I-O 2677M Display Module

Quick Setup & User's Guide

Version 1.11

I-O 2677M Display Module Quick Setup & User's Guide Version 1.11
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PREFACE

I-O Corporation (I-O) is pleased to introduce you to the I-O 2677M Display Module. This full-featured, affordable display is well suited to the varied and complex applications found in today's midrange data processing environments. Thank you for your confidence in I-O products.

The first section of this user's guide contains a QUICK SETUP GUIDE which provides an easy-to-use setup for the I-O 2677M.

For your convenience, the Quick Setup Guide and Appendix E (Help Screens) have also been translated into German (Deutsch), French (Français), Spanish (Español), and Portuguese (Português).

The following five sections contained in the User's Guide will give you the information needed to get the most from your I-O 2677M Display Module.

1. **INTRODUCTION** - Provides an overview of the I-O 2677M and includes unpacking instructions and device specifications.

2. **INSTALLATION** - Explains the process for installing the I-O 2677M in your work area and connecting it to the host.

3. **CONFIGURATION** - Explains the process of configuring the I-O 2677M options, as well as how to configure the host system to work properly with the I-O 2677M. Also describes the optional setup for an attached printer.

4. **OPERATION** - Provides details of the I-O 2677M features and how to use them, including host directed and local printing capabilities, as well as the details of the key functions and keyboard mapping.

5. **PROBLEM RESOLUTION** - Gives a detailed troubleshooting guide.

We have tried to make this user's guide as complete as possible. If you encounter inaccuracies or omissions, please let us know by contacting us at the address and telephone number printed on the back cover of this manual. Thank you.

PREFACE

This manual was prepared by I-O Corporation for use by its customers, dealers, and affiliates. All attempts are made to ensure that the information presented in this manual is correct. However, no liability, expressed or implied, will be assumed by I-O Corporation or its dealers or affiliates for any damage resulting from the use of this information.

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English

I-O 2677M Display Module

Quick Setup Guide

Version 1.11

Thank you for buying the I-O 2677M Display Module. This Quick Setup Guide is designed to help you get up and running in a short amount of time.

Unpacking

Check the box for freight or water damage. If any damage is evident, please contact the carrier immediately.

Unpack the unit and keyboard from the shipping carton. The following items are included:

- I-O 2677M Display Module
- 102/103-key or 122-key keyboard
- Universal power supply (100-240V)
- Power cord
- Parallel printer cable
- Auto-terminate twinax V-cable
- I-O 2677M Quick Setup and User's Guide

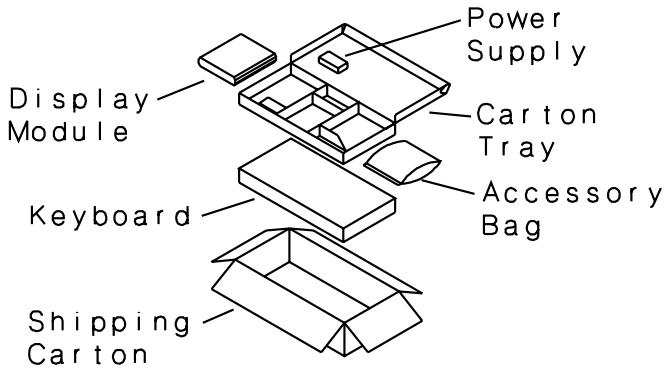


Figure 1

Installation

1. Attach the monitor's video cable to the 15-pin VGA connector on the rear panel of the display module.

   Note: The DIP switches next to the VGA connector has been set to Auto by the factory. In most cases, this setting will allow the display module to automatically configure itself for a monochrome or color monitor. However, if your monitor supports VESA DDC 1/2B, then the DIP switches will need to be set to either color or mono, depending on your monitor's capabilities.

2. Connect the parallel printer cable (if required) to the 25-pin "D" parallel printer port on the rear panel of the module and connect the 36-pin Centronics end to the printer.

Warning! DO NOT connect to a serial RS-232C port on the printer. The I-O 2677M Display Module's 25-pin "D" connector is a parallel printer interface. Connecting RS-232C signals to the printer port will damage the display module. Damage from improper connection of a serial port is not repairable under the display module's warranty. If you are interested in using a parallel to serial connector cable, contact I-O for more information.

3. Connect the keyboard to the Mini-DIN keyboard connector located on the back of the display module. The top of the keyboard's connector is flat and marked by an arrow. While the unit is in the tower (vertical) position, as shown below, the arrow must be positioned to the right when inserting the connector (Figure 2).

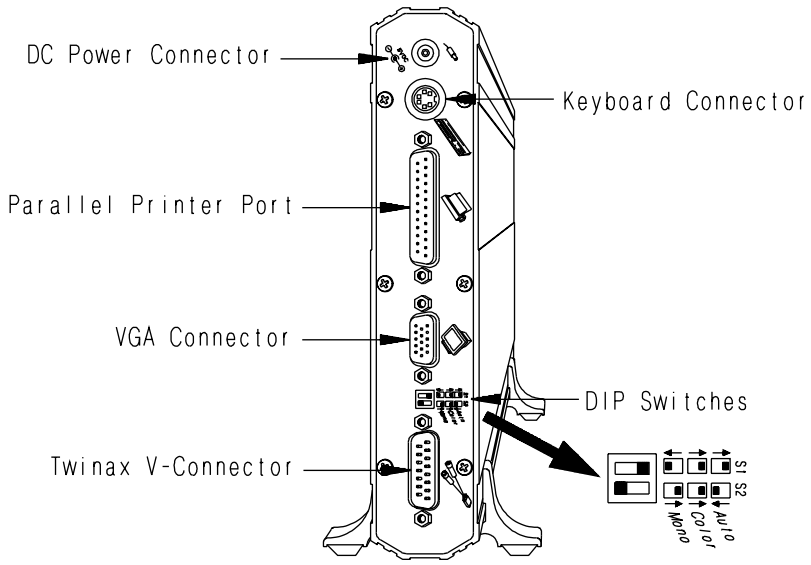


Figure 2

4. Attach the auto-terminate twinax V-cable to the 15-pin "D" connector on the rear panel of the display module (see figure 2). Tighten the screws on both sides of the V-cable until they are secured tightly into the display module.

5. Connect the host twinax cable(s) to the auto-terminate V-cable. The V-cable automatically terminates when only one cable or balun is attached, and automatically cables through when two baluns or cables are attached.

6. Plug the AC power cord of the power supply into a grounded outlet or surge protector. Plug the power supply's DC cord into the 5VDC power inlet on the rear panel of the display module.

Danger! For your personal safety, and the protection of the display module, make sure the display module is properly grounded.

Warnung! Für Ihren persönlichen Schutz und den Schutz der Datensichtstation muss das Gerät ordnungsgemäss geerdet sein.

7. Power on the I-O 2677M Display Module. The power-on switch is located on the front panel of the display module. Power on the monitor.

Configuration

1. Set the "restricted" options by pressing and holding the <Reset> key or the space bar while powering on the display module. A self-test screen is briefly displayed, followed by Setup Screen 1, as shown below. The "restricted" options are indicated by an asterisk (*) to the left of the option.

   Warning! Set the "restricted" options, before running the display module on your host, as factory default settings may conflict with other devices attached to the same twinax cable.

   Note: Be sure the host has display and printer devices configured that match the types and cable addresses selected for the "restricted" options. See Chapter 3 of the I-O 2677M User's Guide for further information on host configuration.

Setup Screen 1

*	Language:	U.S./Canada (English)
*	Multinational:	No
*	Terminal session emulation:	3197D
*	Address:	6
*	Terminal session emulation:	DISABLED
*	Address:	0
*	Terminal session emulation:	DISABLED
*	Address:	1
*	Printer emulation:	5224-2
*	Address:	3
*	Keyboard ID:	U.S.
	Type Ahead:	DISABLED
	VESA-DPMS power saver mode:	15 MINUTES
	Ruler Style:	+
	Key-click volume:	HIGH
	Alarm volume:	HIGH

2. Set the non-restricted options to match your needs. These options can also be set at any time by pressing the <Shift><Setup> key. (<Setup> on 122-key keyboards.)

3. Set the printer options on Setup Screen 2 (shown below) to match your printing needs. A different Setup Screen 2 may be shown, depending on which printer emulation has been selected on Setup Screen 1, and which printer is selected on Setup Screen 2.

Printer = Disabled

Setup Screen 2

Form feed after local screen dump:	YES
Character set:	ASCII

SPACE BAR = change value ENTER = save values

QUICK SETUP

Printer = 4214 (Proprinter)

Setup Screen 2

Printer type:	24-PIN PROPRINTER
Form feed after local screen dump:	YES
Page eject is produced by:	FORM FEED
Line ending mode:	TRUNCATE
Front panel override:	NO
Carriage width:	WIDE
15-CPI prints with:	17 CPI Native
Printer is set for:	CONTINUOUS FORMS
Character set:	C.P. 437
Downloadable Characters:	YES
Command Pass-Thru:	ENABLED
EBCDIC Delimiters:	50 6C

SPACE BAR = change value ENTER = save values

Printer = 4214 (Epson)

Setup Screen 2

Printer type:	24-PIN EPSON
Form feed after local screen dump:	YES
Page eject is produced by:	FORM FEED
Line ending mode:	TRUNCATE
Front panel override:	NO
Carriage width:	WIDE
15-cpi prints with:	17 CPI Native
Printer is set for:	CONTINUOUS FORMS
Character set:	C.P. 437
Command Pass-Thru:	ENABLED
EBCDIC Delimiters:	50 6C

SPACE BAR = change value ENTER = save values

Printer = 3812/5219

Setup Screen 2

Form feed after local screen dump:	YES
Paper source:	PRINTER DEFAULT
Command Pass-Thru:	ENABLED
EBCDIC Delimiters:	50 6C

SPACE BAR = change value ENTER = save value

Printer = 5224, 5225, or 5256

Setup Screen 2

Form feed after local screen dump:	YES
Page eject is produced by:	FORM FEED
Printer is set for:	CONTINUOUS FORMS
Character set:	ASCII
CPI:	HOST
LPI:	HOST
Command Pass-Thru:	ENABLED
EBCDIC Delimiters:	50 6C
Printer's HEX codes for 10 CPI:	
Printer's HEX codes for 15 CPI:	
Printer's HEX codes for 6 LPI:	
Printer HEX codes for 8 LPI:	
Printer Initialization String:	

SPACE BAR = change value ENTER = save values

4. Exit the setup mode by pressing <Enter> as many times as needed to exit. The settings are automatically saved when you exit.

5. The I-O 2677M will reset itself and again display a self-test screen. A system sign-on screen should then appear.

6. Perform a display-generated test pattern by pressing <Alt><Alt><P> on the keyboard. This pattern confirms the I-O Display Module and printer are communicating.

QUICK SETUP

Operation

To help utilize the features of the I-O 2677M Display Module, the following on-line help screens are available:

1. Screen Functions
2. Printer Functions
3. Status Line Indicators

To enter the on-line Help mode, press <Alt><Alt><Help>. Please refer to Appendix E for details regarding the three resident Help screens.

Datensichtstation I-O 2677M

Installationsanleitung

Ausgabe 1.11

Deutsch

Vielen Dank, daß Sie die Datensichtstation I-O 2677M gekauft haben. Dieses Schnelleinrichtungshandbuch soll Ihnen helfen, die Datensichtstation so schnell wie möglich einsatzbereit zu machen.

Auspacken

Überprüfen Sie den Karton auf Transport- und Wasserschäden. Kontaktieren Sie sofort die Transportfirma, wenn eine Beschädigung sichtbar ist.

Packen Sie das Gerät und die Tastatur aus dem Versandkarton aus. Die Lieferung enthält die folgenden Teile:

- Datensichtstation I-O 2677M
- Tastatur mit 102/103 oder 122 Tasten
- Universal-Netzteil (100-240 V)
- Stromkabel
- Paralleles Druckerkabel
- Autoterminierung-Twinax-V-Kabel
- I-O 2677M Schnelleinrichtungs- und Benutzerhandbuch

INSTALLATIONSANLEITUNG

AUSPACKEN DER DATENSICHTSTATION

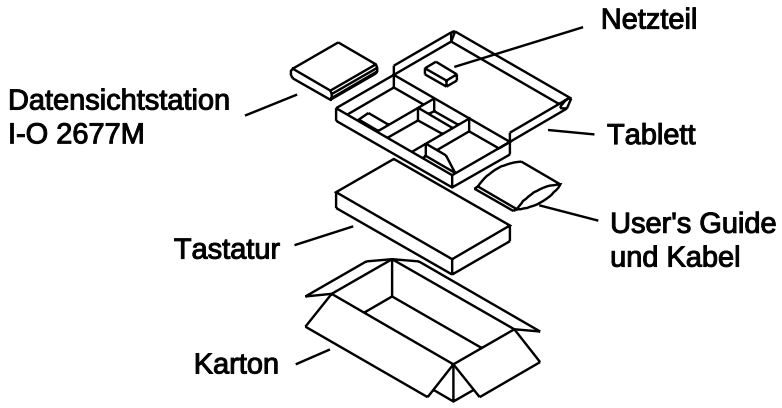


Figure 1

Installation

1. Schließen Sie das Videokabel des Monitors am 15-Stift-VGA-Anschluß auf der Rückseite der Datensichtstation an.

Anmerkung: Die DIP-Schalter neben dem VGA-Anschluß sind ab Werk auf Automatik eingestellt. In den meisten Fällen ermöglicht diese Einstellung der Datensichtstation, sich selbst automatisch für einen Monochrom- oder Farbmonitor zu konfigurieren. Wenn Ihr Monitor jedoch VESA DCC 1/2B unterstützt, müssen die Dip-Schalter je nach Anforderung Ihres Monitors entweder für Farbe oder Mono eingestellt werden.

2. Schließen Sie das parallele Druckerkabel (falls benötigt) am parallelen 25-Stift-"D"-Anschluß auf der Rückseite der Datensichtstation an und schließen Sie das Ende mit dem 25-Stift-Centronics-Stecker am Drucker an.

Achtung: Schließen Sie das Kabel nicht an der seriellen RS-232C-Schnittstelle am Drucker an. Der 25-Stift-"D"-Stecker der Datensichtstation I-O 2677M ist eine parallele

Druckerschnittstelle. Der Anschluß von RS-232-Signalen am Drucker führt zu Schäden an der Datensichtstation. Schäden, die durch falschen Anschluß an der seriellen Schnittstelle entstanden sind, können nicht unter der Garantie der Datensichtstation repariert werden. Wenn Sie ein Anschlußkabel parallel auf seriell verwenden möchten, erfragen Sie bitte nähere Anweisungen von I-O.

3. Schließen Sie die Tastatur an dem Mini-DIN-Tastaturanschluß auf der Rückseite der Datensichtstation an. Die Oberseite des Tastatursteckers ist abgeflacht und mit einem Pfeil markiert. Wenn Sich die Einheit um Tower (vertikaler Position) befindet, muß der Pfeil beim Einstecken des Steckers nach rechts zeigen.

