above, W3 initiates a 3 second pause before initiating a tone dial.

The W command CANNOT be used in the U.K.

,

2 second pause. Used to allow time for a function to take place before continuing with the next step. i.e. placing the comma after the code used to access an outside line through a PBX. The number of commas you enter depends on how many seconds you want to pause before initiating the next command. The dial sequence in the example below will access an outside line and wait four seconds before initiating a tone dial.

Example: P9,,T714-891-1112

:   Wait for a dial tone.

This command causes your modem to wait for a dial tone before proceeding with a second telephone number. (Some systems require the first telephone number to access a central location and dial a second telephone number from there.) If the second number is busy, or the wait lasts more than 24 seconds, the dialing terminates.

Example: P9,T714-891-9164:714-891-1112

Modem Commands - Dial Back Security Systems

The following commands are used if the host you're calling has a dial back security system installed. (The security system is used to block unauthorized calls.) It is important to know the answer mode the security system modem is set to. Your modem must be set to the opposite mode. i.e. If the security system at the host site is set for Originate, you must enter a dial sequence that causes your modem to answer (the security system's dial back call), in Answer mode.

LA   Initiate Dial Back Procedure and answer in Answer Mode.

The L command initiates the dial back procedure used when the host you're calling has a dial back security system installed.

The L must be followed by a code representing the mode in which your modem will answer the security system's dial back call.

The A command sets your modem to answer the dial back call in Answer mode.

Example: P9,T714-891-1112**LA**(access code)

LO   Initiate Dial Back Procedure and answer in Originate Mode.

The L command initiates the dial back procedure used when the host you're calling has a dial back security system installed.
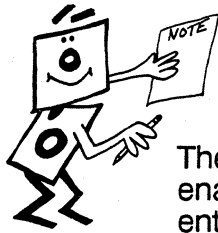
The L must be followed by a code representing the mode in which your modem will answer the security system's dial back call.

The O command sets your modem to answer the dial back call in Originate mode.

Example: P9,T714-891-1112**LO**(access code)

See note on next page.

The access code entered after the LA or LO command enables your call to be cleared and processed, and depends entirely on the host security system requirements. If you don't know or understand these requirements, ask someone at the host site who is familiar with the network.

/   The / is used as a delimiter between the first and second ID in a security dial back sequence. **The / command is valid only when used with an LA or LO command.**

Example 1:   P9,T714-891-1112LOFirst ID/Second ID

Example 2:   P9,T714-891-1112LO123456/12345

The information entered before the delimited is sent after the host calls back. The information after the delimited is sent to the host when the 213's modem calls it.

Sample Dial Back Procedure

The internal modem initiates the call to the host modem. The security system intercepts the call and waits for the 213 to send a security (access) code.

The internal modem sends the code, waits four seconds, automatically hangs up and waits for the security system to verify the security code and dial back.

The internal modem answers the dial back call. (Remember, the 213 must be set to answer in the mode opposite that used by the host's modem.)

Once the internal modem answers the dial back call, the security system starts processing the call to the host. Call Progress Messages will appear on the 213's screen to indicate the calls progress.

When the internal modem is waiting for an answer tone, handshaking to end, or a security system to call back, time elapsed is indicated as a period symbol. A period will appear every second until approximately 4 minutes have elapsed. If connection wasn't accomplished within that amount of time, the call will abort. You may try again later.

Modem Commands - Miscellaneous

;   Personal Comment.

Placing a semicolon as the last modem command allows you to enter "personal" comments. The comments will not affect the modem commands entered before the semicolon.

Example: P9,T714-891-1112;ICT

Modem Commands - Change Modem Defaults

The following commands are used to change modem defaults. Enter these commands after the last phone number in your dial sequence.

C

To change a modem command, enter a C at the very end of the dial sequence. C must be followed by a subcommand that indicates the default change.

Example: P9,T714-891-1112C*

---

*Subcommands

En   n = 0: Disable echo protector tone

      n = 1: Enable short echo protector tone

      n = 2: Enable long echo protector tone

An   n = 1-9: Answer on the nth ring

      n = 0: Answer on the tenth ring

Auto Answer must be enabled before the 213 can answer the phone.
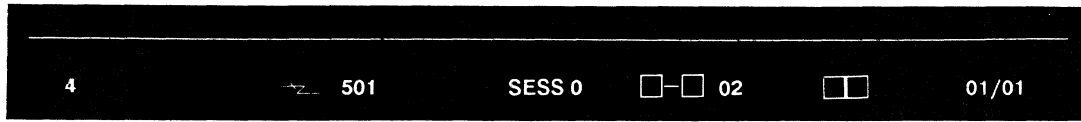

Gn   n = 0: Disable guard tone

      n = 1: Enable guard tone

      n = 2: Enable 1800hz guard tone

      n = 3: Enable 550hz guard tone

The G command DOES NOT apply to U.K. modems. U.K. modems always use an 1800hz tone.

Status Line Section

4	⚡ 501	SESS 0	☐—☐ 02	☐☐	01/01

The following information explains the Status Line data elements identified above.

Read Appendix C and **Appendix D** *for detailed information on status line symbols and messages.*

4

A **4** indicates that the 213 is ready.

⚡ nnn

The "lightening bolt" symbol always displays when communication with the host is not taking place. (That's the reason for the slash through it.) It is followed by a message number (represented by nnn in the example to the left). This is called a Communication Check and will always appear in this location. (Communication Reminders will appear to the right of the Communication Check location.) The reminder will be preceded by a "lightening bolt" also.

SESS

SESS is an abbreviation for Session. The session you're logged onto will appear in this location. See the section on **Operation - Sessions**.

☐—☐ 02

Printer Status and Printer Session Address. The printer status and printer session address appear in this location. The appearance of the blocks in this location will change as the printer status changes. **The 02 indicates that session 2 is the printer session.**

□□

The Modem Status Indicator. The status of modem operations appear in this location. If neither block is highlighted, the modem is in the idle state.

01/01

The Row and Column (cursor location) Indicator. 01/01 indicates the cursor is on line 1, column 1. This changes as the cursor is moved across or up and down the screen.

How to Enter Configuration Values

There are three methods used to enter configuration values. These methods are described below.

To display the Setup Menu, hold down the **ALT** *key and press the* **TEST** *key.*

---

1. **Select an Option**

   When the highlight bar is on a parameter that requires a option to be selected, the options display on the right side of the screen.

   Press the numeric key representing the option you want to enter.

---

2. **Type in a Value**

   Some parameters do not offer options to choose from (i.e. Host Name or Phone Number).

   When you are required to type a value, the following prompt will appears on the right side of the screen.

   < ENTER > To Edit

   Press the ENTER key.

   The following message will appear at the bottom of the screen.

   End with < Enter >:

   Type the value you want to enter.

   Press the ENTER key. The value just typed will display to the right of the parameter.

---

3.   Accept the Default Value

If the default value displayed represents the value you want to enter, just move the highlight bar to the next parameter.

To save the configuration values, press the **PF1** *key.*

To configure the Setup Menu you must have the AC power cord plugged in and the power turned ON. When the power is turned ON, the cursor will appear in the upper left hand corner. If everything is working properly, you **should see a "4" in the status line**.

To eliminate the blinking cursor press the **CURSR BLINK** key.
To change the shape of the cursor, press the **CURSR SEL** key.