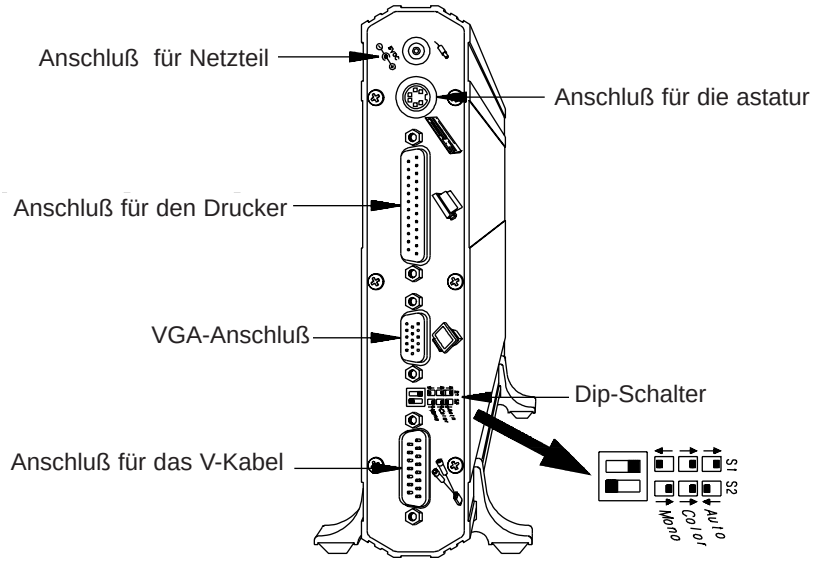


Figure 2

4. Verbinden Sie das Autoterminierungs-V-Kabel mit dem 15-Stift-"D"-Stecker auf der Rückseite der Datensichtstation (siehe Abbildung). Ziehen Sie die Schrauben auf beiden Seiten des V-Kabels fest, bis das Kabel fest mit der Datensichtstation verbunden ist.

5. Verbinden Sie das (die) Host-Twinax-Kabel mit dem Autoterminierungs-V-Kabel. Das V-Kabel terminiert automatisch, wenn nur ein Kabel oder Balun angeschlossen ist, und stellt die Verbindung her, wenn zwei Balun oder Kabel angeschlossen sind.

6. Stecken Sie das Kabel vom Netzteil in eine geerdete Steckdose oder Spannungspitzenschutzgerät. Stecken Sie das Gleichstromkabel des Netzteils in den entsprechenden Anschluß auf der Rückseite der Datensichtstation.

Warnung! Für Ihren persönlichen Sicherheit und zum Schutz der Datensichtstation muß das Gerät ordnungsgemäß geerdet sein.

7. Schalten Sie die Datensichtstation I-O 2677M ein. Der Einschalter befindet sich auf der Vorderseite der Datensichtstation. Schalten Sie den Monitor ein.

Konfiguration

1. Legen Sie die "restricted" (gesperrten) Optionen fest, indem Sie beim Anschalten der Datensichtstation die Taste <Grdst> oder die Leertaste drücken. Es erscheint kurz ein Selbsttestbildschirm, gefolgt von Einrichtbildschirm 1, dem unten dargestellten 'Setup Screen 1'. Die "gesperrten" Optionen sind links neben der Option mit einem Sternchen (*) gekennzeichnet.

Achtung! Legen Sie die "gesperrten" Optionen fest, bevor Sie die Datensichtstation auf Ihrem Host benutzen, da die Werkseinstellungen im Konflikt mit anderen Geräten stehen können, die an dem Twinax-Kabel angeschlossen sind.

Anmerkung: Stellen Sie sicher, daß auf dem Host Anzeige- und Druckergeräte konfiguriert sind, die mit den Typ- und Kabeladressen übereinstimmen, die bei den "gesperrten" Optionen angegeben werden. Nähere Informationen über die Konfiguration des Hosts finden Sie in Kapitel 3 des I-O 2677M Benutzerhandbuchs.

Konfigurationsmenü 1

*	Sprache:	Austrian/German
*	Multinational:	Nein
*	Logischer Bildschirm:	3197D
*	Adresse:	6
*	Logischer Bildschirm:	Nicht Definiert
*	Adresse:	0
*	Logischer Bildschirm:	Nicht Definiert
*	Adresse:	1
*	Druckeremulation:	5224-2
*	Adresse:	3
*	Tastaturidentifikation:	Österr/Deutsch
	Schnelleingabe:	Ausgeschaltet
	VESA-DPMS Energiesparmodus:	15 Minuten
	Linealart:	+
	Tastaturklicker:	Laut
	Alarmlautstärke:	Laut

LEERTASTE = Ändern der Werte TASTE “DAT FREIG” = Werte sichern

2. Geben Sie die nicht gesperrten Optionen je nach Bedarf an. Sie können diese Optionen jederzeit ändern, indem Sie die Tasten <Shift><Defin> drücken. (<BsDefin> auf der 122-Tasten-Tastatur).

3. Geben Sie die Druckeroptionen auf dem Bildschirm 'Setup Screen 2'' (unten abgebildet) je nach Ihren Druckanforderungen an. Es kann ein von dem dargestellten Bildschirm abweichender Bildschirm erscheinen, je nach gewählter Druckeremulation auf dem 'Setup Screen 1' und der Wahl des Druckers auf dem 'Setup Screen 2'.

Drucker =Nicht Definiert

Konfigurationsmenü 2

Automatischer Formularvorschub nach lokaler Hardcopy:	Ja
Zeichensatz:	ASCII

LEERTASTE = Ändern der Werte TASTE “DAT FREIG” = Werte sichern

Drucker = 4214 (Proprinter)

Konfigurationsmenü 2

Druckertyp:	24-Nadel Proprinter
Automatischer Formularvorschub nach lokaler Hardcopy:	Ja
Papiertransport erfolgt durch:	Formularvorschub
Zeilenendemodus:	Abbrechen
Übersteuern der Druckereinstellung:	Nein
Wagenbreite:	Breit
15-cpi drucken wie:	17 CPI Native
Formularart:	Endlosformular
Zeichensatz:	C.P. 437
Ladbarer Zeichensatz:	Ja
Pass Thru - Befehl:	Aktiviert
EBCDIC Befehlscode:	50 6C

LEERTASTE = Ändern der Werte TASTE “DAT FREIG” = Werte sichern

Drucker = 4214 (Epson)

Konfigurationsmenü 2

Druckertyp:	24-Nadel Epson
Automatischer Formularvorschub nach lokaler Hardcopy:	Ja
Papiertransport erfolgt durch:	Formularvorschub
Zeilenendemodus:	Abbrechen
Übersteuern der Druckereinstellung:	Nein
Wagenbreite:	Breit
15-cpi drucken wie:	17 CPI Native
Formularart:	Endlosformular
Zeichensatz:	C.P. 437
Pass Thru - Befehl:	Aktiviert
EBCDIC Befehlscode:	50 6C

LEERTASTE = Ändern der Werte TASTE “DAT FREIG” = Werte sichern

Drucker = 3812/5219

Konfigurationsmenü 2	
Automatischer Formularvorschub nach lokaler Hardcopy:	Ja
Papierzuführung:	lt. Druckerdefinition
Pass Thru - Befehl:	Aktiviert
EBCDIC Befehlscode:	50 6C

LEERTASTE = Ändern der Werte TASTE “DAT FREIG” = Werte sichern

Drucker = 5224/5225/5256

Konfigurationsmenü 2	
Automatischer Formularvorschub nach lokaler Hardcopy:	Ja
Papiertransport erfolgt durch:	Formularvorschub
Formularart:	Endiosformular
Zeichensatz:	ASCII
Zeichendichten in CPI:	Host
Zeichendichten in LPI:	Host
Pass Thru - Befehl:	Aktiviert
EBCDIC Befehlscode:	50 6C
Drucker HEX-Code für 10 CPI:	
Drucker HEX-Code für 15 CPI:	
Drucker HEX-Code für 6 LPI:	
Drucker HEX-Code für 8 LPI:	
Drucker-Grundeinstellung:	

LEERTASTE = Ändern der Werte TASTE “DAT FREIG” = Werte sichern

Deutsch

4. Verlassen Sie den Einrichtmodus, indem Sie die Taste <Daten Freig> so oft wie nötig drücken. Beim Verlassen des Einrichtmodus werden die Eingaben automatisch gespeichert.

5. Die I-O 2677M stellt sich automatisch zurück und kehrt zum Selbsttestbildschirm zurück. Dann erscheint ein System-Anmeldebildschirm.

6. Führen Sie eine Testsequenz aus, indem Sie die Tasten <Alt><Alt><P> auf der Tastatur drücken. Diese Sequenz stellt sicher, daß die Datensichtstation und der Drucker kommunizieren.

Betrieb

Damit Sie die Funktionen der Datensichtstation I-O 2677M richtig ausnutzen können, stehen die folgenden Bildschirme als O-Line-Hilfe zur Verfügung:

1. Bildschirmfunktionen
2. Druckerfunktionen
3. Statuszeilenanzeiger

Drücke Sie die Tasten <Alt><Alt><Bed Hilfe>, um in dem On-Line-Hilfe-Modus zu gelangen. Nähere Angaben zu den drei Hilfe-Bildschirmen finden Sie in Anhang E.

Poste d’affichage I-O 2677M

Guide d'installation rapide

Version 1.11

Merci d’avoir choisi le poste d’affichage I-O 2677M. Ce guide d’installation rapide est conçu pour vous permettre d’utiliser rapidement votre matériel.

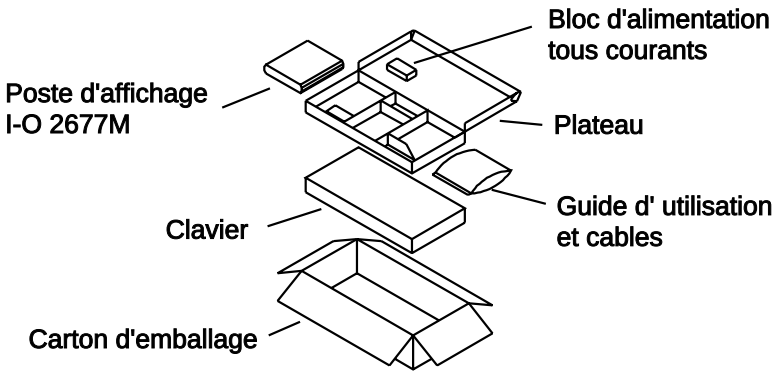
Déballage

Assurez-vous que le carton d’emballage n’a subi aucun dommage causé par l’eau ou le transport. Si de tels dommages sont apparents, veuillez communiquer immédiatement avec le transporteur.

Sortez l’unité et le clavier du carton d’emballage. Dans ce dernier, vous trouverez les éléments suivants:

- Poste d’affichage I-O 2677M
- Clavier à 102-103 ou 122 touches
- Bloc d’alimentation tous courants (100-240 V)
- Le cordon d’alimentation
- Câble d’imprimante parallèle
- Câble twinaxial en V à terminaison automatique
- Guide d’installation rapide et d’utilisation du poste d’affichage I-O 2677M

INSTRUCTIONS DE DEBALLAGE DU POSTE D'AFFICHAGE



Installation

1. Connectez le câble vidéo du moniteur au connecteur VGA à 15 broches du panneau du poste d'affichage.

   Nota : Les commutateurs DIP à côté du connecteur VGA sont réglés en usine au mode automatique. Dans la plupart des cas, ce réglage permet au poste d'affichage de se configurer automatiquement pour un moniteur couleur ou monochrome. Toutefois, si votre moniteur supporte le standard VESA DDC 1/2B, vous devrez régler les commutateurs DIP à couleur ou mono, selon les capacités du moniteur.

2. Connectez le câble d'imprimante parallèle (si nécessaire) au port d'imprimante parallèle «D» à 25 broches sur le panneau arrière du poste et connectez l'extrémité Centronics à 36 broches du câble à l'imprimante.

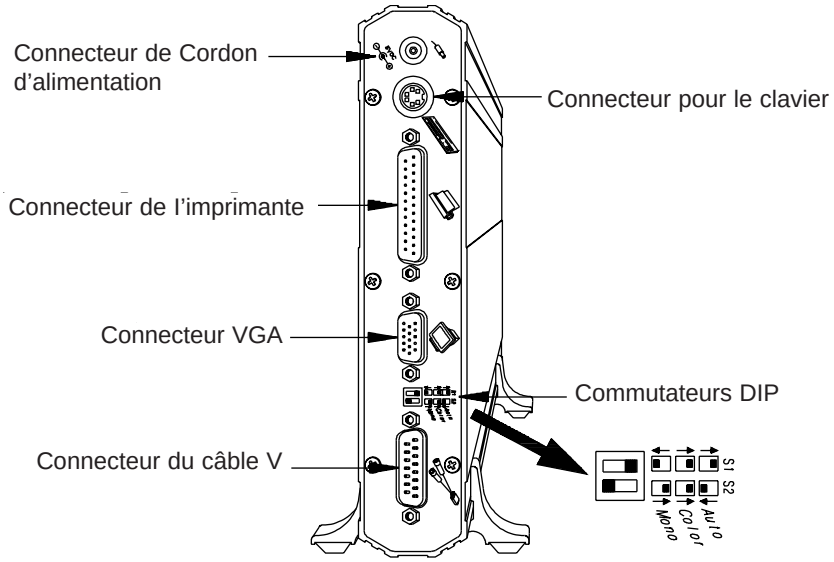
   Avertissement! NE connectez PAS ce câble à un port RS-232C de l'imprimante. Le connecteur «D» à 25 broches du poste d'affichage I-O 2677M est un connecteur d'interface d'impression parallèle. Connecter des signaux RS-232C au port d'imprimante endommagerait le poste d'affichage. Tout dommage résultant de la connexion inappropriée

d'un port série n'est pas couvert par la garantie. Pour utiliser un câble adaptateur série-parallèle, contactez I-O afin d'obtenir de plus amples renseignements.

3. Connectez le clavier au connecteur de clavier Mini-DIN sur le panneau arrière du poste d'affichage. Le haut du connecteur de clavier est plat et porte une flèche. Lorsque l'unité est à la verticale, le connecteur doit être inséré de façon que la flèche soit à droite.

4. Connectez le câble twinaxial en V à terminaison automatique au connecteur «D» à 15 broches sur le panneau arrière du poste d'affichage (voir l'illustration). Serrez le vis de chaque côté du câble de manière à bien le fixer au poste d'affichage.

Figure 2



5. Connectez les câbles twinaxiaux de l'hôte au câble en V à terminaison automatique. Ce dernier câble établit automatiquement une terminaison lorsqu'un seul câble ou balun y est raccordé et permet la continuité de la connexion lorsque deux câbles ou baluns y sont raccordés.

6. Branchez le cordon d'alimentation c.a. dans une prise de mise à la terre ou un protecteur de surtension. Branchez le cordon d'alimentation c.c. du bloc d'alimentation dans la prise d'entrée d'alimentation sur le

panneau arrière du poste d'affichage.

Danger! Afin d'éviter toute électrocution et tout dommage au poste d'affichage, assurez-vous que le poste est adéquatement mis à la terre.

Warnung! Für Ihren persönlichen Schutz und den Schutz der Datensichtstation muss das Gerät ordnungsgemäss geerdet sein.

7. Mettez le poste d'affichage I-O 2677M sous tension. L'interrupteur marche/arrêt est situé sur la face avant du poste d'affichage. Mettez le moniteur sous tension.

Configuration

1. Réglez les options «limitées» en tenant la touche de remise à zéro <Rest> ou la barre d'espacement enfoncée au démarrage du poste d'affichage. Un écran d'autodiagnostic s'affiche brièvement avant que l'écran de configuration Setup Screen 1 s'affiche (voir l'illustration ci après). Les options «limitées» sont identifiées par un astérisque (*) placé à gauche.

Avertissement! Réglez les options «limitées» avant d'utiliser le poste d'affichage avec votre hôte, car les réglages en usine peuvent causer des conflits avec les autres périphériques reliés au même câble twinaxial.

Nota: Assurez-vous que la configuration des périphériques d'affichage et d'impression de l'hôte correspond aux types et aux adresses de câble sélectionnés dans les options «limitées». Consultez le chapitre 3 du Guide de l'utilisateur du poste d'affichage I-O 2677M pour obtenir plus de détails sur la configuration de l'hôte.

2. Réglez les autres options selon vos besoins. Vous pouvez régler ces options en tout temps en appuyant sur les touches <Shift> et <Config>. (La touche <Config> est offerte sur les claviers à 122 touches.)

Installation de l'Ecran 1

*	Langue:	Canadian French
*	Multinaational:	Non
*	Emulation de session terminale:	3197D
*	Adresse:	6
*	Emulation de session terminale:	Désactivé
*	Adresse:	0
*	Emulation de session terminale:	Désactivé
*	Adresse:	1
*	Emulation de l'imprimante:	Désactivée
*	Adresse:	3
*	Indentification du clavier:	Canadian French
	Buffer calvier:	Désactivée
	Mode économique d'energie VESA-DPMS:	15 minutes
	Catégorie de regle:	+
	Volume du déclic de toucher:	Haut
	Volume de l'alarme:	Haut

BARRE D'ESPACEMENT = Changement de valeur
ENTRÉE = Sauvegarde des valeurs

3. Réglez les options d'impression à l'écran Setup Screen 2 (illustré ci-après) selon vos besoins. Un écran Setup Screen 2 différent peut apparaître, selon l'émulation d'imprimante définie à l'écran Setup Screen 1 et l'imprimante sélectionnée à l'écran Setup Screen 2.

Imprimante=Désactivée

Installation de l'Ecran 2

Avancmnt page après vidage écran local:	Oui
Jeu de caractères:	ASCII

BARRE D' ESPACEMENT = Changement de valeur
ENTRÉE = Sauvegarde des valeurs

Imprimante = 4214 (Proprinter)

Installation de l'Ecran 2

Type d' imprimante:	Proprinter a 24 aiguilles
Avancmnt page aprés vidage écran local:	Oui
Éjection de page produite par:	Presentation de Forme
Mode de fin de ligne:	Tronquage
Panneau avant avancé:	Non
Largeur de chariot:	Large
Impression à 15 cpi comme:	17 CPI Native
L'imprimante est installée pour:	Pages continues
Jeu de caractères:	C.P. 437
Downloadable caractères:	Oui
Exécution de commande:	Activée
EBCDIC Delimiters:	50 6C

BARRE D'ESPACEMENT = Changement de valeur
ENTREÉ = Sauvegarde des valeurs

Imprimante = 4214 (Epson)

Installation de l' Ecran 2

Type d' imprimate:	Epson a 24 aiguilles
Avancmnt page après vidage écran local:	Oui
Éjection de page produite par:	Presentation de Forme
Mode de fin de ligne:	Tronquage
Panneau avant avancé:	Non
Largeur de chariot:	Large
Impression à 15 cpi comme:	17 CPI Native
L'imprimante est installée pour:	Pages continues
Jeu de caractères:	C.P. 437
Exécution de commande:	Activée
EBCDIC Delimiters:	50 6C

BARRE D'ESPACEMENT = Changement de valeur
ENTREÉ = Sauvegarde des valeurs

Imprimante = 3812/5219

Installation de l'Ecran 2

Avancmnt page après vidage écran local:	Oui
Source de papier:	Appel Automatique de Feuille
Exécution de command:	Activée
EBCDIC Delimiters:	50 6C

BARRE D'ESPACEMENT = Changement de valeur
ENTREÉ = Sauvegarde des valeurs

Imprimante = 5224/5225/5256

Installation de l'Ecran 2

Avancmnt page après vidage écran local:	Oui
Éjection de page produite par:	Presentation de Forme
L'imprimante est installée pour:	Pages continues
Jeu de caractéres:	ASCII
Caractères par pouce:	Système
Lignes par pouce:	Système
Exécution de commande:	Activée
EBCDIC Delimiters:	50 6C
Codes d'imprimante HEX pour 10 CPI:	
Codes d'imprimante HEX pour 15 CPI:	
Codes d'imprimante HEX pour 6 LPI:	
Codes d'imprimante HEX pour 8 LPI:	
Printer Initialization String:	

BARRE D'ESPACEMENT = Changement de valeur
ENTREÉ = Sauvegarde des valeurs

4. Quittez le mode de configuration en appuyant sur <Entreé> autant de fois que nécessaire pour sortir du programme. Les réglages sont automatiquement sauvegardés à la sortie.

5. Le poste d'affichage I-O 2677M redémarre automatiquement et affiche de nouveau l'écran d'autodiagnostic. Puis, un écran d'ouverture de session s'affiche.

6. Exécutez une séquence d'essai générée par l'affichage en appuyant sur les touches <Alt>, <Alt> et <P> du clavier. Cet essai confirme que le poste d'affichage I-O et l'imprimante communiquent entre eux.

Exploitation

Les écrans d'aide suivants sont offerts pour vous aider à utiliser les fonctions du poste d'affichage I-O 2677M:

1. Fonctions d'affichage
2. Fonctions d'impression
3. Indicateurs de ligne d'état

Pour activer le mode aide en ligne, appuyez sur les touches <Alt>, <Alt> et <Aide>. Consultez l'annexe E pour obtenir plus de détails sur les trois écrans d'aide.

La Terminal Modular I-O 2677M

Guía de Instalación Rápida

Versión 1.11

Le agradecemos que haya adquirido el La Terminal Modular I-O 2677M. Esta Guía de instalación rápida ha sido diseñada para ayudarle a instalar el módulo y a que funcione en un corto período de tiempo.

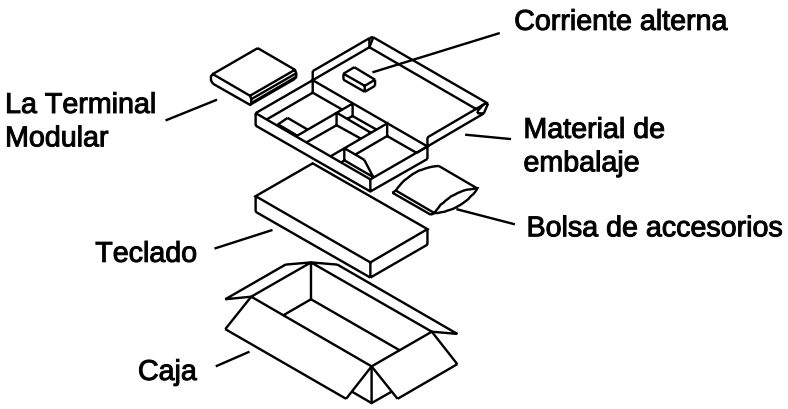
Desembalaje

Revise la caja por daños causados por agua o por transporte. Si existiera algún daño evidente, comuníquese inmediatamente con el transportador del envío.

Desenpaque la unidad y el teclado de la caja de embalaje. Los artículos que enumeraremos a continuación deberán formar parte del contenido:

- La Terminal Modular I-O 2677M
- Tecla 102/103 o Teclado de tecla-122
- Cable de corriente alterna universal (100-250 V)
- Cable eléctrico (110/220V)
- Cable paralelo de la impresora
- Cable V twinax auto terminador
- Guía del usuario y Guía de Instalación Rápida I-O 2677M

INSTRUCCIONES DE DESEMBALAJE
LA TERMINAL MODULAR



Instalación

1. Conecte el cable de vídeo del monitor al panel posterior del La Terminal Modular.

   Nota: Los fabricantes de los interruptores que se encuentran al lado del conector VGA han definido la configuración en Automático. En la mayoría de los casos, esta configuración permitirá que el módulo se configure automáticamente ante un monitor monocromo o a color. Sin embargo, si su monitor reconoce VESA DDC 1/2B, entonces los interruptores DIP se deberán definir ya sea al valor de color o al monocromático, dependiendo de la capacidad de su monitor.

2. Conecte el cable paralelo de la impresora (si se requiere) al puerto paralelo de impresora, ubicado en el panel posterior del módulo y conecte el extremo del cable Centronics de 36 contactos a la impresora.

¡Advertencia! NO CONECTE un puerto en serie RS-232C de la impresora. El conector "D" de 25 contactos del La Terminal Modular I-O 2677M es una interface en paralelo de impresora. Los daños causados por señales RS-232C puede ocasionar daños serios al la terminal modular. Llos daños causados por conexión inapropiada de un puerto de serie no son reparables bajo las cláusulas especificadas en la garantía del producto. Sin embargo, si a usted le interesa obtener información en cuanto al uso de un cable paralelo en conector en serie, contáctese con las oficinas de I-O para tal fin.

3. Conecte el teclado al conector de teclado Mini-DIN ubicado en la parte posterior del la terminal modular. La parte superior del conector del teclado es plana y está marcado con una flecha. Cuando la unidad se encuentre en posición vertical la flecha deberá estar posicionada a la derecha al inserte el conector al teclado.

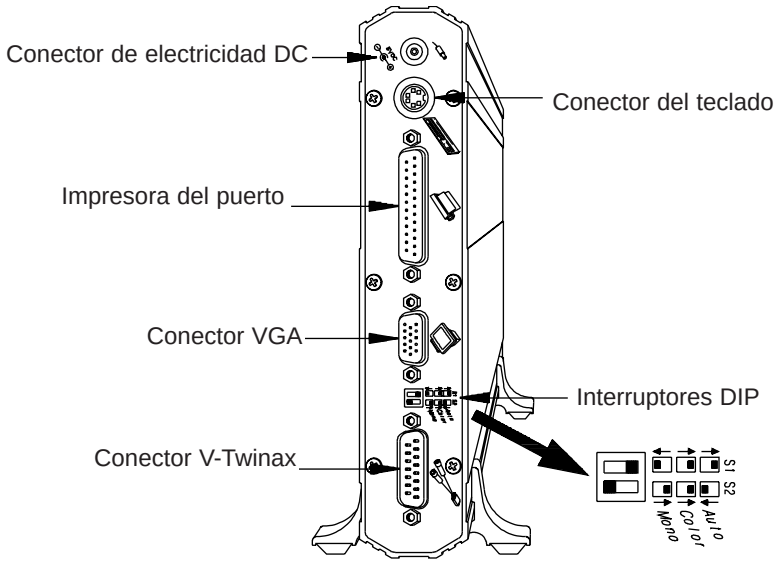


Figure 2

4. Conecte el cable V-twinax auto terminador al conector "D" de 15 contactos en el panel posterior del la terminal modular (vea figure).

Español

Asegure las tuercas en ambos lados del cable-V hasta que se encuentren bien ajustadas al la terminal modular.

5. Conecte el (los) cables twinax de la computadora al cable-V auto terminador. El cable-V termina automáticamente cuando solamente se conecta un cable y automáticamente permite la conexión de otro dispositivo twinax cuando se conectan dos cable.

6. Enchufe el cable de corriente eléctrica AC de corriente alterna en una toma de corriente con conexión a tierra o en una con protección a la sobretensión. Enchufe el cable de corriente eléctrica DC en la toma corriente de la pared, ubicada en la parte posterior del la terminal modular.

   ¡Peligro! Para seguridad personal y protección del la terminal modular, asegúrese de que el la terminal modular esté debidamente conectada a tierra.

   ¡Advertencia! Für Ihren persönlichen Schutz und den Schutz der Datensichtstation muss das Gerät ordnungsgemäss geerdet sein.

7. Encienda el La Terminal Modular I-O 2677M. El interruptor de encendido esté ubicado en el panel frontal del la terminal modular. Del mismo modo, ponga en marcha el monitor.

Configuración

1. Configure las opciones “restringidas” pulsando y manteniendo oprimida la tecla <Reset> o la barra espaciadora al activar el La Terminal Modular. Se visualizará brevemente una autoevaluación, seguida de la Pantalla de instalación 1, como se muestra a continuación. Las opciones “restringidas” se indican con un asterisco (*) al lado izquierdo de la opción.

   ¡Advertencia! Debe configurar las opciones “restringidas” antes de poner en marcha el La Terminal Modular en la computadora, ya que los valores predeterminados por los fabricantes del producto prodrían ocasionar conflictors con otros dispositivos conectadoes al mismo cable twinax.

¡Nota!: Cerciórese de que la computadora tenga dispositivos de visualización y de impresión configurados que correspondan a los tipos y a las direcciones de calbe seleccionados para las opciones “restringidas.” Para obtener mayor información en cuanto a la configuración de la computadora, vea el Capítulo 3 de la Guía de usuario.

Pantalla de Instalación

*	Idioma:	L/A Spanish
*	Multinacional:	No
*	Sesión de emulación de la terminal:	3197D
*	Dirección:	6
*	Sesión de emulación de la terminal:	Inhibida
*	Dirección:	0
*	Sesión de emulación de la terminal:	Inhibida
*	Dirección:	1
*	Impresora emulada:	Inhibida
*	Dirección:	3
*	ID del teclado:	Latinoamericana
	Type-ahead:	Inhibida
	Intervalo de autocontrol de brillo de pantalla:	5 Minutos
	Estilo de la regla:	+
	Volumen del ruido de las teclas:	Alto
	Volumen de la alarma:	Alto

BARRA ESPACIADORA = Cambia el valor INTRO = Almacena los valores

2. Configure las opciones no restringidas que correspondan a sus necesidades particulares. Estas opciones se pueden seleccionar en cualquier momento oprimiendo la tecla <Shift><Setup>. (La tecla <Setup> en los teclados de 122 teclas).

3. Configure las opciones de impresora en la Pantalla 2 (que se muestra a continuación) para que correspondan a las necesidades de impresión. Se presentará una Pantalla de Instalación 2 diferente, dependiendo de la selección de impresora emulada seleccionada en la Pantalla de Instalación 1 y en la impresora elegida en la Pantalla de Instalación 2.

Impresora = Inhibida

Pantalla de Instalación 2

Alimentación de formularios después de vaciar la pantalla:	Sí
Conjunto de caracteres:	ASCII

BARRA ESPACIADORA = Cambia el valor INTRO = Almacena los valores

Impresora = 4214 (Proprinter)

Pantalla de Instalación 2

Tipo de impresora:	Proprinter de 24 agujas
Alimentación de formularios después de vaciar la pantalla:	Sí
Expulsión de hoja producida por:	Alimentacion de formulario
Modo de terminación de línea:	Truncar
Anulación de panel frontal:	No
Ancho del carro:	Ancho
15-CPI imprimen como:	17 CPI Nativo
Impresora se ha configurado para:	Formularios continuos
Juego de caracteres:	C.P. 437
Bajada de caracteres:	Sí
Comando de pasada:	Activado
EBCDIC Secuencia del modo Comando de Pasada es:	50 6C

BARRA ESPACIADORA = Cambia el valor INTRO = Almacena los valores

Impresora = 4214 (Epson)

Pantalla de Configuración 2

Tipo de impresora:	Epson de 24 agujas
Alimentación de formularios después de vaciar la pantalla:	Sí
Expulsión de hoja producida por:	Alimentacion de formulario
Modo de terminación de línea:	Truncar
Anulación de panel frontal:	No
Ancho del carro:	Ancho
15-CPI imprimen como:	17 CPI Nativo
Impresora se ha configurado para:	Formularios continuos
Juego de caracteres:	C.P. 437
Comando de pasada:	Activado
EBCDIC Secuencia del modo Comando de Pasada es:	50 6C

BARRA ESPACIADORA = Cambia el valor INTRO = Almacena los valores

Impresora = 3812/5219

Pantalla de Instalación 2

Alimentación de formularios después de vaciar la pantalla:	Sí
Fuente del papel:	Valor por defecto de la impresora
Comando de pasada:	Activado
EBCDIC Secuencia del modo Comando de Pasada es:	50 6C

BARRA ESPACIADORA = Cambia el valor INTRO = Almacena los valores

Impresora = 5224/5225/5256

Pantalla de Instalación 2

Alimentación de formularios después de vaciar la pantalla:	Sí
Expulsión de la hoja producida por:	Alimentacion de formulario
Impresora se ha configurado para:	Formularios continuos
Juego de caracteres:	ASCII
CPI:	Ordenador
LPI:	Ordenador
Comando de pasada:	Activado
EBCDIC Secuencia del modo Comando de Pasada es:	50 6C
Códigos HEX de la impresora para 10 CPI:	
Códigos HEX de la impresora para 15 CPI:	
Códigos HEX de la impresora para 6 LPI:	
Códigos HEX de la impresora para 8 LPI:	
Códigos de inicialización impresora:	

BARRA ESPACIADORA = Cambia el valor INTRO = Almacena los valores

4. Salga del modo de instalación oprimiendo <Intro> cuantas veces sea necesario hasta que logre salir. Las especificaciones realizadas se almacenan de manera automática cuando sale del sistema.