Configuration Procedure

The following instructions show you how to add, change, or delete configuration values through the 213 Setup Screen.

Adding a Host to the Setup Menu

[ ]   Hold down the **ALT** key and press the **TEST** key. The Set-Up Menu for the protocol you're using will appear on the monitor.

[ ]   Enter or select the configuration values for the host.

[ ]   To **save** the **values** you entered, **press** the **PF1** key.

       The **word DONE will display** in the lower left side of the screen.

[ ]   To **add** other **hosts, press** the **PF4** key **to move to** the **Next Host screen.**

[ ]   To **Exit** the **Setup Menu**, hold down the **ALT** key and press the **TEST** key.

[ ]   **Turn** the power **OFF or continue with** the instructions under **Dialing the Host.**

Changing Configuration Values

[ ]   Hold down the **ALT** key and press the **TEST** key to display the **Setup Menu.**

[ ]   **Select** the **host** you want **to change.** The **PF4** key **moves from** one **host** screen **to** the next **host** screen.

[ ]   Use the arrow key to move the **highlight** bar to the **item** you want **to change.**

If you want **to display** the **default values** press the **PF3** key.
Default values for all parameters will display.

Redisplay **previous values** by pressing the **PF2** key.

[ ]   **Make** your **changes** by:

1.   selecting another option, or

2.   pressing the ENTER key and typing the new
      information in the "End with <Enter>:" field.

[ ]   Press the **PF1** key to **Save** the changes.

Deleting a Host Setup

[ ]   Hold down the **ALT** key and press the **TEST** key to display
      the **Setup Menu.**

[ ]   **Select** the **host** you want **to delete.** The **PF4** key **moves
      from** one **host** screen **to** the next **host** screen.

[ ]   Press the **PF3** key **to display** the **default values.**

[ ]   Press the **PF1** key to **Save** the default values.

      Replacing hosts values with default values deletes the host
      setup. The "clean" screen may be used to enter a new host
      and values.

Dialing the Host

The following instructions tell you how to dial the host from the built in modem. Make sure the value for Host Port on the Setup Menu is set for Modem.

[ ] Hold down the **ALT** key and press the **TEST** key to display the **Setup Menu.**

[ ] **Select** the **host** you want **to dial.**

Press the **PF4** key **to move through** the **screens.**

[ ] Hold down the **ALT** key and press the **TEST** key to **exit** the **Setup Menu.**

[ ] Hold down the **ALT** key and press the **DIAL** key to initiate the **automatic dial** procedure.

Call Progress Messages similar to the following will display **on the screen.**

Dialing
DT9,P999-9999

Waiting for answer tone
Waiting for handshake to end
Connected at 4800

[ ] Check the status line for the following:

- A **4B** or **4A** will appear **in the status line** and the **lightening bolt** symbol **will disappear.**

  B indicates that the 213 is connected to the a host using **SNA** protocol.

  A indicates the 213 is connected to a host using **BSC** protocol.

  The **B or A should remain until** you **disconnect.**

- Right next to the "4B" or "4A", you should see a **?** symbol flash on the screen.

- **When you see** 4B or 4A followed by a **stickman** (System Operator) symbol, you are talking directly with the SSCP (Systems Services Control Point), and can **log onto the host and initiate** an **application**.

  If **4B** or **4A** is **followed by** a **?** instead of the stickman, hold down the **ALT** key and press the **SYS REQ** key. The **stickman** symbol **should appear.**

- To interpret other status line symbols and messages, refer to Appendix C.

Sessions

The 213 workstation allows you to use more than one application at a time by initiating multiple sessions, and switching from one session to another. (When you logon and begin using an application, it becomes a "Session".) The active session number (01 or 03 for a display session, or 02 for printer sessions), is displayed in the status line.

More than one application can be active at the same time, but only one session at a time can be displayed on the 213's screen.

The following instructions show you how to initiate and use sessions.

To Switch Sessions

[ ]   Hold down the **ALT** key and press the **SPACEBAR.**

The logon screen should appear.

Accessing the logon screen depends on how your host is
Setup. If pressing the ALT and SPACEBAR keys don't
provide a logon screen, try the ALT and SYS REQ keys.

If you still do not receive a logon screen, check with the
system operator or network administrator. You may not be
authorized to use more than one application.

[ ]   **Enter the logon sequence and password** for the
application desired. At this point the application is referred to
as a "session".

When more than one application (session) is activated, you
may switch from one session to another without having to
logoff any of the sessions already activated.

[ ]   **To switch from one session to another**, hold down the
ALT key and press the **SPACEBAR.**

The next session will appear on the screen. The previous
session will remain active, but will not show on the screen.
The status line indicates which session you're in.

If you want to move to another session, use the ALT key and
Spacebar to move forward through the session screens until
you reach the one you want.

To Quit a Session and Disconnect from the Host

[ ]   **Logoff** the session. (Your system operator should have
provided instructions for this).

[ ]   Hold down the **ALT** key and press the **DISCON** key to
disconnect from the host.

[ ]   **Turn** the 213 Workstation **OFF.**

To Print

While you're in an application, you may use the local printer (connected to the 213 workstation), to print a screen at a time.

The host may also use this printer to print data. To do this, the system programmer or network administrator at the host site must program the host to perform this function.

[ ] **Press the Print key. (See Appendix B, Device Control Keys for a "picture" and explanation of this key.)**

The screen you are presently viewing will print out.

Repeat this each time you want to print a screen.

A.
FCC Registration Number and Ringer Equivalence

Notify your local telephone company with the following information. All modem models have the same FCC Registration Number and Ringer Equivalence.

FCC Registration Number: GAV4FG-10384-DT-E

Ringer Equivalence: 0.2A

B.
The Keyboard

The standard keyboard for the 213 Workstation is the English (US) version illustrated in Figure 1.4. If you ordered one of the other keyboard options you can still use the following descriptions. There may be minor differences between country and language specific alpha and punctuation mark keys, but the purpose of the function keys remain the same. Keyboard operation and definitions of each key are on the following pages. Each group of keys is illustrated so you can see their location in relation to the other keys.