5. El módulo I-O 2677M se reconfigurará automáticamente y nuevamente la pantalla de autoevaluación aparecerá seguido de la pantalla de identificación.

6. Lleve a cabo el patrón de evaluación generada en pantalla oprimiento <Alt><Alt><P> en el teclado. Este patrón confirma que tanto el La Terminal Modular I-O y la Impresora se están comunicando entre sí.

Operación

Para facilitarle el uso de las funciones de La Terminal Modular I-O 2677M, las siguientes pantallas de ayuda se encuentran a su disposición:

1. Funciones de la pantalla
2. Funciones de la impresora
3. Indicadores de la línea de estado

Para entrar al modo de Ayuda en línea, oprima <Alt><Alt><Help>. Sírvase consultar el Apéndice E para obtener los detalles concernientes a las tres pantallas de Ayuda en línea.

Módulo de visualização I-O 2677M

Guia de configuração rápida

Versão 1.11

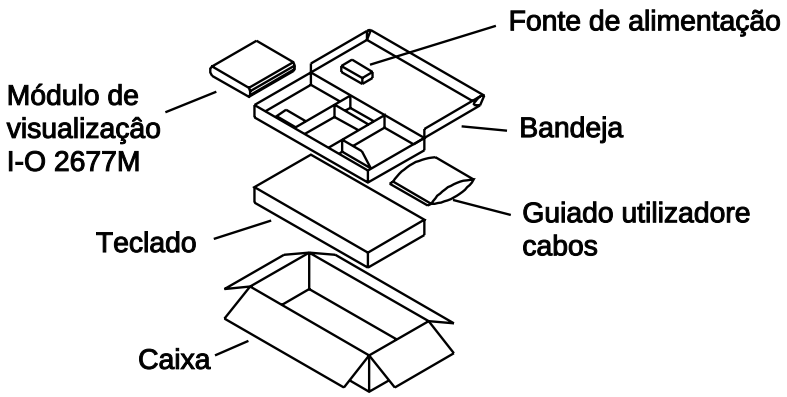
Os nossos agradecimentos por ter adquirido o módulo de visualização I-O 2677M. Este guia de configuração rápida foi concebido para o auxiliar a configurar e começar a trabalhar num curto espaço de tempo.

Desembalar

Verifique para ver se a caixa foi danificada durante o transporte ou foi danificada com água. Se houver indícios de danos, contacte imediatamente o portador.

Desembale a unidade e o teclado da caixa de embarque. Os itens seguintes estão incluídos.

- Módulo de visualização I-0 2677M.
- Teclado de 102/103 teclas ou 122 teclas.
- Fonte de alimentação universal (110-240 V).
- Cabo de alimentação.
- Cabo paralelo para impressora.
- Cabo V coaxial duplo auto-terminado.
- Configuração rápida e Guia do utilizador do I-0 2677/M



Instalação

1. Ligue o cabo de vídeo do monitor no conector VGA de 15 pinos no painel traseiro do módulo de visualização.

   Nota: Os interruptores DIP ao lado do conector de VGA foram definidos para Auto na fábrica. Na maioria dos casos, esta definição permite que o módulo de visualização faça a sua própria configuração para monitor monocromático ou policromático. No entanto, se o monitor suportar VESA DDC 1/2B, então os interruptores DIP precisam de ser definidos para monocromático ou policromático, dependendo das capacidades do seu monitor.

2. Ligue o cabo paralelo da impressora (se for necessário) à porta paralela tipo 'D' de 25 pinos na traseira do painel do módulo e ligue a extremidade com o conector Centronics de 36 pinos à impressora.

   Aviso! NÃO ligue a uma porta série RS-232C na impressora. O conector D de 25 pinos do módulo de visualização I-O 2677M é uma interface paralela de impressora. Ligar sinais de RS-232C à porta da impressora irá danificar o módulo de

visualização. Danos causados por ligação indevida de uma porta série não é reparável sob a garantia dos écrans. Se estiver interessado em utilizar um cabo de ligação paralelo série, contacte a I-O para informações

3. Ligue o teclado ao conector de teclado Mini-Din situado na traseira do módulo de visualização. O topo do conector do teclado é plano e está marcado com uma seta. Enquanto a unidade está na posição vertical (torre), a seta deve ser posicionada para a direita quando da inserção do conector.

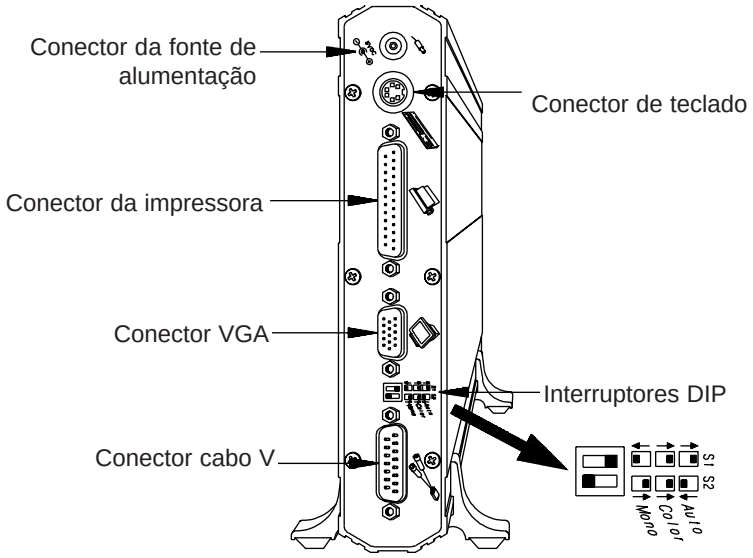


Figure 2

4. Ligue o cabo V coaxial duplo auto-terminado no conector D de 15 pinos no painel traseiro do módulo de visualização (veja a figura). Aparafuse os parafusos em ambos os lados do cabo V até estarem bem fixos no módulo de visualização.

5. Ligue o(s) cabo(s) coaxial(ais) duplo(s) do host ao cabo V auto-terminado. O cabo V termina automaticamente apenas quando se liga um cabo ou um balun e deixa passar sinais automaticamente quando se ligam dois baluns ou cabos.

Português

6. Ligue o cabo de alimentação de CA da fonte de alimentação a uma tomada com terra ou protector de picos transitórios. Ligue o cabo de CC da fonte de alimentação à tomada de parede no painel traseiro do módulo de visualização.

   Perigo! Para sua segurança pessoal e protecção do módulo de visualização, certifique-se de que este está devidamente ligado à terra.

7. Ligue o módulo de visualização I-O 2677M. O interruptor de ligar à corrente está situado no painel frontal do módulo de visualização. Ligue o monitor.

Configuração

1. Defina as opções “restritas” pressionando e mantendo pressionada a tecla <Reset> ou a barra de espaços enquanto liga à corrente o módulo de visualização. Um écran de teste automático aparece brevemente, seguido do écran 1 de configuração, como se mostra abaixo. As opções “restritas” estão indicadas por um asterisco (*) à esquerda da opção.

   Aviso! Defina as opções “restritas”, antes de correr o módulo de visualização no seu host, porque as definições de fabrica podem entrar em conflito com outros dispositivos ligados ao mesmo cabo coaxial duplo.

Nota: Certifique-se de que o host tem dispositivos de visualização e impressão configurados que correspondem aos tipos e endereços de cabo seleccionados para as opções “restritas”. Veja o capítulo 3 do Guia do utilizador do I-O 2677M para mais informações sobre a configuração do host.

Écran de Disposição 1

Língua:	Portuguese
Multinacional:	Não
Emulação de sessão de terminal:	3197D
Endereço:	6
Emulação de sessão de terminal:	Desactivada
Endereço:	0
Emulação de sessão de terminal:	Desactivada
Endereço:	1
Emulação de impressora:	5224-2
Endereço:	3
Identidade do teclado:	Português
Tecle/Adiante:	Desactivado
Modalidade economica de força de VESA-DPMS:	15 Minutos
Estilo da Régua:	+
Volume do som do teclado:	Alto
Volume do alarme:	Alto

BARRA de ESPACEJAMENTO = modificar valor
ENTER = registrar valores

2. Defina as opções não restritas para se adaptarem às suas necessidades. Estas opções também podem ser definidas premindo a tecla <Shift><Setup>. (<Setup> em teclados com 122 teclas).

3. Defina as opções de impressora no écran 2 de configuração (mostrado abaixo) para se adaptarem às suas necessidades de impressão. Pode aparecer um écran 2 de configuração diferente, dependendo de qual emulação de impressão é que foi seleccionada no écran 1 de configuração e da impressora seleccionada no écran 2 de configuração.

Impressora = Desativado

Écran de Disposição 2

Alimentação de formularios após despejar écran:	Sim
Conjunto de caracteres:	ASCII

BARRA de ESPACEJAMENTO = modificar valor
ENTER = registrar valores

GUIA DE CONFIGURAÇÃO RAPIDA

Impressora = 4214 (Proprinter)

Écran de Disposição 2

Tipo de Impressora:	Proprinter de 24 agulhas
Alimentação de formularios após despejar écran:	Sim
Ejeção de página efetuada através de:	Alimentação de Formulário
Modalidade de final de linha:	Truncamento
Anulação do painel de controle:	Não
Largura do carro:	Largo
15 cpi imprime como:	17 CPI Native
Impressora está configurado para:	Formularios continuos
Conjunto de caracteres:	C.P. 437
Downloadable Characters:	Sim
Pass-Thru de comando:	Activado
EBCDIC Delimiters:	50 6C

BARRA de ESPACEJAMENTO = modificar valor ENTER = registrar valores

Impressora: 4214 (Epson)

Écran de Disposição 2

Tipo de Impressora:	Epson de 24 agulhas
Alimentação de formularios após despejar écran:	Sim
Ejeção de página efetuada através de:	Alimentação de Formulário
Modalidade de final de linha:	Truncamento
Anulação do painel de controle:	Não
Largura do carro:	Largo
15 cpi imprime como:	17 CPI Native
Impressora está configurado para:	Formularios continuos
Conjunto de caracteres:	C.P. 437
Pass-Thru de comando:	Activado
EBCDIC Delimiters:	50 6C

BARRA de ESPACEJAMENTO = modificar valor ENTER = registrar valores

Impressora: 3812/5219

Écran de Disposição 2	
Alimentación de formularios após despejar écran:	Sim
Fonte de papel:	Valor a revelia de impressora
Pass-Thru de comando:	Activado
EBCDIC Delimiters:	50 6C
BARRA de ESPACEJAMENTO = modificar valor	ENTER = registrar valores

Impressora:5224/5225/5256

Écran de Disposição 2	
Alimentação de formularios após despejar écran:	Sim
Ejeção de página efetuada através de:	Alimentação de Formulário
Impressora está configurado para:	Formularios continuos
Conjunto de caracteres:	ASCII
Characteres por polegado (CPP):	Hoste
Linhas por polegado (LPP):	Hoste
Pass-Thru de comando:	Activado
EBCDIC Delimiters:	50 6C
Códigos HEX impressora para 10 CPI:	
Códigos HEX impressora para 15 CPI:	
Códigos HEX impressora para 6 LPI:	
Códigos HEX impressora para 8 LPI:	
Printer Initialization String:	
BARRA de ESPACEJAMENTO = modificar valor	ENTER = registrar valores

4. Saia do modo configurar premindo <Enter> tantas vezes quantas as necessárias para sair. As definições são automaticamente guardadas quando sai.

5. O I-O 2677M faz a sua própria reinicialização e de novo visualiza um écran de teste automático. Deverá então aparecer o écran de início de sessão do sistema.

6. Execute um padrão de teste gerado no écran premindo <A1><A1><P> no teclado. Este padrão confirma que o módulo de visualização I-O e a impressora estão a comunicar.

GUIA DE CONFIGURAÇÃO RAPIDA

Operação

Para utilizar as funções do módulo de visualização I-O 2677M, tem disponível os seguintes écrans em linha:

1. Funções de écran
2. Funções de impressora
3. Indicadores de linha de estado

Para aceder ao modo Ajuda em linha, prima <Alt><Alt><Help>. Consulte o Apêndice E para os detalhes respeitantes aos três écrans residentes de Ajuda.

I-O 2677M Display Module

User's Guide

Version 1.11

I-O 2677M Display Module Quick Setup & User's Guide Version 1.11
2677MX-OMAN01-111 Revision Date: May, 1998

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1 INTRODUCTION

The I-O 2677M Display Module is a modular display device that attaches to an IBM Host System/36, System/38, or AS/400. Display stations can also be known as terminals, workstations, or video display terminals (VDTs). No matter what the name, they give the access to enter data, run applications, and perform other functions on the host.

The I-O 2677M Display Module consists of a keyboard and display module (monitor is separate). Several IBM display station emulations are available. Other features include a ergonomic design, resident help screens, and a record/playback feature for frequently used keystrokes. The I-O 2677M also has a host-addressable printer port.

Unpacking

The I-O 2677M Display Module and keyboard come packed in a strong shipping container. The keyboard is packaged separately in the outer carton. Inserts provide protection during shipping.

Check the packaging for damage and notify the carrier immediately if any damage is evident. Carefully remove the items from the box. You may want to keep the original packaging in case the module and keyboard need to be moved or shipped.

INTRODUCTION

The shipping carton contains the following items:

- I-O 2677M Display Module
- 102/103-key or 122-key keyboard
- Universal power supply (100-240V)
- Power Cord (110/220V)
- Parallel printer cable
- Auto-terminate twinax V-cable
- I-O 2677M Display Module Quick Setup and User's Guide

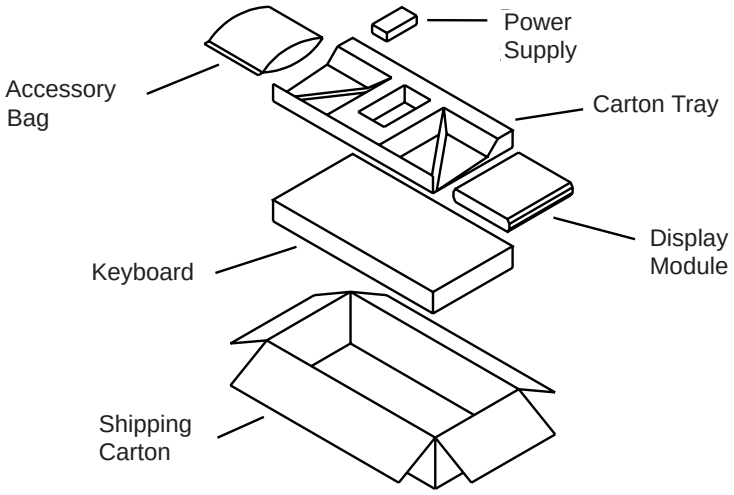

Figure 1-1

Specifications

General

Host Systems:	IBM System/36, /38, and AS/400; IBM 5294, 5394, 5494 Remote Controllers I-O 8294, 8394, 8394E, 8394Ei, and 8494 Remote Controllers **Note:** The 3487C NonInfoW emulation is not fully supported by the System/36 and /38, and 5294 remote controller.
Display Emulations:	IBM 3180, 3196, 3197C, 3197D, 3487C NonInfoW, 5291, 5251-11
Number of sessions:	Four - (3 display + 1 printer)
Languages Supported:	18 - US/Canadian (English), Canadian French, L/A Spanish, Austrian/German, Belgian (Azerty), Danish, Finnish, Swedish, French (Azerty), Italian, Dutch, Norwegian, Portuguese, Spanish, Swiss-French, Swiss-German, UK English, and Multinational
Screen Features:	- 132-column display with 3197D, 3180 and 3487C NonInfoW emulations - Ruler cursor - Split screen view of multiple sessions - User-selectable manual dim - User-selectable VESA-DPMS power saver - Status line in words and symbols - Diacritic mode indicator - Row and column indicator - Supports Text Assist Characters and shadow cursor for text applications - 75 Hz refresh rate with color monitor (color monitor with less than 75Hz refresh rate can be used in monochrome mode) - 60 Hz refresh rate with monochrome monitor

Keyboard Features:	- 102/103-key or 122-key available - Record/Playback (1,570 keystrokes) with security options - Low profile, adjustable slope keyboard meets 30 mm DIN spec
Printer Port:	- Parallel port - Host addressable - Local screen print - IBM 5224, 5225, 5256, 4214 (IBM Proprinter and Epson), and 3812/5219 (HP LaserJet) emulations
Host or Twinax Interface:	- 15-pin auto-terminating twinax V-cable for connection to host with automatic cable through - Parallel printer cable for connection to 25-pin printer port - 6 foot keyboard cable for keyboard connection to 6-pin Mini-DIN keyboard connector
Ergonomics:	- Low profile, adjustable keyboard - Supports 75Hz refresh rate with color monitor
Other Features:	- Selectable printer character tables - Printer Code Editor - On-line Help screens - I-O Command Pass-Thru™ - Power-on self-test - Audible alarm - Software keylock - Record/Playback Security - Double Cursor Speed - VESA®-DPMS™ compatible in 640 x 480 PC mode
Electrical	- 100 to 250 VAC auto-ranging - 43-67 Hz - Max. 2.4 A

Environmental

Operating temperature:	0° C to 40° C (32° F to 105° F)
Non-operating temperature:	-4° C to 65° C (-40° F to 150° F)
Relative Humidity:	10% to 90% non-condensing

Physical

Dimensions:	7.5” H x 1.5” W x 3.5”D (19.1 cm H x 3.8 cm W x 21. 6 cm D)
Shipping Weight:	102/103-key keyboard: 12 lbs (5.45 kg) 122-key keyboard: 13 lbs (5.90 kg)

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2 INSTALLATION

This chapter provides instructions for installing the I-O 2677M Display Module and accessories to the host.

Installing the Display Module

The display module should be placed in a clean, dust-free area. Be careful not to block any openings on the display module as it could cause overheating.

Note: Any liquid spills in any of the openings of the display module or the keyboard could result in damage.

Danger! Make sure the power to the display module is off, remove the power cord, and unplug the cord from the electrical supply before connecting any cables. Do not turn power on until all cables are connected.

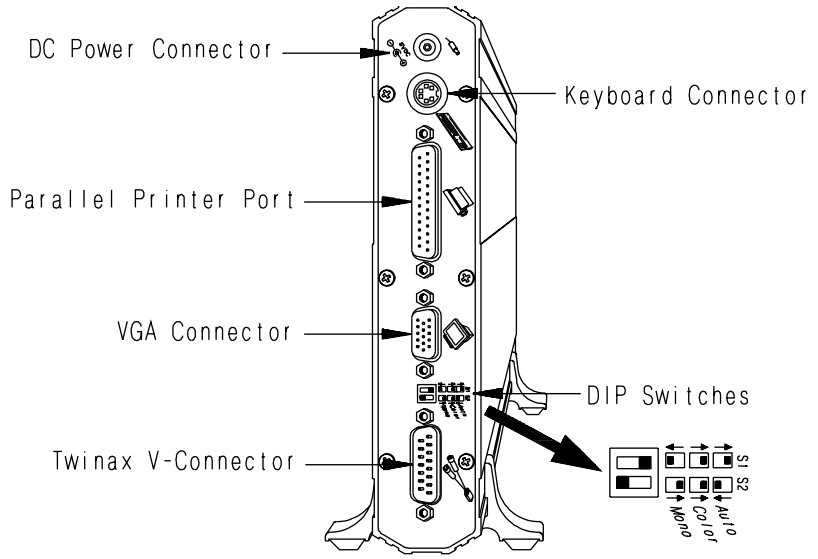
Warnung! Vergewisseren Sie sich, dass die Datensichtstation ausgeschaltet und die Netzzuleitung entfernt ist bevor irgendwelche Kabel angeschlossen werden. Schalten Sie Gerät nicht wieder ein bevor alle Kabel angeschlossen sind. Zur vollständigen Trennung vom Netz ist der Netzstecker zu ziehen.

Follow the instructions below to install the display module:

1. Make sure power is OFF on all devices connected to the host twinax cable.

2. Attach the monitor's video cable into the 15-pin VGA connector on the rear panel of the display module.

   Note: The DIP switches next to the VGA connector has been set in the Auto position by the factory. In most cases, this setting will allow the display module to automatically configure itself for a monochrome or color monitor. However, if your monitor supports VESA DDC 1/2B, then the DIP switches will need to be set to either color or mono, depending on your monitor's capabilities.



3. Connect the parallel printer cable (if required) to the 25-pin "D" parallel printer port on the rear panel of the display module, then connect the 36-pin Centronics end to the printer.

   Warning! DO NOT connect a serial RS-232C port on the printer. The I-O 2677M Display Module's 25-pin connector is a parallel printer interface. Connecting a RS-232C serial port can damage the printer port of the display module. Damage from improper connection of a serial port is not repairable under the display module's warranty. If you are interested in using a parallel to serial convertor cable, contact I-O for information.

4. Connect the keyboard into the Mini-DIN keyboard connector located on the back of the display module. The top of the keyboard's connector is flat and marked by an arrow. While the unit is in the tower (vertical) position, the arrow must be positioned to the right when inserting into the rear of the display module.

Figure 2-1

5. Attach the auto-terminate twinax V-cable to the 15-pin “D” connector on the rear of the display module (see figure 2-1). Tighten the screws on both sides of the V-cable until they are secured tightly into the display module.

6. Attach the host twinax cable(s) and/or twisted pair balun to the auto terminate V-cable. Be sure to connect these cables by matching the corresponding notches of each cable, then turn the host cable until it is secured tightly to the V-cable. The V-cable automatically terminates when one cable or balun is attached, and automatically cables through when two cables or baluns are attached.

7. Plug the detachable power cord designed for a specific power outlet into the grounded wall outlet or surge protector. Plug the power supply’s DC cord to the power inlet on the rear panel of the display module.

8. Before powering on the display module, configure the host for proper operation with the display module (refer to Chapter 3, Configuration).

9. Power on the display module. The power switch is located on the front panel of the display module. Power on the monitor. Configure the display module for proper operation (refer to Chapter 3, Configuration).

Danger! For your personal safety, and the protection of the display module, make sure the display module is properly grounded.

Warnung! Für Ihren persönlichen Schutz und den Schutz der Datensichtstation muss das Gerät ordnungsegemäss geerdet sein.

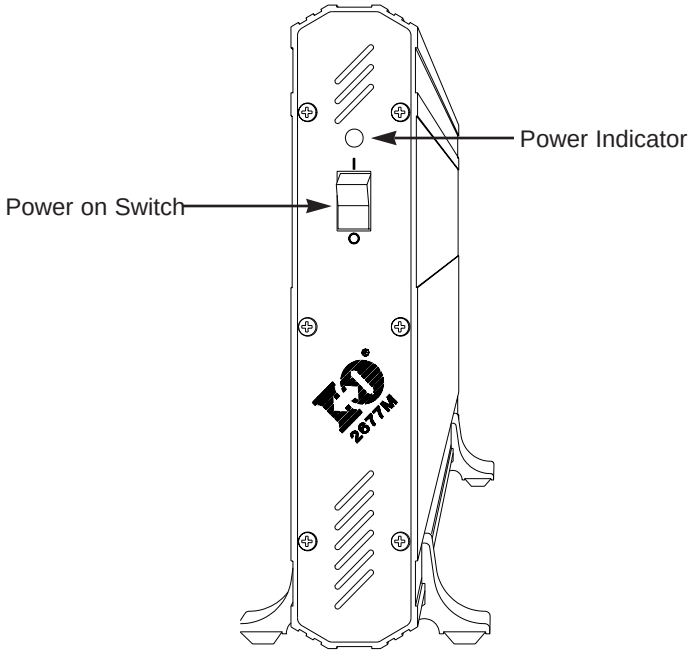


Figure 2-2

Display Station Controls

In addition to the power-on switch of the display module (see Figure 2-2), the monitor may also have contrast and brightness controls, and a power-on indicator. (See the monitor's user's guide for further information).

Connecting a Printer to the Display Module

The I-O 2677M Display Module has a parallel printer port connector located on the rear panel of the module (see Figure 2-1). It is a host-addressable port, which means that host print jobs can be sent directly to the attached printer. The printer port can also be used to produce a local screen print. The port must be configured on the host as with any other host printer (refer to Chapter 3, Configuration).

Follow the instructions below to connect the printer to the display module:

1. Print out a self-test on the printer before connecting it to the I-O Display Module to confirm the printer is functional. (See the printer's user's guide for instructions).

2. Make sure the display module and printer are powered OFF and unplugged.

3. The cable used to connect a printer is a standard PC parallel printer cable with a 25-pin male connector on one end, and a 36-pin female connector on the other side. Attach the standard printer cable's 36-pin female connector to the printer.

4. Attach the printer cable's 25-pin male connector to the printer port on the display station. (See Appendix B for the cable connector pin out).

Warning! DO NOT connect a serial printer cable's RS-232C connector to the display module's 25-pin connector without using a converter cable. If you do, you will damage the display module. Damage from improper connection to a serial printer is not repairable under the display module's warranty.

5. Power on the display module (press power switch to "|"). Power on the printer.

6. Before using the printer, configure the host and the display module for proper operation with the printer (refer to Chapter 3, Configuration).

7. Press <Alt><Alt><P> on the keyboard to print a display station-generated test pattern. This test pattern confirms that the I-O Display Module and printer are communicating.

   Note: If the test pattern does not print, check the setup options on the display module and printer (refer to Chapter 3, Configuration). Check the parallel cable for proper connection.

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3 CONFIGURATION

This chapter provides instructions for configuring or setting up the I-O 2677M Display Module and an attached printer.

Configuring the Host

Configure the host system for the I-O 2677M Display Module at the appropriate device type, as shown in the table on the following page.

Emulation	Device Type	
	S/36	AS/400
3197C	26	3197C
3197D	16	3197D
3196	15	3196
3180	11	3180
3487C Non InfoW	--	3487C
5291	10	5291
5251-11	01	5251-11
Printer Type		
4214	EA	4214 Mod D02
5219	PD	5219 Mod D02
5224	BA,BB	5224
5225	CA,CB	5225
5256	AA	5256

Note: The 3487C NonInfoW emulation does not provide support of InfoWindow functions (such as graphical user interfaces (GUI) or mouse support), but does allow 132-column color display formats, as does the IBM 3487C Display Station. 3487C NonInfoW emulation is not fully supported by the System/36, System/38, or 5294 remote controllers.

8-color, 132-column application screens are possible with the 3487C NonInfoW emulation, however, this feature is application and host dependent.

Configuring the Keyboard

If a 102/103-key enhanced keyboard is being used, you must specify the keyboard in the 3197 or 3196 device description on the host. Choose "Keyboard Type = 2. Enhanced" at the bottom of the "Set Device Characteristics" screen in CNFIGSSP on a System/36. On a System/38, specify the workstation controller keyboard (WSCKBD) value as GUSB (Enhanced, US) in the CRTDEVD screen. On an AS/400, the keyboard type is configured automatically.

Note: A 102/103-key keyboard cannot be configured on an IBM 5294 remote controller.

If using a 122-key keyboard, choose "Keyboard Type = 1. 5250" on the "Set Device Characteristics" screen on a System/36. On a System/38 choose “WSCKBD = TUSB” on the CRTDEVD screen.

Refer to Appendix D, Related Documentation, for a list of IBM manuals that describe the installation and configuration of IBM host systems.

Configuring the Display Station

There are two menu-driven setup screens. The first is used to configure the display module and the second is used to configure the printer (if attached).

To make selections on the setup screens, use the up and down cursor arrow keys to move the highlighted block to the option to be changed, then press the space bar to change the selection. When the selection you want to change appears, use the cursor arrow keys to highlight the next option. Press the <Setup> key on a 122-key keyboard, or the <Shift><Setup> keys on a 102/103-key keyboard to toggle between the two setup screens.

Two types of options appear on the first setup screen: restricted and non-restricted. In most cases, the system administrator will set up the restricted options.

Setting the Restricted Options

To access the restricted options, press and hold either the <Reset> key or the space bar while powering on the display module (press the power-on switch to "|"). A beep will sound, then the power-on indicator will be visible on the front of the display module (see Figure 2-2). A self-test screen is briefly displayed, then Setup Screen 1 is displayed, as shown on the following page. The restricted options are shown at the top of the Setup Screen (marked by an * to the left of the option).

Setup Screen 1

*	Language:	U.S./Canada
*	Multinational:	NO
*	Terminal session emulation:	3197D
*	Address:	6
*	Terminal session emulation:	DISABLED
*	Address:	0
*	Terminal session emulation:	DISABLED
*	Address:	4
*	Printer emulation:	5224-2
*	Address:	6
*	Keyboard ID:	U.S.
	Type Ahead:	ENABLED
	VESA-DPMS power saver mode:	15 MINUTES
	Ruler Style:	+
	Key-click volume:	HIGH
	Alarm volume:	HIGH

The system administrator uses the restricted options to set up the display module on the host system, so check before changing these selections.

The following are restricted options:

Language: US/Canadian (English), Canadian French, L/A Spanish, Austrian/German, Belgian Azerty, Danish, Finnish, Swedish, French (Azerty), Italian, Dutch, Norwegian, Portuguese, Spanish, Swiss-French, Swiss-German, UK English

CONFIGURATION

Select the language configured on the host system. The setup screen changes to the language selected.

Multinational: No, Yes

Select "No," if the host system is configured for the “base” table of each language (e.g. USB for U.S. base). Select "Yes", only if the host system is configured for multinational.

Terminal session emulation: 3487C NonInfoW, 3197C, 3197D, 3196, 3180, 5291, 5251-11 Disabled

Select the type of IBM display station emulated for the first terminal session. Match the emulation configured on the host. The 3487C NonInfoW, 3197D or 3180 emulations allow the host to display 132-column data.

Note: The 3487C NonInfoW emulation does not provide support of InfoWindow functions (such as graphical user interfaces (GUI) or mouse support), but does allow 132-column color display formats, as does the IBM 3487C Display Station. 3487C NonInfoW emulation is not fully supported by the System/36, System/38, or 5294 remote controllers.

8-color, 132-column application screens are possible with the 3487C NonInfoW emulation, however, this feature is application and host dependent.

Note: When a 102/103-key enhanced keyboard is attached, only the 3487C NonInfoW, 3197 and 3196 emulations are displayed, since only these emulations support the 102/103-key enhanced keyboard.

Address: 0, 1, 2, 3, 4, 5, 6

Select the host cable address for the terminal session indicated above.

Terminal session emulation: 3487C NonInfoW, 3197C, 3197D, 3196, 3180, 5291, 5251-11 Disabled

Select the type of IBM display station emulated for the second terminal session. Match the emulation configured on the host.

Address: 0, 1, 2, 3, 4, 5, 6

Select the host cable address for the second terminal session.

Terminal session emulation: 3487C NonInfoW, 3197C, 3197D, 3196, 3180, 5291, 5251-11 Disabled

Select the type of IBM display station emulated for the third terminal session. Match the emulation configured on the host.

Address: 0, 1, 2, 3, 4, 5, 6

Select the host cable address for the third terminal session.

Printer emulation: Disabled, 4214, 3812/5219, 5224, 5225, 5256

Select the type of IBM printer to be emulated on the display module's printer port. Choose the same emulation as configured on the host for the printer's cable address. Select "Disabled" if no printer is configured or attached. The local screen print function is operational even if "Disabled" is selected. (See Chapter 2, Installation, for information on attaching a printer to the display module).

Address: 0, 1, 2, 3, 4, 5, 6

Select the host cable address for the printer session.

Keyboard ID: U.S., World Trade

Select the type of keyboard: US for U.S./Canadian (English) keyboards or World Trade for non-U.S./Canadian (English) keyboards.