Keycap Face →

Keycap Front →
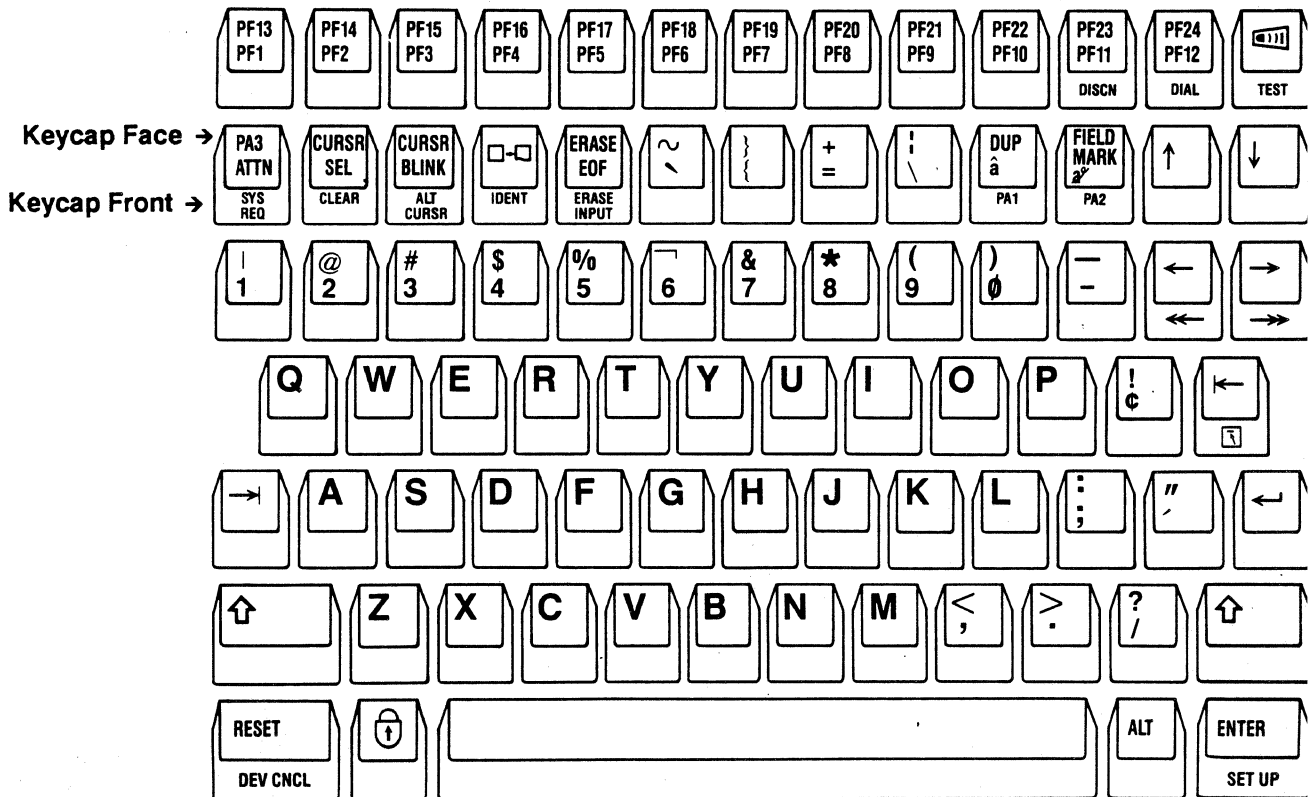
Figure 1.4   English (US) Keyboard

The keyboard is used to enter and display characters on the screen, change or delete characters, start and end functions, and move the cursor.

The application program you use determines the fields in which you may enter, change or delete characters.

If the cursor is displayed in a position without a character, you may enter a character in that position. Entering a character causes the cursor to advance to the next character location.

If the cursor is displayed under a character on the screen, that character may be changed or deleted.

Most of the keys are used to create more than one character or perform more than one function. Using the key by itself or in combination with the ALT or SHIFT key, determines the character you type or the function you access.

Keycaps are grouped into five categories.

- **Keyboard Control Keys**

- **Data Control Keys**

- **Screen Control Keys**

- **Host Function Keys**

- **Device Control Keys**

The following pages describe what each key or combination of keys do. Each key and category of keys is illustrated.

Keyboard Control Keys

The **Keyboard Control Keys** *are* **used in combination with other keys** *to determine which character is typed, which case it is typed in, and which function is initiated.*

The Keyboard Control Keys are,

- **ALT**

- **Shift**

- **Lock**

These keys are explained on the next page.
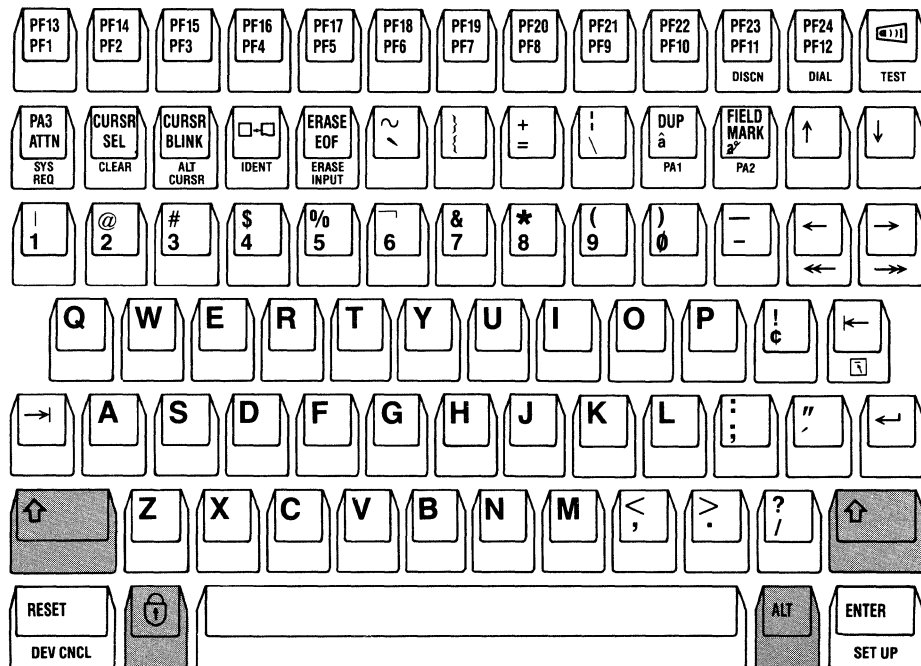
The **ALT** key is used with function keys that show the function symbol on the front of the keycap. The ALT key must be held down first and continue to be held down while you press the function key.
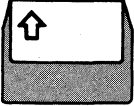
There are two **Shift** keys. Each side of the keyboard has a Shift key. This makes it convenient to use while typing. The Shift key is used in combination with other keys. Pressing a Shift key and an Alpha key types a capital letter. Pressing a Shift key and a dual character key types the character in the upper half of the key face. Pressing a Shift key and a dual function key initiates the function labeled on the upper half of the key face.

Pressing the **Lock** key locks the keyboard in the shifted (uppercase) mode. Pressing the Lock key accomplishes the following:

- types alpha characters as capital letters,

- types the character shown on the upper half of the keycap face,

- initiates the function displayed in the upper half of the keycap face.

To unlock the keyboard and return to lowercase mode, press the right or left Shift key.

Data Control Keys

The **Data Control Keys** *are used to* **type, position and punctuate data** *entered on the screen. These keys are the,*

- **Alpha and Numeric Keys**

- **Spacebar**

- **Punctuation and Symbol Keys.**

The following pages show where these keys are located on the keyboard and explain each keys purpose and how it is used.

Alpha Numeric Keys

The **Alphabet Keys** are used to enter letters of the alphabet.

The **Numeric Keys** are used to enter numbers.

The characters on the face of the Alphabet keys are displayed as capital letters. Pressing an alphabet key will type a lowercase (small) letter. Pressing an alphabet key and the SHIFT key will type an uppercase (capital) letter.