Setting the Non-Restricted Options

Non-restricted options are used to set up the display module to match your needs. Select the non-restricted options at the same time the restricted options are selected, or access the non-restricted options at any time by pressing <Shift><Setup> on the 102/103-key keyboard or <Setup> on the 122-key keyboard.

Type Ahead: Enabled, Disabled

This local feature is in addition to the host Type Ahead feature available on the AS/400 and Advanced System/36. Type ahead allows you to continue typing in data, even if the host indicates an inhibit status. 128 keystrokes are buffered when this feature is enabled on the setup screen. "Enabled" activates this feature, and "Disabled" turns it off. When enabled, any keystrokes requiring host action (such as <Reset> and <Attn>) are available without waiting for the display station to be uninhibited, by temporarily turning off Type Ahead, which will empty the buffer.

VESA-DPMS Power Saver Mode (minutes): 15, 30, 60, 120, Disabled.

During the power save mode, the power to the monitor is reduced (see the monitor user's guide for power savings). The power to the logic board is left on. The blanked screen is restored when the host communication is resumed or when a key is pressed. A distinct beeping will acknowledge the action while the screen warms up.

Note: A VESA®-DPMS™ monitor is required to utilize this feature. The factory default will be enabled at 15 minutes to meet EPA requirements.

Warning: This may damage your monitor if it does not meet theVESA-DPMS standard.

Ruler style: | (vertical), - (horizontal), + (crosshair)

Select the type of ruler to be displayed when the ruler is activated.

Key click volume: Off, Very Low, Low, Medium, High

This choice sets the volume of the key click (the sound made when keys on the keyboard are pressed). This option allows you to select the volume of the key click or to disable the key click. Select a volume, a sample click will sound to determine comfort level.

Alarm volume: Off, Very Low, Low, Medium, High

This audible alarm is used to attract the user's attention. This option allows you to select the volume of the alarm or to disable the alarm. As you select the volume, a sample beep will sound to determine comfort.

Setting the Printer Options

Press the <Setup> key on a 122-key keyboard, <Shift><Setup> on a 102/103-key keyboard, or <Alt><Alt><S> on either keyboard to enter setup mode. Press <Enter> to continue to the second setup screen. This screen is used to set the options for a printer attached to the display module's printer port. The printer options are non-restricted and can be accessed at any time. The options vary depending on the printer emulation selected on screen one.

Printer Session Disabled

If the printer session is disabled, only two printer options are displayed on Setup Screen 2.

```
                         Setup Screen 2

        Form feed after local screen dump:    YES
                            Character set:    ASCII



SPACE BAR = change value                    ENTER = save values
```

Form feed after local screen dump: Yes, No

Select "Yes" to make the paper advance to the top of a new form after a local (hard copy) screen print to the attached printer. Select "No" if you do not want the paper to advance to the top of a new form.

Character set: U.S. ASCII, Code Page 437 (IBM Extended ASCII - Character Set 2), Code Page 850 (Character Set 2), Roman 8, User-defined

This option allows you to determine which printer character table set to use. Select the character set to that used by the printer. The switches on the printer may need to be set to agree with the choice. (Refer to the printer's user's guide for the type of table to be selected and the method for setting the printer. Refer to page 4-24 for information on using the Printer Code Editor to create a user-defined table.)

4214 Emulation

The following information describes the selections if 4214 emulation (for IBM Proprinters/Proprinter-emulating, or Quietwriter printers or Epson/ Epson-emulating printers is selected.

Proprinter

Setup Screen 2

Printer type:	24-PIN PROPRINTER
Form feed after local screen dump:	YES
Page eject is produced by:	FORM FEED
Line ending mode:	TRUNCATE
Front panel override:	NO
Carriage width:	NARROW
15-cpi prints with:	15 CPI I-O CMD
Printer is set for:	CONTINUOUS FORMS
Character set:	C.P. 437
Downloadable characters:	NO
Command Pass-Thru:	ENABLED
EBCDIC Delimiters:	50 6C

SPACE BAR = change value ENTER = save values

Epson

Setup Screen 2 (Epson)

Printer type:	24-PIN EPSON
Form feed after local screen dump:	YES
Page eject is produced by:	FORM FEED
Line ending mode:	TRUNCATE
Front panel override:	NO
Carriage width:	WIDE
15-cpi prints with:	17 CPI Native
Printer is set for:	CONTINUOUS FORMS
Character set:	C.P. 437
Command Pass-Thru:	ENABLED
EBCDIC Delimiters:	50 6C

SPACE BAR = change value ENTER = save values

Printer type: 9-pin Proprinter, 24-pin Proprinter, Quietwriter, 9-pin Epson, 24-pin Epson

Match this selection to the attached printer (consult the printer's user's guide to determine the pin count).

Form feed after local screen dump: Yes, No

Select "Yes" to make the paper advance to the top of a new form after a local (hard copy) screen print to the attached printer. Select "No" if you do not want the paper to advance to the top of the new form.

Page eject produced by: Form feed, Multiple line feed

This choice determines whether: the host system or the printer controls the length of the forms (lines per page). Choose "Form feed" for printer control or "Multiple line feed" for host control.

Line ending mode: Wrap, Truncate

This option determines how to end a line. Wrap prints or wraps around lines that are longer than the paper is wide. Truncate is used to shorten the line prints whatever will fit on one line and ignore the rest of the information.

Front panel override: Yes, No

The printer's front panel settings will override any commands for CPI, LPI, and print quality sent by the host when “Yes” is selected. The printer will use the commands from the host, when “No” is selected.

Carriage width: Wide, Narrow

Choose "Wide" for wider 132-column printers. Choose "Narrow" for narrow-carriage 80-column printers.

15 CPI prints with: 15 CPI Native, 17 CPI Native, 15 CPI I-O Cmd

IBM Proprinters cannot print 15 CPI. The I-O Display Module uses this option to select the method of emulating 15 CPI printing. 15 CPI Native allows the use of preprinted forms, but it should only be selected if the printer supports 15 CPI.

17 CPI Native allows 132-columns to print on an 8 1/2" x 11" page. The 15 CPI I-O Cmd allows 15 characters per inch to print even though 15 CPI is not supported by the printer. (This selection may slow the printing speed).

Printer is set for: Continuous forms, Cut sheets

Select the type of paper used. If "Cut sheets" is selected, the printer sends a message to the host at the end of each page waiting for a new sheet to be inserted, thus stopping printing after each page. The printer stops until the user has the next sheet of paper and presses <Alt><Alt><Print> to start the printer. If “Continuous Form” is chosen, the printer does not pause after each sheet.

Character Set: Code Page 437 (IBM Extended ASCII-Character Set 2), Code Page 850 (Character Set 2) or User-Defined

This option allows you to determine which printer character set table to use. Select the character set to that used by the printer. The settings on the printer may need to be set to agree with the choice. (Refer to the printer's user's guide for the type of table to select and method for setting the printer. Refer to page 4-24 for information on using the Printer Code Editor to create a user-defined table.)

Note: The user-defined character set is only available on the Epson emulation.

Downloadable characters: Yes, No

If the attached printer is a Proprinter or printer with Proprinter emulation which supports downloadable characters, select "Yes." Select “No” if the attached printer does not support downloadable characters.

Note: This option is only available on the Proprinter or Quietwriter emulation.

Command Pass-Thru: Enabled, Disabled

This feature allows access to all of the built-in features of the printer, even if these features are not normally available through the host software by providing a method of placing printer specific sequences into the data sent to the printer, which are “passed through” to the printer. (See Chapter 4, Operation, for more information on Command Pass-Thru).

EBCDIC delimiters: 50 6C (&% default)

Delimiters at the beginning and end of a Command Pass-Thru sequence signal the printer to perform the intended function. Designate any two EBCDIC characters as the delimiters. Enter the characters in hexadecimal code.

The default characters are &% (50 6C). You must enter a value for Command Pass-Thru to function. (See Chapter 4, Operation, for more information on Command Pass-Thru.)

3812/5219 Emulation

The following information describes the printer selections if 3812/5219 emulation (for HP LaserJet or Laserjet-type printers) is selected.

```
                         Setup Screen 2

           Form feed after local screen dump:   YES
                                Paper source:   PRINTER DEFAULT
                           Command Pass-Thru:   ENABLED
                           EBCDIC Delimiters:   50 6C




     SPACE BAR = change value                   ENTER = save values
```

Form feed after local screen dump: Yes, No

Select "Yes" to make the paper advance to the top of a new form after a local (hard copy) screen print. Select "No" if you do not want the paper to advance to the top of the new form.

Paper source: LaserJet paper bin selection, Printer default

This choice determines the paper source for the printer. Choose "LaserJet paper bin selection" for multiple-bin HP printers. (For more information, refer to page 4-23.) The "Printer default" choice is for printers without multiple bins or optional feeders.

Command Pass-Thru: Enabled, Disabled

This feature allows access to all of the built-in features of the printer even if these features are not normally available through the host software by printing a method of placing printer specific sequences into the data sent to the printer, which are “passed through” to the printer. Select "Enabled" for the Command Pass-Thru feature to function. (See Chapter 4, Operation, for more information on Command Pass-Thru.)

EBCDIC delimiters: 50 6C (&% default)

Delimiters at the beginning and end of a Command Pass-Thru sequence signal the printer to perform the intended function. Enter any two EBCDIC characters in hexadecimal code as the delimiters if Command Pass-Thru is enabled (above).

The default characters are &% (50 6C). You must enter a value for Command Pass-Thru to function. (See Chapter 4, Operation, for information on Command Pass-Thru™.)

5224, 5225, or 5256 Emulation

The following information describes the printer selections for 5224, 5225, or 5256 emulation (for most ASCII printers).

Setup Screen 2

Form feed after local screen dump:	YES
Page eject is produced by:	FORM FEED
Printer is set for:	CONTINUOUS FORMS
Character set:	ASCII
CPI:	HOST
LPI:	HOST
Command Pass-Thru:	ENABLED
EBCDIC Delimiters:	50 6C
Printer's HEX codes for 10 CPI:	
Printer's HEX codes for 15 CPI:	
Printer's HEX codes for 6 LPI:	
Printer's HEX codes for 8 LPI:	
Printer Initialization String:	

SPACE BAR = change value ENTER = save values

Form feed after local screen dump: Yes, No

Select "Yes" to make the printer advance to the top of a new form after a local (hard copy) screen print to the attached printer. Select "No" if you do not want the paper to advance to the top of a new form.

Page eject produced by: Form feed, Multiple line feed

This choice determines whether the host system or printer controls the length of the forms (line per page). Choose "Form feed" for printer control or "Multiple line feed" for host control.

Printer is set for: Continuous forms, Cut sheets

Select the type of paper being used. If "Cut sheets" is selected, the printer sends a message to the host at the page end waiting for a new sheet to be inserted thus stopping printing after each page. The printer stops until the user has the next sheet of paper ready and presses <Alt><Alt><Print> to start the printer. If “Continuous Forms” is chosen, the printer does not pause after each sheet.

Character set: Code Page 850 (Character Set 2), Code Page 437 (IBM Extended ASCII-Character Set 2), U.S. ASCII, Roman 8 User defined.

This option determines which printer character set table to use. The switches on the printer may need to be set to agree with the choice. (Refer to the printer's user's guide for the type of table to select and method for setting the printer. Refer to page 4-24 for information on using the Printer Code Editor to create a user-defined table.)

CPI: 10, 15, Host

This option determines the pitch of the characters in printed output. (The number of characters that can be printed horizontally within an inch.) Select “10, 15”, or “Host”.

Note: If “Host” is selected, make sure the hex codes for 10 and 15 CPI are typed.

The 5256 emulation will only print 10 CPI, so it cannot use the host CPI commands.

LPI: 6, 8, Host

This option determines the lines per inch for the printed output. (Lines per inch are the number of characters that can be printed vertically within an inch.) Select “6, 8,” or “Host”.

Note: If “Host" is selected, make sure the hex codes for 6 and 8 LPI are typed in.

The 5256 emulation will only print 6 LPI, so it cannot use the host LPI commands.

Printer's hex code for 10 CPI:
Printer's hex code for 15 CPI:
Printer's hex code for 6 LPI:
Printer's hex code for 8 LPI:

The host can change character and line spacing on 5224 and 5225 emulations. Fill in these four options with the printer's "ESC" (escape) codes in hexadecimal format for the printer commands controlling CPI and LPI. Whenever the display module receives a command from the host for LPI or CPI, it will send these hex escape codes to the printer. See the printer's user's guide or the table below for common ESC codes.

Hexadecimal ESC Codes for Printer Setup				
Printer Name & Models	**10 CPI**	**15 CPI**	**6 LPI**	**8 LPI**
Epson 9-Pin	12 1B 50	0F*	1B 32	1B 30
Epson 24-Pin	12 1B 50	1B 67	1B 32	1B 30
HP LaserJet	1B287331 3048	1B287331 3548	1B 26 6C 36 44	1B 26 6C 38 44
IBM Proprinter	12	0F**	1B 41 00 1B 32	1B 41 09 1B 32
Okidata	1E	1D	1B 36	1B 38

* Condensed mode = 16.7 CPI
** Condensed mode = 17.1 CPI

Command Pass-Thru: Enabled, Disabled

The feature allows access to all the built-in features of a printer, even if these features are not normally available through the host software by providing a method of placing printer specific sequences into the data sent to the printer which are “passed through” to the printer.(See Chapter 4, Operation, for more information on Command Pass-Thru.)

EBCDIC delimiters: 50 6C (&% default)

Delimiters at the beginning and end of a Command Pass-Thru sequence signal the printer to perform the intended function. Enter any two EBCDIC characters in hexadecimal code as the delimiters if Command Pass-Thru is enabled (above).
The default characters are &% (50 6C). You must enter a value for Command Pass-Thru to function. (See Chapter 4, Operation, for information on Command Pass-Thru™.)

Printer Initialization string:

Each time the display module is powered on, it sends an "initialization string" or set of commands to the attached printer, setting modes such as draft, NLQ, etc.

If you want the printer to start up in a particular mode, enter the printer codes (converted to hexadecimal) that control the printer modes that host commands may override.

Saving the Options

Toggle between the setup screens by pressing <Setup> on the 122-key keyboard, <Shift><Setup> on a 102/103-key keyboard, or <Alt> <Alt><S> on either keyboard. When the choices have been made on the setup screens, press <Enter> until the setup screen is exited. The option selections will be saved, even after the display station is powered off.

If any restricted options have been changed, the display module will reset itself and the monitor will display the self-test screen and then the system sign-on screen. If only non-restricted options have been changed, you are returned to the screen displayed when you entered the setup screen, and the display module does not.

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4 OPERATION

Operation of the I-O 2677M Display Module depends on the IBM terminal emulation(s) selected during configuration. The program or application currently running also affects the display station's operation.

Some features such as record/playback, ruler cursor, cursor blink, cursor type, and cursor location are available with any emulation. These features can be activated or changed without entering the Setup Screen by using special shortcut key sequences as displayed on the help screens in Appendix E. To enter the on-line Help mode, press **<Alt><Alt><Help>**.

To help utilize the features of the I-O 2677M Display Module, the following on-line help screens are available:

1. Screen Functions
2. Printer Functions
3. Status Line Indicators

The display screen is divided into two areas: the user area and the status line. The user area is the main portion of the screen that displays the data entered from the keyboard. The status line displays status information about the display module at the bottom of the screen.

Signing On

After the I-O Display Module is configured (refer to Chapter 3, Configuration), a sign-on screen will appear (after the self-test) when the display module and monitor is powered on. "Display: Ready" should appear in the lower left of the screen and "Printer: Ready" in the lower right (if a printer is attached). If the sign-on screen does not appear or does not indicate "Ready" the system may not be available, or there may be a problem with the configuration. (Refer to Chapter 5, Problem Resolution, for further information.)

OPERATION

Multiple Sessions

The I-O 2677M Display Module has three terminal sessions and one printer session available. Each session must be assigned a terminal or printer emulation and a unique cable address, or be disabled in the Setup Screen. The display station can then maintain communication with the host on all of the sessions. You can change or "jump" from one session to another as needed. This is helpful when a session is inhibited, as you can jump to another session and work on a different program or application. To jump between sessions, use the key sequence **<Alt><Jump>** or **<Alt><Alt><J>**.

The session number currently running is displayed in the lower left-hand corner of the screen. If a message is linked to a session, the "MSG" prompt at the bottom of the screen identifies the session number for the message.

Screen Formats

The screen format of the display is determined by the emulation selected as follows:

- 3197C, 3196, 5291 and 5251 Model 11 emulations: 80 columns x 25 lines, plus status line.

- 3197D, 3180 and 3487C NonInfoW emulations: 80 columns x 25 lines, plus status line; 132 columns x 28 lines, plus status line (host selected).

Note: The 3487C NonInfoW emulation does not provide support of InfoWindow functions (such as graphical user interfaces (GUI) or mouse support), but does allow 132-column color display formats, as does the IBM 3487C Display Station. The 3487C Non InfoW emulation is not fully supported by the System/36, System/38, or 5294 remote controller.

8-color, 132-column application screens are possible with the 3487C NonInfoW emulation, however, this feature is application and host dependent.

Split Screen

The I-O 2677M Display Module has split screen capability, which means two sessions can be viewed at once on a single screen. The screen will be "split" to view two full sessions in a top-to-bottom format.

Use the key sequences **<Alt><a-a>** on 122-key keyboards, or **<Alt><Zoom>** on 102/103-key keyboards, or **<Alt><Alt><Z>**. (On some non-US keyboards use <Alt><Alt><Y> to activate the split screen.)

If the sessions are in 80-column mode, then all 25 lines of both sessions (total of 50 lines) will be displayed on the split screen at the same time. Sessions in 132-column mode display all 28 lines of the active session (the session in which you are working) and 22 lines of the inactive session on the split screen at the same time. The cursor always resides in the active session.

Press either the **<Alt><Forward>** (F10) or **<Alt><Back>** (F9) key sequence to scroll the inactive 132-column session line by line forward or backward to select which 22 lines out of the 28 in the session will be displayed.

Note: When one session is in the 132-column mode and the other session is in the 80-column mode, the characters will appear in 132-column font size.

Changing the Active Screen

The active split screen will display a cursor. In the split screen mode, either the top/bottom half of the screen is active, and the other half of the screen in non-active.

To change which split screen session is active by jumping between the two sessions using the **<Alt><Jump>** or **<Alt><Alt><J>** sequence. The cursor will then move to the active session.

Session Change Within Window

A third session can be displayed in the active portion of the split screen by pressing **<Alt><Alt><W>**. The third session will replace the active session. The previously active session will become the third session and will no

longer be displayed. Press **<Alt><Alt><W>** again to swap the sessions back.

Software Keylock

A software security keylock is provided to prevent unauthorized use of the display station. The display station can be locked or can be assigned a password. To enter this feature, press <Alt><Alt><I>.

Before a password has been defined, operation will proceed directly to the password entry screen where you will be instructed to a “Enter the password twice, then press <ENTER> or <RESET> to exit.” There are two password prompts on this screen. As the password is entered, asterisks (****) appear to the right of the password. The password can be up to 31 characters in length, and the backspace key can be used to delete the typed characters. Two identical passwords must be received for the software lock to be activated.

After the password has been defined, you are brought up to another screen that instructs you to “Press <I> to lock, <P> to change password, or <Reset> to abort.”

If both password definitions match, the screen enters the lock mode. The screen is blanked and a "key symbol" (⍁) will appear on the status line, followed by a password prompt.

Any keystrokes entered after the lock mode is entered will go into the password definition. Once the correct password is entered, the screen will be unlocked.

Note: Powering off the display module will erase the password.

Other Features

Some of the features available on the I-O 2677M Display Module can be activated or changed using shortcut key sequences as listed below. Most of these key sequences are also listed on the display module help screens.

Help Screens: <Alt><Alt><Help>

The help screens contain messages that explain some of the display station features, such as the local <Alt><Alt> key sequences and status line information. The Help screens can be viewed at any time.

Cursor Position Identifier: <Alt><Alt><K>

The cursor position identifier displays the current cursor location by line and column number in the bottom left corner of the screen. This key sequence toggles the identifier on and off.

Cursor Blink: <Alt><Alt><X>

This key sequence toggles the local blinking specification between a blinking or non-blinking cursor. This sequence combines with the host blinking specification to control cursor blinking.

Note: This option may have no immediate visual effect depending on the host specifications. Refer to host documentation for more information.

Cursor Type: <Alt><Alt><Reset>

This key sequence toggles between an underscore or block type cursor.

Extended Display Mode: <Alt><Alt><T>

Press this key sequence to display the field attributes on the current screen.

Manual Screen Dimming: <Alt><Alt><D>

Press this key sequence to immediately dim the screen. The screen will go blank (except the status line on the bottom of the screen). A " ¤ " symbol appears on the bottom of the screen.

Note: I-O recommends the use of this feature to help prolong the life of the display.

Keyboard Click: <Alt><Alt><A>

This choice sets the volume of the key click (the sound made when the keyboard keys are pressed.) This option allows you to select the volume of the key click or disables the key click. Select a comfortable volume.

Parity Error Indicator: <Alt><Alt><E>

The parity error indicator displays the number of parity errors detected since the display module was powered on (the count rolls over after 99 to 0).

These are displayed in the bottom left corner of the screen in place of the row-column indicator. Parity errors usually indicate cabling problems. This key sequence toggles the indicator on and off.

Ruler: <Alt><Alt><R> or <Rule> or <Alt><PgDn>

The ruler feature provides a cursor reference for ease of reading and aligning text on the screen. Choose the ruler type in the Setup Screen, then press this key sequence to toggle the ruler on and off.

4/8 Color: <Alt><Alt><V>

Press this key sequence to toggle the display between a full 8-color (red, blue, black, green, white, yellow, turquoise, and pink) and 4-color mode. In 4-color mode, the limited color displays green and/or white with blue. This option is available on the I-O 2677M with a color monitor.

White Cursor: <Alt><Alt><Y>

Press this key sequence to toggle between a white cursor and one that assumes the color of the field it is in. This option is available on the I-O 2677M with a color monitor.

Reverse Video/Overscan: <Alt><Alt><V>

When this feature is activated, the background and the text of the screen intensities are reversed. This feature is available on the 2677M with a monochrome monitor.

Reverse Intensities: <Alt><Alt><V>

When this feature is enables, it changes the highlighted intensity fields to normal intensity fields to highlight intensity. This feature is available on the 2677M with a monochrome monitor.

Software Keylock: <Alt><Alt<I>

This feature either locks the screen to inhibit unauthorized use of the keyboard or to assign the software keylock password.

Record/Playback Security: <Alt><Alt><Attn>

This feature was designed to prevent unauthorized personnel from obtaining confidential recorded keystrokes. This feature allows the user to select the level of security of the record/playback feature.

Text Assist Characters: <Alt><Jump> or <Alt><Home>

When in DisplayWrite/36, TextManagement/38, or OfficeVision/400, pressing this key sequence sends a request to the host to display the text assist characters (line wrap, return, etc.) in the document.

Using the Keyboard

The 102/103-key enhanced keyboard functions the same as IBM's 102-key enhanced keyboard. It only works with 3487C NonInfoW, 3197C, 3197D, and 3196 display emulations (which are the only emulations that will be displayed on the Setup Screens). Only use the enhanced keyboard at addresses that are configured at the host for an enhanced keyboard.

The 122-key keyboard works with all display emulations on the I-O Display Module.

Note: Since the System/34 does not support 3197 and 3196 emulations, the 102/103-key keyboard cannot be used with the System/34. The 5251 model 11 and 5291 emulations will only support the 122-key keyboard.

Shift and Alt Keys

The shift key is used to type upper case letters. On 102/103-key keyboards, Shift key also selects the function shown on the very top of the key. For example, to enter the Setup Screen from the 102/103-key keyboard, you must press and hold the <Shift> key, then press the <Setup> key, since the "Setup" legend is printed on the top of the key.

There are two ways to use the Alt key:

- Press and hold the <Alt> key, then press a key to perform the function shown on the front or "face" of the key.

- The Alt key is also used for local commands. Press the <Alt> key twice, then press the specified key. For example, to toggle between a block and an underline cursor type, press and release the <Alt> key, then press and release the <Alt> key again, and then press and release the <Reset> key.

Other Keys

Other special function keys available on some or all of the keyboard types are described in the following table.

Keys	Description
Attn	Request the host's attention to select a new activity.
Clear	Blanks all fields on the screen, except for the cursor, the separator line, and the operating status line.
Del	Deletes characters at the cursor location. The character to the right of the cursor shifts over one position to the left.
Dup	Duplicates the last field entry and display an *. Pressing this key, when the cursor is not in an input field causes an **X** to appear on the operating status line. To remove the symbol and unlock the keyboard, press <**Reset**>.
Enter	Transmits information to the host. This key does not change the keyboard shift status, but it does cancel the insert mode.
Erase Input	Erases all input field entries on the screen and moves the cursor to the beginning of the first input field. If the screen has no input field, the cursor moves to row 1, column 1 of the screen, this key clears the screen and moves the cursor to row 1, column 1 of the same screen.
Field -	This key's functions can vary depending on the system. The key function is the same as the Field +, and Field Exit functions, except it is allowed only in numeric-only fields. This key inserts a "-" (minus) sign in the last position of the field. An error will appear if the field is not programmed to accept negative numbers as input.
Field +	Causes the cursor to exit an input field. Null characters are inserted to the end of the field. When this key is pressed in a right adjust field, the data to the left of the cursor shifts to the right and the cursor advances to the next field.
Field Exit	Causes the cursor to exit an input field. Null characters are inserted to the end of the field. When this key is pressed in a right adjust field, the data to the left of the cursor shifts to the right and the cursor advances to the next field.
Hex	This function is available to enter the hexadecimal values for a character. Press the <**Alt**><**Hex**> keys, then enter the corresponding hexadecimal value. For valid hexadecimal characters, use 1-9 and A-F for the first character and 0-9 and A-F for the second character. **Note:** Do not use "FF".

Keys	Description
Home	Moves the cursor to the first input position on the screen, or row 1, column 1 of the screen. This action is host-dependent.
Insert	Allows a character to be inserted into an existing input field without writing over existing data. If you attempt to insert more characters than nulls, an **X** appears in the operating status line and the keyboard will lock up. If this happens, simply press **<Reset>**. The following keys also turns off the insert mode: Attn, Clear, Enter, SysReq, and F1-F24.
Jump	Move from one session to another.
Quit/DvCncl	Stops the printing operation and cancels the printing of the remainder of the file. this key can also be used to end a record/playback sequence.
Reset	This key performs the following functions: • Exits the insert mode and removes the insert mode symbol (^). • Cancels a diacritic-mark key. • Ends help/system request functions. • Cancels a hex key. • Clears operator erros. • Unlocks the keyboard and removes the input-inhibited (**X**) symbol.
Rule	Toggles the rule cursor on and off.
Setup	Enters the setup screen.
Sys Req	Varies on the host system. SysReq can do the following: • Select and start an alternate job. • Notify the host system that the display station is ready to select a new program. • Request that the keyboard be unlocked so data can be entered.
Test	Enters IBM test request from the AS/400 sign-on screen.
Help	Requests host on-line help to: provide an explanation of current error conditions; or help from the system.
<Alt> ◄◄ / ►► <Shift> ←/→	Moves the cursor two positions at a time in the direction of the arrow.

Keyboard Mapping

The user can remap the keyboard layout by using OS/400 Workstation Customization. This feature is only available on displays connected to the AS/400. (Refer to the IBM AS/400 Workstation Customization Guide for further information.)

Record/Playback Feature

The Record/Playback feature allows you to record a sequence of keystrokes for later playback by pressing one of the 24 command (CMD) keys. This is helpful for entering information used most often. A maximum of 1570 keystrokes can be recorded. The display module will remember the recorded sequence even when it's powered off.

Record Past Enter and Play Past Enter are also supported. This feature allows the recording of the Enter key's function, which later will be used in the play mode. In the play mode, playback will play past or beyond Enter, and then continues the playback as soon as the host is uninhibited.

Recording Keystroke Sequences

Record a sequence of keystrokes with the following steps:

1. Press the **<Recrd>** key (122-key keyboard) or **<Alt><Recrd> (**102/103-key keyboard) to activate the record mode. An "R" appears in the bottom left-hand corner of the screen. The number to the right of the "R" is the remaining number of keystrokes available for recording.

   Note: The <Reset> key can be pressed, at this point, to cancel and exit the record mode.

   A CMD key screen appears showing which of the 24 CMD keys is already in use. The highlighted block and the letter "R" in front of the CMD key number means that key already contains a recorded sequence.

2. Press one of the unassigned CMD keys to assign a sequence of keystrokes to the key. (Press <Shift> with the CMD key on 102/103-key enhanced keyboards to access CMD keys F13 through F24). The selected CMD key will be highlighted and the screen will disappear.

Note: If a 90XX error code is shown, a key other than a CMD key was pressed. To clear the error condition, press <Reset>, then continue by choosing a CMD key. (Refer to Chapter 5, Problem Resolution, for a description of the error codes.)

If a CMD key with a key sequence already assigned to it is chosen, an alarm sounds and the number next to the "R" increases. The previously recorded key sequence can be left intact or erased. To leave it intact, press **<Recrd>** or **<Alt><Recrd>** to exit record mode, then re-enter the record mode and select a different CMD key. To erase the keystroke sequence assigned to the CMD key, press and hold **<Alt>** key, and then the **<Quit>** key.

3. Type the keystroke sequence to be recorded, and make note of which sequence is assigned to which CMD key. As you type, the number next to the "R", in the bottom left-hand corner of the screen, decreases.

4. When typing is complete, press the **<Recrd>** key or **<Alt><Recrd>** keys to save the keystrokes assigned to the CMD key and exit the record mode. An "R*****" will appear briefly while the display module saves the keystroke sequence. The recorded keystroke sequence is permanently saved in the memory of the display module (even when it is turned off), until the sequence is manually erased or recorded over.

Notes: The <Play>, <Recrd>, <Setup> keys and local functions, such as the <Alt><Alt> commands cannot be recorded.

When the <Shift> key is recorded, it counts as two keystrokes: once when the key is pressed, and once when the key is released.

Recording With a Pause

One or more "pause(s)" can be recorded into the recorded sequence, so that during playback information or a password can be typed in. For example, to get into a word processing document, you may need to type in a user code, then a password, then go into a menu and then choose other menu items. All of this can be recorded on one CMD key by doing the following.

1. Press the **<Recrd>** key or **<Alt><Recrd>** to enter record mode.

2. Choose an unassigned CMD key from the CMD key screen.

3. Enter the sequence to be recorded, then press the **<Pause>** key or **<Alt><Pause>**. A "^" symbol will appear next to the "R" in the bottom left corner of the screen. This shows that the pause is in effect.

4. Type keystrokes which are not to be recorded, then press **<Pause>**, or **<Alt><Pause>** to end the pause function and add it to the recorded sequence.

5. Continue typing the sequence.

6. Press **<Recrd>** or **<Alt><Recrd>** to save the sequence and exit the record mode.

Deleting Keystroke Sequences

To delete a single keystroke sequence assigned to a CMD key, press **<Recrd>** or **<Alt><Recrd>**, and then the CMD key. Press and hold the **<Alt>** and **<Quit>** keys.

To delete all keystroke sequences assigned to all CMD keys, press the **<Recrd>** or **<Alt><Recrd>** keys, then press the **<Shift>** and **<Erase Input>** keys together.

Playing Back Keystroke Sequences

Play back keystroke sequences that have been recorded using the following steps:

1. Position the cursor where the keystroke sequence is to begin.

2. Press the **<Play>** key or **<Alt><Play>** keys. A "P" appears in the bottom left-hand corner of the screen, the CMD key screen appears with the previously recorded sequences highlighted.