The Numeric keys display both numbers and punctuation characters. The numeric digit is displayed on the lower half of the key. Pressing a numeric key without pressing the SHIFT key types the digit on the lower half of the key face.
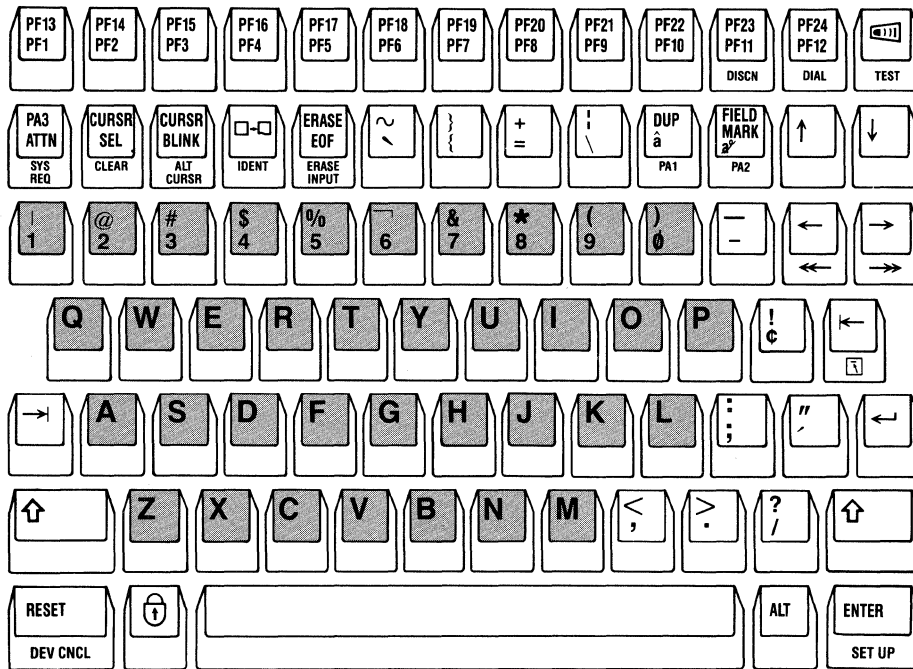
Spacebar

The **Spacebar** is the **only unmarked key** on the keyboard.

The action performed by pressing the spacebar depends on whether or not the 213 Workstation is in INSERT mode.

An ^ symbol will be displayed in the status line when the 213 is in INSERT mode.

If the 213 is **not** in insert mode, pressing the spacebar causes a blank space to replace the character the cursor is on.

If the 213 is **in** insert mode, pressing the spacebar enters a blank space and moves the characters to the right one space each time the spacebar is pressed.
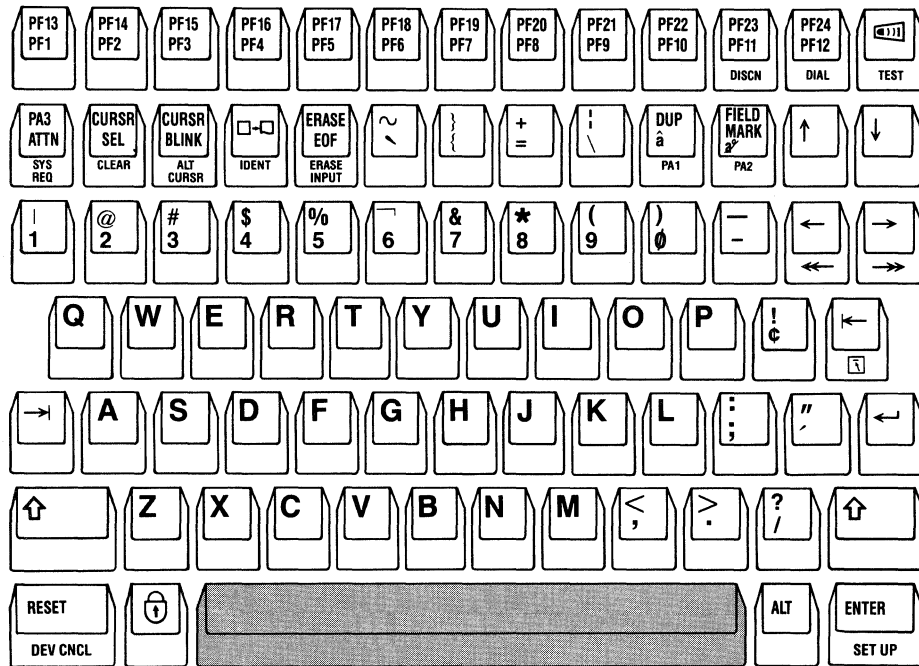
Symbol and Punctuation Mark Keys

The **Symbol** and **Punctuation Mark keys** are dual character keys.

To display symbols and punctuation marks located on the upper half of the keycap face, hold down the Shift key while you press the key with the symbol or punctuation mark you want to type.

To display the symbol or punctuation mark on the lower half of the key, press the symbol or punctuation key only.

The location of each symbol or punctuation mark is shown in the illustration below. The description for each key is on the following page.
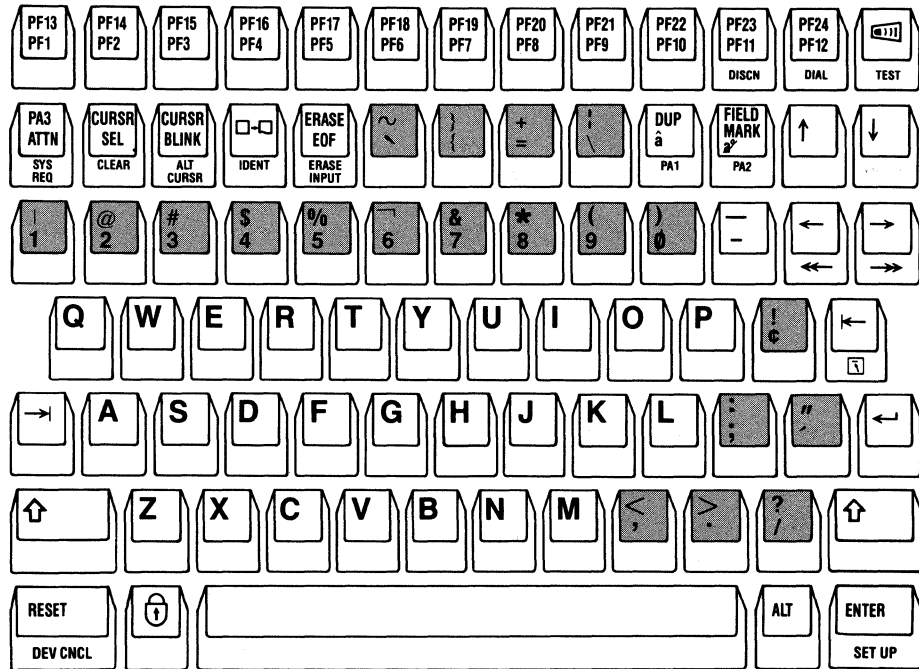
Upper Symbol *(The Shift key is required to type these symbols.)*

~	Tilde		*	Asterisk
}	Right Brace		(	Left Parenthesis
+	Plus Sign		)	Right Parenthesis
¦	Broken Vertical Bar		_	Underscore
|	Logical OR Vertical Bar		!	Exclamation Point
@	At Sign		:	Colon
#	Number Sign		"	Quotation Mark
$	Dollar Sign		<	Less Than
%	Percent Sign		>	Greater Than
¬	Logical NOT Sign		?	Question Mark
&	Ampersand			

Lower Symbol *(Shift key is not required to type these symbols.)*

`	Grave Accent		¢	Cent Sign
{	Left Brace		;	Semicolon
=	Equals Sign		'	Apostrophe
\	Back Slash		,	Comma
-	Minus Sign		.	Period
			/	Slash

Screen Control Keys

The **Screen Control Keys have an arrow symbol** *on the face or front of the keycap. These keys are used to move the cursor one or more spaces, create a new line, and enable a function. The SHIFT key is an arrow key, but has to do with keyboard control rather than cursor movement. (See the section on* **Keyboard Control Keys** *for more information on the Shift key.)*
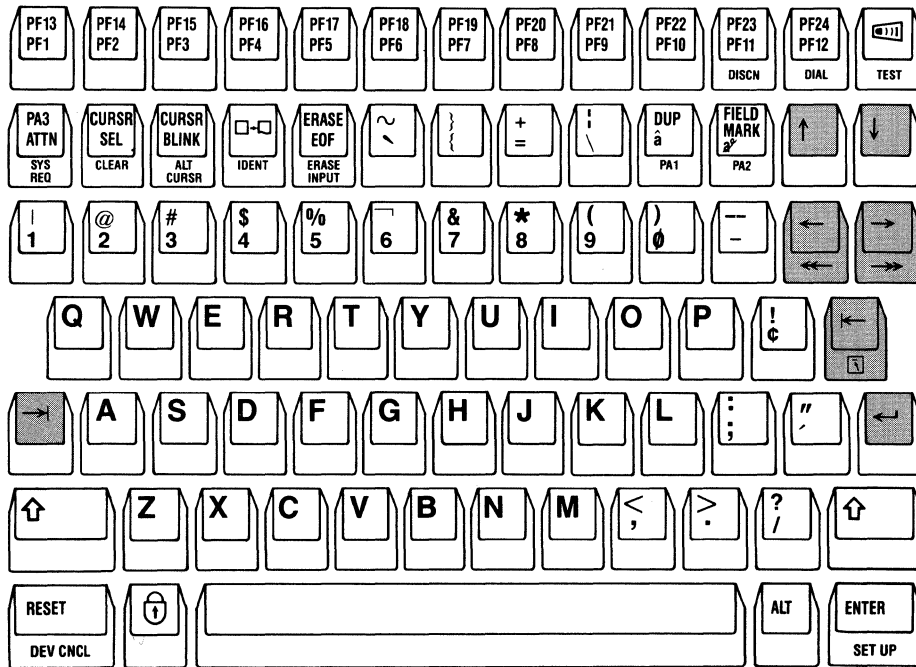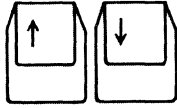
Pressing the **Vertical** (Up and Down) **Arrow** keys, moves the cursor in the direction the arrow is pointing. You can quickly move the cursor any number of lines by holding the key down. When the cursor is located at the position you want, release the key and the cursor stops moving. These keys do not move any of the characters on the screen. They position the cursor only.
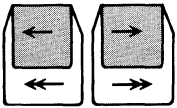
Pressing the **Horizontal** (Left and Right) **Arrow** keys, moves the cursor one character position in the direction the arrow is pointing. If you hold the left arrow key down, the cursor will continue to move left. When the cursor reaches the end of the line, it wraps around and reappears on the last character position in the line directly above. The right arrow key will continue to move to the right until the cursor reaches the end of the line. The cursor wraps around and reappears on the first character position in the line directly below. This action will continue until you release the arrow key.
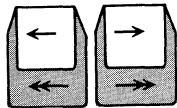
Holding down the **ALT** key and pressing the **Double-Speed Horizontal Arrow** key moves the cursor two spaces at a time in the direction of the arrow. Holding both keys down continues to move the cursor until you release the arrow key. The Double-Speed Horizontal Arrow keys move the cursor twice as fast as the normal horizontal keys. The cursor will wrap around in the same manner as when using the normal horizontal keys.
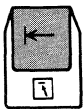
Pressing the **Backspace** key moves the cursor one position to the left, just as the left arrow key does. This duplication of function is for operator convenience. Holding the Backspace key down continues the backspacing action until the key is released.
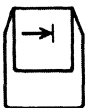
Using the **Tab** key is a quick way to move the cursor forward to the next field. Pressing the Tab key moves the cursor to the first character location in the next field. If you're working with an unformatted screen with no input fields, the cursor will return to the first location in line 1.

Pressing the **New Line** key moves the cursor to the first character location on the next line.
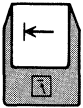
Holding down the **ALT** key and pressing the **Home** key moves the cursor to the first input character located on your screen. If your screen is unformatted and has no fields, the cursor moves to the first location on line 1.

Host Function Keys

The **Host Function Keys** *are used to* **initiate a function** *from the host. The keys are categorized as* **PA (Program Access) keys** *and* **PF (Program Function) keys.** *The following pages show their location on the keyboard and explain more about their use.*

PA Keys   The **PA (Program Access) keys** are,

- **PA1**

- **PA2**

- **PA3**

These keys are used to signal the program or communicate with it. These keys provide an immediate signal to the host that a specific action is required to initiate the function designated by the PA key pressed.

The functions performed by these keys depend on the program running in the host system at the time you access it.

When a program is written, the programmer determines the function of each PA key. For example, one application program might use PA1 to overwrite a file, while another application program might use PA1 to access a Help menu.

If you don't know the function of each PA key, ask the appropriate person in your organization or refer to the program user's guide.

To initiate a PA function, hold down the Alt key while you press the PA key.

PF Keys

The **PF (Program Function) keys** are,

- **PF1 - PF12**

- **PF13 - PF24**

Like the PA keys, the PF keys are used to signal the program or communicate with it. These keys provide an immediate signal to the host that a specific action is required to initiate the function designated by the PF key pressed.

The functions performed by these keys are defined by the application program you're running in the host system at the time you access it.

When a program is written, the programmer determines the function of each PF key. For example, one application program might use PF1 to undo a command, while another application program might use PF1 to save a file.

If you don't know the function of each PF key, ask the appropriate person in your organization or refer to the program user's guide.

To use PF1 through PF12 keys, press the PF key only.

To use the PF13 through PF24 keys, hold the SHIFT key down while you press the PF key.
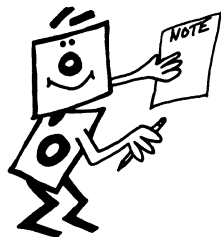
There are some functional differences between the PA and PF keys. For instance the functions initiated by the PF keys generally take longer to transmit to the host and to process.While the differences may be invisible to the program user, they do affect the programmer and programming decisions.

If you need more technical information about programming the PA and PF keys, refer to **Appendix E** for a list of IBM publications.

Device Control Keys

*The **Device Control Keys** are used to **perform local functions.**
The illustration below shows their location on the keyboard. The
following pages explain how they are used.*

*The keycaps with symbols are explained first. The rest of the keycap
definitions are presented in alphabetical order.*
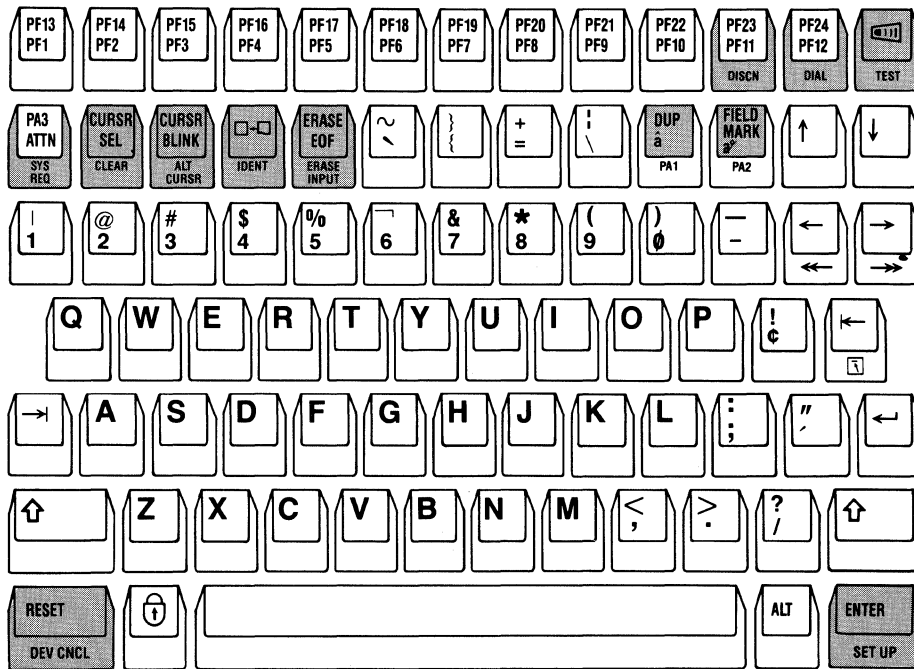
The **Click** key enables you to turn the keyboard clicking sound on or off. Pressing the Click key when the keyboard clicker is working, turns it off. Pressing it again, turns it on. **Being aware of the clicking sound or the absence of it, can tell you when keyboard operation is not normal.**

Pressing the **Delete** key will erase the character or blank space the cursor is positioned under. Characters to the right will move one space to the left for each character or blank space deleted.

Pressing the **Insert** key allows you to insert characters into a group of other characters without overtyping the characters that are already displayed. When the keyboard is in the Insert mode, a ^ symbol displays in the status line.
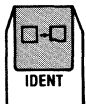
Pressing the **Print** key causes the local printer to print the information displayed on your screen.

Holding down the **ALT** key and pressing the **ALT CURSR** key changes the cursor from one shape to another. If the cursor is displayed as an underline, pressing these keys changes it to a rectangular shape. Press the same keys to change the rectangular shape to an underline.

Pressing the **ATTN** key provides a means of getting the programs attention. You may use the ATTN key **only** with SNA systems and when **B** is displayed in the status line. The program operating in the host system determines the programs response when the ATTN key is pressed. If you don't know what the programs response will be, ask the appropriate person in your organization or refer to the program user's guide.

Holding down the **ALT** key and pressing the **CLEAR** key clears the entire screen of all character locations except the status line. To redisplay the screen's fields, see the user's guide for the program you're using or ask the appropriate person in your organization for instructions.

Pressing the **CURSR BLINK** key causes the cursor to blink on and off. To stop the blinking, press the CURSR BLINK key again.

The **CURSR SEL** key is used to select an item from a list or table displayed on your screen. (It's function is the same as that performed by a light pen.) When using the CURSR SEL function, you will move the cursor to locate a field and item. Pressing the CURSR SEL key notifies the program of your selection. If you're unfamiliar with this function, ask the appropriate person in your organization for further instructions or refer to the program's user guide.
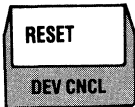
The purpose of the **DEV CNCL** (Device Cancel) key is to recover from a Do Not Enter condition. The Do Not Enter condition is the result of pressing the Print key to initiate printing when one of the following circumstances exist.

- The printer is busy.

- The printer is not working.

- The printer failed while printing your request.

Holding down the **ALT** key and pressing the **DEV CNCL** (Device Cancel) key cancels the operation and restores the keyboard.

PF24
PF12
DIAL

Holding down the **ALT** key and pressing the **DIAL** key dials the host. (See the instructions under *Dialing the Host.*)

PF23
PF11
DISCN

Hold down the **ALT** key then press the **DISCN** (Disconnect) key to disconnect the workstation from the network and stops communication between your workstation and the host.

DUP
â
PA1
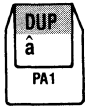
Hold down the **Shift** key then press the **DUP** key to duplicate text. The application program you are working with defines the use of the DUP key. Check with the appropriate person in your organization or refer to the application program's user guide to determine the procedure for using the DUP key.

ENTER
SET UP

Pressing the **ENTER** key tells the program you are ready to have the information on your screen entered into the system.

ERASE EOF
ERASE INPUT

The **ERASE EOF** (End Of Field), key is used to erase characters in the input field the cursor is located. Characters to the right of the cursor location are erased to the end of the field. If your screen is unformatted (no fields are defined), characters from the cursor location to the last character location on the bottom line are erased.

ERASE EOF
ERASE INPUT

Holding down the **ALT** key while you press the **ERASE INPUT** key erases all the data you entered on your screen. The cursor moves to the first location in which you can begin typing data. The cursor will be moved to the first location on line 1. If you're working with an unformatted screen, all characters will be erased and the cursor will move to the first location on line 1.

The **FIELD MARK** key is used when operating with an unformatted screen to indicate the end of a field.
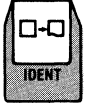
The IDENT key is NOT supported on the 213 Workstation.
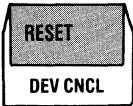
The **RESET** key is used to recover from an Input Inhibit condition. (The message will display in the Status Line.) Pressing the Reset key unlocks the keyboard and resumes normal operation. Pressing the Reset key also terminates an Insert Mode operation. The Reset key will not work if it's pressed when the 213 is sending data to or receiving data from the host.

Not used.

The function of the **SYS REQ** key is dependent on the host's system software. Contact the network administrator at the host site to find out how to use this key.

Holding down the **ALT** key and pressing the **TEST** key displays the 213's Setup Menu. To exit the Setup Menu, hold down the Alt key and press the Test key.

C.
Status Line Symbol Definitions

The Status Line Symbols are grouped into six categories.

- **Readiness and System Connection**

- **Do Not Enter (Input Inhibited)**

- **Reminders**

- **Shifts and Modes**

- **Printer Status**

- **Communication Status**

Each category is explained on the following pages.

For a list of Modem Messages that appear in the Status Line during operation, refer to **Appendix D**.

Readiness and System Connection Symbols

The Readiness and System Connection symbols indicate which stage of readiness your system is at. These symbols may appear by themselves or in combination with each other.

4	Ready	A **4** displayed in location 1 of the Status Line indicates the 213 is emulating a 3274 Control Unit and is ready to use.
A	Online A	An Online **A** indicates the 213 is connected to a system governed by BSC protocol.
B	Online B	An Online **B** indicates the 213 is connected to a system governed by SNA protocol.
■	My Job	The "My Job" symbol indicates the 213 is connected to an application program. Applies to both SNA and BSC protocol.
⦵	System Operator	A "stickman symbol" indicates that you are connected to the SSCP (System Services Control Point), and are talking directly to the host. You must be at this point before you can logon to an application or logoff. SNA protocol only.

?	Unowned	The 213 is connected to the system but not the SSCP. To get into the SSCP, hold down the Alt key and press the SYS REQ key. SNA protocol only.
TEST	Test	Test displays in the status line when the 213's in Setup mode. Holding down the Alt key then pressing the Test key enters and exits the Setup Menu.
DIAL	Dialing	DIAL is displayed when the 213's modem is in the process of dialing the host.
DISC	Disconnect	DISC is displayed when the 213 is disconnecting from the host and terminating transmissions.

Do Not Enter (Input Inhibited) Symbols

The Do Not Enter symbols appear when the keyboard is locked (the ability to input data is inhibited). When an input inhibited condition occurs, you'll notice a change in the keyboard clicker (on to off or off to on).

Press the **RESET** *key to* **resume normal operation** *when a Do Not Enter condition occurs.*

Holding down the **ALT** *key then pressing the* **DEV CNCL** *key* **resumes operation** *when a Do Not Enter condition is the result of trying to use the "print" function.*

X ⊘   Time

Time is required for the host to process a function. You cannot operate the keyboard when this symbol is displayed.

X SYSTEM   System Lock

The host system has disabled the keyboard. Press RESET to restore the keyboard.

X⊠nn   Machine Check

The 213 is not working properly. nn represents the machine check number. One of the following Machine Check numbers will be displayed

00:   The workstation's model number is not supported. (Applies to Informer's 207 Models 2-5 Workstation only.)

06:   Unrecognized keyboard.

If one of these messages appear, turn the 213 off, then on again. If the problem persists, call for service.

X ⇀z⌐ nn   Communication Check

A Communication Check indicates a problem with either a cable, the RS-232 port or the modem. One of the following Communication Check numbers will be displayed.

501: DSR signal is inactive.
504: A disconnect was received from the host.
520: Twenty seconds have gone by with no polls.
530: TX Timeout caused by the following circumstances.

1. A missing CTS connection.
2. TX clock is missing.
3. Bad modem.

X PROGnnn   Program Check

The 213 detected a program error. One of the following Program Check numbers will be displayed.

401: Invalid 3270 command.

402: Invalid address.

403: Data after read command or invalid parameters for SFE, MF or SA orders.

404: Incomplete order sequence.

413: Invalid SNA command (function not supported).

421: Definite response error.

431: Chaining error.

432: Bracket error.

433: Data traffic reset.

434: Direction error

440: Session limit exceeded.

441: Bracket bid reject (no RTR)

444: Session already bound.

445: Invalid ACTLU parameter.

450: Bind: Profile error.

451: Bind: Primary protocol error.

452: Bind: Secondary protocol error.

453: Bind: Common protocol error.

454: Bind: Screen size error

455: Bind: LU profile error.

456: Bind: LU1 error.

457: Bind: Cryptography not supported;

470: Unsupported code point (<$40 or $3F & $FF sent to non-ECSA device).

471: Extended data stream error.

475: WCC has Start-Print bit set, but wasn't last SF

498: Negative Response received from host.

X ? +   What?   The last input was not accepted. The "What" condition generally occurs because keystrokes were made during a transfer of data or when a request was being processed.

X -f   Minus Function   This message displays when you request a function that is unavailable. (i.e. pressing a PF or PA key while in the "unowned" state, or use of the ATTN key while operating in a non SNA system.)

X -f ⚥ X X   Minus Function   **The 213 does not use this message.**
             Operator Unauthorized

X □-◁   Printer Not   The printer you want to print from is not
            Working   working and no other printer in this class is
                               available.

X □-□◇   Printer Busy   You're trying to print from a printer that is
                               already printing. You may wait for the printer to
                               finish, or restore the keyboard by holding the
                               ALT key down and pressing the DEV CNCL
                               key.

X □□◇◇   Printer Very Busy Your print request will take longer than usual for
                               the host to process.

:X < ⵕ →   Go Elsewhere   You're trying to enter or delete data in a field
                               that is protected or you've attempted to use the
                               CURSR SEL key in a field not programmed for
                               that function.

                               Press the RESET key and move the cursor out
                               of the field. If you continue to have problems
                               check with your system operator to make sure
                               your workstation supports the program you're
                               using.

X ⵕ >   More Than   You've entered more data than the field can
                               hold.

X ⵕ NUM   Numeric   You've tried to enter a non numeric character in
                               a numeric field.

Reminders

Reminders appear in the right side of the status line. They are reminders that a condition occurred.

⇁Z̲ nnn Communication
        Reminder

The error number will be the same as the one displayed for the Communication Check on the left side of the status line. This message stays on as a reminder that a communication link connecting you to the host system is producing errors. (See Communication Check.)

Shifts and Modes

The Shift and Mode symbols tell you what shift or mode your keyboard is in.

NUM	Numeric	NUM appears when your workstation is in numeric lock mode and the cursor is in a numeric field. (If your workstation isn't equipped with the numeric lock feature, the NUM symbol is not applicable.)
⇧	Upshift	Your workstation is in the upshift mode or a numeric field on a keyboard that doesn't have the numeric lock feature.
^	Insert	Your workstation is in Insert Mode.

Printer Status

Printer Status symbols are displayed during the printing process. These symbols inform you of printing progress and which printer is being used.

If printing halts, try to **resume normal operation** *by holding the* ALT *key down and pressing the* **DEV CNCL** *keys. If this doesn't work ask the system operator for help.*

□–□ nn	Printer Assignment	Displays the printer or class number your workstation is authorized to use.
□–■ nn	Printer Printing	Your printer is printing in response to your request.
□–⊠ nn	Printer Failure	The printer you selected failed during printing. You can cancel the request and restore the keyboard by holding down the ALT key and pressing the DEV CNCL key.
	Nothing	If nothing appears in the printer status location when you a print function is requested, printing cannot take place. Check to see if a printer has been assigned or connected to your workstation.

Communication Status

The Communication Status tells you when the 213's modem is transmitting, receiving or inactive.

The Communication Status symbols apply to the 213's built in modem and external modems.

For a list of Modem Messages and their meaning, refer to **Appendix D**.

■☐   When the left block is highlighted, the 213's modem is in the transmit state.

☐■   When the right block is highlighted, the 213's modem is in the receive state.

☐☐   The 213's modem is idle.

D.
Modem Messages

Message	Meaning
ANSWER	Auto answering an incoming call.
BAD MDM	An error has occurred in the control information exchanged between the modem and the (213) workstation. the user should turn the workstation power off, wait five (5) seconds and turn the power back on. If the "BAD MDM" message occurs again, there is a hardware fault and the user should request service.
BUSY	Called number is busy.
CONNECT	A connection has been made with the remote modem.
CMD OK	Command accepted and OK.
DISCON	The modem is disconnected from the phone line.
DIALING	The modem is dialing.
ERROR	Invalid command or parameters.
NO CARR	No carrier detected from the remote modem.
NO RPLY	Indicates that the modem is in the Call-Back Security mode and the host has not made the necessary call back within the eight (8) minute interval allowed.
NO SUPP	The modem does not support the feature or setting requested.
NO TONE	No dial tone detected.

ORIGIN	The modem is answering a call in the originate mode. This is the normal response to an "O" command.
OVERFLO	Command exceeded the sixty (60) character limit.
RING	Incoming call ring is detected.
SEND ID	The ID digits in the Call-Back Security command have been sent.

E.
Additional Reading

To order these and any other publications you want, contact your local IBM office.

Operation and Setup

- IBM 3270 Information Display System: 3274 Control Unit Operator's Guide, GA23-0023

- IBM 3274 Control Unit Model 1C Setup Instructions, GA27-2855

- IBM 3278 Display Station Setup Instructions, GA27-2838

- IBM 3174 Installation Guide, GC24-3061

- IBM 3174 Customer Setup User Information, GA23-0259

- IBM 3174 Model 1L, 1R, 3R, User Guide, GA23-0337

Programming

- IBM 3270 Information Display System: Data Stream Programmers Reference, GA23-005903

- IBM 3270 Information Display System 3274 Control Unit Description and Programmer's Guide, GA23-0061-2

- IBM 3270 Information Display System: Color and Programmed Symbols, GA33-3056-1

General Information

- Systems Network Architecture: General Information,   GA27-3102-0

- IBM Synchronous Data Link Control: General Information,   GA27-3093-2

- IBM 3174 Functional Description,   GA23-0218

F.
V.32 Host Modem Recommended Settings

When using Informer's 213 with the V.32 Integral modem, the host V.32 modem should be optioned as follows:

Date Rate - 9600 bps Trellis with fallback to V.22 bis.

0   Modem Parameters

        Normal Originate
        Fast Train Disabled
        Auto Retrain Enabled
        Transmit Clock Internal
        Line Type Dial
        Jack Type Permissive
        Line Current Disconnect Long Enabled
        Long Space Disconnect Disabled
        V.22 Guard Tone Disabled

0   DTE Parameters

        Sync Data
        Dial Method Manual
        Respond to DTR
        DSR Normal
        DCD Normal
        CTS Normal
        RTS/CTS Delay = 0 MS
        DTE Fallback Enabled
        DTE Speed = To Follow DCE

0   Dial Parameters

        Tone Dial
        Wait for Dial Tone
        Wait Delay 2 Seconds
        Pause Delay 2 Seconds
        Call Timeout 30 Seconds
        Answer on 1 Ring

Index

Index

INFORMER®
Computer Terminals, Inc.

ADDENDUM, USER GUIDE 213

P/N 65068-001 REV A

Please add the following to your 213 User Guide (Part Number 65041-001, Rev. A):

V.32 Host Modem recommended settings

When using Informer's 213 with the V.32 integral modem, the host V.32 modem should be optioned as follows:

Date Rate - 9600 bps Trellis with fallback to V.22 bis.

0   Modem Parameters

      Normal Originate
      Fast Train Disabled
      Auto Retrain Enabled
      Transmit Clock Internal
      Line Type Dial
      Jack Type Permissive
      Line Current Disconnect Long Enabled
      Long Space Disconeect Disabled
      V.22 Guard Tone Disabled

0   DTE Parameters

      Sync Data
      Dial Method Manual
      Respond to DTR
      DSR Normal
      DCD Normal
      CTS Normal
      RTS/CTS Delay = 0 MS
      DTE Fallback Enabled
      DTE Speed = To Follow DCE

0   Dial Parameters

      Tone Dial
      Wait for Dial Tone
      Wait Delay 2 Seconds
      Pause Delay 2 Seconds
      Call Timeout 30 Seconds
      Answer on 1 Ring

IBM PC EMULATING a 3101

F1	F2
F3	F4
F5	F6
F7	F8
F9	F10

Esc	!/1	@/2	#/3	$/4	%/5	^/6	&/7	./8	(/9	)/0	—/-	+/=	←		Num Lock	Scroll Lock	
⇥	Q	W	E	R	T	Y	U	I	O	P	{/[	}/]			7 Home	8 ↑	9 PgUp	-
Ctrl	A	S	D	F	G	H	J	K	L	:/;	"/'	~/`	↵		4 ←	5	6 →	
⇧	|	Z	X	C	V	B	N	M	,/	./.	?//	⇧	.		1 End	2 ↓	3 PgDn	+
Alt										Caps Lock		0 Ins		Del	

TO PERFORM THIS FUNCTION: TYPE:

ATTN	Ctrl A
BACKTAB	|← or Esc →|
CLEAR	Home or Ctrl C
CURSOR SELECT	Esc k
DELETE	Del
DEV CNCL	Ctrl X
DOWN ARROW	↓
DUP	Ctrl D
ENTER	←┘
ERASE EOF	End
ERASE INPUT	Ctrl Home
FIELD MARK	Ctrl F
HOME	Ctrl PgUp or Esc H
IDENT	Esc z
INSERT MODE	Ins or Esc Del
LEFT ARROW	←
NEW LINE	Ctrl ←┘ or Ctrl J
NULL/BLANK	Esc n
PA1	Ctrl F1 or Esc ,
PA2	Ctrl F2 or Esc .
PA3	Ctrl F3 or Esc /
PF1	F1 or Esc 1
PF2	F2 or Esc 2
PF3	F3 or Esc 3
PF4	F4 or Esc 4
PF5	F5 or Esc 5
PF6	F6 or Esc 6
PF7	F7 or Esc 7
PF8	F8 or Esc 8

PF9	F9 or Esc 9
PF10	F10 or Esc 0
PF11	Esc -
PF12	Esc =
PF13	Esc !
PF14	Esc @
PF15	Esc #
PF16	Esc $
PF17	Esc %
PF18	Esc ^
PF19	Esc &
PF20	Esc *
PF21	Esc (
PF22	Esc)
PF23	Esc _
PF24	Esc +
PRINT	Ctrl P
REFRESH	Esc r
RESET	Ctrl R
RESUME DISPLAY	Ctrl Y
RESUME PRINTER	Esc p
RIGHT ARROW	→
STATUS ON/OFF	Ctrl W
SUSPEND DISPLAY	Ctrl T
SUSPEND PRINTER	Esc o
SYS REQ	Esc s
TAB	→|
TYPE AHEAD	Esc t
UP ARROW	↑

Notes:

1. For key sequences that begin with Esc, press and release Esc and then press the other key.
2. For key sequences that begin with Ctrl, press and hold Ctrl while pressing the other key.
3. When using the IBM 3101 Emulation Program or the IBM PC/Host File Transfer and Terminal Emulation Program, use 7426.SET or 3708.SET.
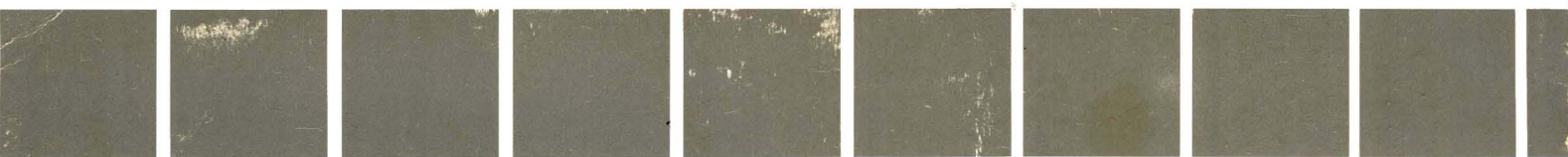
Corporate Office

Informer Computer Terminals, Inc.
12781 Pala Drive
Garden Grove, CA 92641-3923
714-891-1112
FAX: 714-898-2624