3. Press the CMD key with the assigned keystroke sequence. The keystroke sequence plays back starting at the location of the cursor. When complete, the "P" disappears from the bottom of the screen.

   Note: If a 90XX error code appears, an invalid key or a CMD key was pressed that does not have a recorded keystroke sequence. To clear the error condition, press <Reset> then the correct CMD key. (Refer to Chapter 5, Problem Resolution, for a description of the error code.)

Note: You can only exit the play mode (indicated by a "P" in the lower left-hand corner of the screen) by pressing <Play>, <Reset>, or a CMD key that has a recorded keystroke sequence. If any other key is pressed, an error message appears.

Playing Back With a Pause

Play back the keystroke sequence that was recorded with a pause by taking the following steps:

1. Press the **<Play>** key or **<Alt><Play>**. The "P" in the status line and the CMD key screen will appear.

2. Press the CMD key with the desired sequence. The playback begins at the position of the cursor. When the playback reaches the pause, a "^" symbol appears next to the "P" in the bottom left corner of the screen. This shows that the pause is in effect.

3. Type in the information that was not recorded, and then press the **<Play>** key or **<Alt><Play>** again. Playback continues to the end of the recorded sequence. If more than one pause is in the recorded sequence, repeat this step.

Record/Playback Security

The Record/Playback function has three levels of security: Unrestricted Record/Playback, Avoid Non-Display Fields, and Disable Record/ Playback. Unrestricted record/playback allows the user to have complete use of the Record/Pause/Playback feature. Avoid Non-Display Fields does not allow the user to record or play in protected fields, such as passwords. Anytime the user tries to record or to play in a protected field, the record or play mode be will exited. Disable Record/Playback allows the user the option of disabling the Record/Playback feature.

Follow the steps below to change the Record/Playback Security options:

1. Enter the Record/Playback Security screen by pressing **<Alt><Alt><Attn>**. The "Record/Playback" security screen displays the following: (The present level will be highlighted.)

F1	Unrestricted Record/Playback
F2	Avoid Non-Display Fields
F3	Disable Record/Playback
F4	Change Security Password
Enter	Exit

2. Type F1, F2, or F3 to change the security level (any change will require entering a password and the recorded keystrokes will be deleted).

3. Press F4 to change only the password. If a password has not be defined, enter the desired password twice and press <Enter>. As the password keystrokes are typed, asterisks (*) will appear to the right. If a password is already defined, enter the old password, then type in the new password. Press <Enter> to save the changes.

4. Press **<Enter>** to exit the Record/Playback Security screen and return to normal operation.

Note: In the event the password is forgotten, have the system administrator contact I-O Customer Support for assistance.

Using an Attached Printer

The I-O 2677M Display Module has a parallel printer port on the back of the unit. It is a host-addressable port, which means that host print jobs can be sent directly to the attached printer. The port must be configured on the host as with any other host printer.

Local screen prints can also be sent to the printer. Press **<Alt><Alt><O>** to print the displayed screen, or press **<Alt><Alt><G>** to print only the first 24 lines of the screen. The display station's printer setup options can be changed to include a form feed at the end of each local screen print. Other printer options such as the characters per inch, lines per inch, and character sets, are found in the Setup Screens defined in Chapter 3, Configuration.

Note: If the printer is configured for host printing, you must stop host printing by pressing **<Alt><Alt><Print>** before doing a local print. Turn host printing back on by pressing **<Alt><Alt><Print>** again. <Alt><Alt><O> and <Alt><Alt><P> automatically stops host printing.

To determine whether the display module and printer are communicating, press <Alt><Alt><P>, and a test pattern will print.

Local Printer Commands

The following is a list of key sequences that can be used to send commands directly to the printer from the display module.

Local Screen Print: <Alt><Alt><O>

Prints the displayed screen on the local-attached printer.

Partial Screen Print: <Alt><Alt><G>

Prints the top 24 lines of the screen on the local-attached printer.

Start or Stop Printer: <Alt><Alt><Print>

Starts or stops host-addressable printing.

Form Feed: <Alt><Alt><F>

This issues a form feed command to the printer advancing the paper to the top of the new form. **Note:** You must stop the printer first.

Line Feed: <Alt><Alt><L>

This issues a line feed command to the printer advancing the paper a line. **Note:** You must stop the printer first.

Local Test Pattern: <Alt><Alt><P>

This option prints a display station-generated test pattern to confirm that the display module and printer are communicating properly. **Note:** You must stop the printer first.

EBCDIC HEX Print Mode: <Alt><Alt><B>

When in this mode, the printer prints everything in hexadecimal format for problem analysis. To show the function is enabled, the word "Printer" on the status line appears in reverse video.

Printer Code Editor: <Alt><Alt><U>

This feature allows the hex codes of defined characters on the display to be changed to those defined by the printer. (Refer to "Printer Code Editor" on page 4-24 for more information.)

Cancel Print Job: <Alt><Alt><C>

Cancels the host print job from the keyboard.

Printer Emulations

Select a printer emulation and cable address for the attached printer using the Setup Screen (see Chapter 3, Configuration). The emulation must be the same as that configured on the host for the cable address. Consult with the system administrator for more information about the printer emulation choices and how each will perform on your system.

5224, 5225, or 5256 Emulation

The 5224, 5225 and 5256 printer emulations are designed for personal computer-type ASCII parallel printers. The lines per inch (LPI) and characters per inch (CPI) printer setup options must be selected, as discussed in Chapter 3, Configuration.

Note: The 5256 emulation prints only 10 CPI and 6 LPI so it cannot use the host LPI and CPI commands.

4214 Emulation

The 4214 printer emulation is for both IBM Proprinters/Proprinter-type printers, and Epson/Epson-type printers. Select the 4214 emulation for printing both data processing and word processing documents. The printer will respond to host commands for near letter quality (NLQ) and cut sheet feeder bin selection. It will also obey host commands for 5, 10, 12, 15, and 17.1 characters per inch (CPI) and 3, 4, 6, and 8 lines per inch (LPI).

Note: To select 5, 12, or 17.1 CPI and 3 LPI from an RPG program on the System/36, you must have a special IBM feature PRPQ P84073 (feature #5799-BYX) installed on the host.

3812/5219 Emulation

The 3812/5219 emulation is for LaserJet-type printers. Normal word processing functions (underlining, bold, super and subscripting, etc.) are all supported, even on small and italic fonts. This emulation can be used for both WP (word processing) and DP (data processing) applications.

Different character styles and pitch are controlled through the IBM typestyle number or font ID. The display module uses the IBM typestyle number to select an HP font from a cartridge. Only the cartridges shown in the Typestyle Reference Chart in Appendix A are supported.

The system administrator will specify a default typestyle when configuring the 3812/5219 address on the host system. The default should be the typestyle used most. Select one of the typestyle numbers from the Typestyle Reference Chart in Appendix A with an asterisk "*" or from the following table for the default font ID, then change it as necessary in the WP document or DP document RPG program.

Data Processing

Condensed print and 8 LPI commands do not work in data processing documents, because 3812/5219 printers only understand font ID commands. For DP documents, such as RPG-generated prints, change fonts by specifying the typestyle in the OCL or CL printer statement. Since only certain fonts are accepted by the host in OCL and CL statements, only use the font ID's in the following table or from the Typestyle Reference Chart in Appendix A with an asterisk (*).

Fonts for Data Processing Documents				
Typestyle Number	**Font ID (Hex)**	**Pitch (CPI)**	**Orientation**	**Font**
05	05	10	Landscape	Courier
11	0B	10	Portrait	Courier
12	0C	10	Portrait	Letter Gothic
13	0D	10	Landscape	Letter Gothic
20	14	10	Portrait	Courier
80	50	12	Portait	Prestige Elite
84	54	12	Portraite	Letter Gothic
85	55	12	Landscape	Letter Gothic
86	56	12	Not assigned	
87	57	12	Portrait	Prestige Elite
*91	5B	13.3	Landscape	Line printer, 8 LPI
158	9E	Prop.	Portrait	Times Roman
159	9F	Prop.	Portrait	Bold Times Roman
160	A0	Prop.	Not assigned	
162	A2	Prop.	Portrait	Italic Times Roman
221	DD	16.6	Portrait	Line Printer
222	DE	16.6	Portrait	Line Printer
*223	DF	16.6	Portrait	Line Printer 8 LPI
*225	E1	19.0	Landscape	Line Printer 8 LPI

* The printer prints 8 LPI when these typestyle numbers are selected. This feature permits DP documents to be printed in 8 LPI instead of the usual 6 LPI.

Word Processing

When a 3812 or 5219 address is configured on the host, a default font ID must be selected. The normal value is 11 (or 0B in hex), which is a 10-pitch font. DisplayWrite/36 may also have a default typestyle number, in most cases number 86, a 12-pitch font. The LaserJet resident font is a 10-pitch font. If typestyle number 86 is used, it will compress to 12-pitch spacing on the printout. Use typestyle number 11 for the correct 10-pitch font.

There are two ways to change fonts for WP documents: select a typestyle within the WP program, or use a font change command in the document.

Your WP program user's guide describes how to change typestyles within the program.

Formatting the Page

The 3812/5219 emulation allows 65 lines at 6 LPI per page for WP documents and 66 lines at 6 LPI per page for DP documents. The HP LaserJet printer allows a maximum of 63 lines at 6 LPI. To print 65 lines, the display station increases line spacing from 6 lines per inch to about 6.25 lines per inch. This small change is not normally noticeable. A similar small change is made to 8 LPI printing. If you get one or two lines at the top of a page, it's usually because the page has been formatted for more lines (either 65 or 66) than the printer is able to print.

The following exact paper sizes in DisplayWrite/36 and OfficeVision/400 are recognized:

Letter Paper:	8.5 x 11 inches
A4 Paper:	210 x 297 millimeters
Legal Paper:	8.5 x 14 inches

Selecting legal or A4 size paper dimensions on the DisplayWrite/36 "Change Page Format" screen causes the printer display window to flash "Legal Paper." Install an HP legal size paper tray in the printer. If paper dimensions different from the above are specified, the paper size is unchanged.

For TextManagement/38, the System/38 does not send paper dimensions to

the printer. Instead, it sends a forms message for legal paper to the controlling workstation assigned to the printer. To change the paper tray, you must do the following:

1. Insert the proper size paper tray, and press the RESET button on the printer.

2. Power the printer off and back on.

3. Release the print job at the host.

The System/38 uses a "Printer Support Facility" that only sends the margins and other document form specifications to a printer when they are different from the previous document or when the printer has been turned off. Either way, the printer must be reset when a different paper tray is installed.

To ensure that a complete set of document specifications is sent by the "Printer Support Facility," it is best to power off the printer and the display module for about five seconds.

You can print 198-column documents at 19 pitch and 8 LPI in landscape orientation on an 8 1/2" x 11" page. This is particularly useful for DP reports. Simply specify the 19-pitch font, typestyle number 225. In DP printing, use this typestyle number as either the default font ID, as described above, or in the OCL or CL statement for the job.

The line format screens in DisplayWrite/36 (Command 20) also permits "Justify," which aligns the right margin. One-Half Justify causes only one-half as much alignment of the right margin. For best results in using justification, change the zone width to 1 (instead of 6).

Envelope Printing

To print envelopes, specify typestyle number 5, landscape orientation, with the first line of the address on line 30 and a left margin of 55. A trial run with a blank sheet of paper will often help identify an error in positioning the address.

Manual Feed: Select the "Envelope Feed" option in the WP program's paper feed selections and a paper size of 11" x 11". The printer will flash "Manual Feed" on the front panel display window. The envelope must be fed

manually.

Envelope Tray: Select "Envelope Feed" and a paper size of 7.5" or 9.5" (or 22.0 cm). The printer automatically finds the envelope tray (if installed) and prints from the tray.

Envelope Feeder: Select "Envelope Feed" and a paper width of 7.5" or 9.5" (or 22.0 cm). The printer automatically finds the envelope feeder (if installed) and prints from the feeder.

Note: The printer may eject a blank page after the printing orientation has been changed.

Duplex Printing

Some printer models can print both simplex (single sided) and duplex (double sided). They can print both long edge (landscape) and short edge (portrait) duplex printing.

Place printing commands on the first line of the document to control simplex, landscape duplex, and portrait duplex printing. These commands are similar to font change commands as follows:

- ¬ D0 for simplex printing
- ¬ D1 for landscape duplex printing
- ¬ D2 for portrait duplex printing

Remember to place these commands on the first line of the document. If they are not on the first line, the commands will not become active until the following page. When the printer receives one of the printing commands, it will do all printing in that mode until another printing command is received.

In other words, if the printer is most often in simplex mode and you are printing in duplex mode, be sure to put a simplex command at the end of the document to return the printer to simplex mode. Envelope printing between documents will not change the printer's mode.

For some duplex printing, if the last page is blank on the back side, the information for the last page may remain in the printer until the next printing job is received. To print the last page, take the printer off-line by pressing the ONLINE button, then press the FORM FEED button to print the last page. Put the printer back on-line by pressing the ONLINE button again.

Paper Source Options

The Printer Setup Screen of the display module has three selections for controlling paper feed selections on the laser printer. The "default paper source" identifies the standard paper feed.

LaserJet Paper Bin Selection: If the laser printer has two or three paper trays that obey HP LaserJet tray selection commands, select "LaserJet paper bin selection" as the paper source in the display module's Setup Screen. The display module will then convert DisplayWrite/36 or Text Management/38 paper source choices into tray selection commands.

A manual feed command does not exist in the Text Management/38 options, but an envelope feed command puts the printer into a manual feed condition with a "PE" flashing in the window. The printer will accept a full-size sheet of paper and print when "PE" is flashing.

Graphics Printing

The I-O 2677M Display Module will print the same Advanced Printer Functions (APF) and Business Graphics Utility (BGU) graphics as the IBM 4214, 5224, and 5225 printers using All Points Available (APA) bit image graphics. APF and BGU allows you to create, change, store, display, and print charts representing data. This method will also print continuous patterns such as bar codes and logos that come from the twinax host.

Graphics are printed on IBM System/36, and /38 from the APF and BGU programs and programmer-defined characters using the Load Alternate Character (LAC) command.

The I-O 2677M Display Module implements the LAC command by taking the dot pattern received from the twinax host and then printing that exact dot pattern using the printer's APA bit image graphics at high density 240 dots/inch. This permits the printer to print APF and BGU graphic output using exactly the same spacing as the IBM 4214, 5224, and 5225 printers.

For more information on BGU, see the BGU User's Guide, and Reference.

Note: Graphics printing is supported by the 5224, and 5225 emulations in 10 and 15 CPI and supported by 4214 printers in 10, 12, and 15 CPI.

Printer Code Editor

The Printer Code Editor is used to create a "user-defined" printer character set. The user-defined Printer Code Editor allows the hex codes of defined characters on the display to be changed to those defined by the printer. This feature is available only with the 5224, 5225, 5256, and 4214 Epson printer emulations, or for local screen prints when the host-addressable printer emulation is "disabled." The steps below describes how to change an existing character set to create a user-defined character set.

1. Press **<Alt><Alt><U>** to activate the Printer Code Editor.

   Note: If a user-defined character set has already been created, it appears on the screen. To modify this existing user- defined character set, skip to step 5. To modify one of the factory default character sets to replace the current user-defined set, continue with the next step.

2. Press **<Insert>** then press the space bar to scroll through the available character sets.

3. Press **<Enter>** to select the character set displayed (for example, Code Page 437). The set selected is copied and then named "user defined." If a user defined set already exists, it is overwritten.

4. Move the cursor to the desired character to be changed. For example, uppercase oblique (Ø).

   The character is shown in the lower left corner of the screen (Ø-4F) which is the EBCDIC character graphic followed by the hexadecimal code that will be sent to the printer (a hyphen is used for a separator).

5. Type in the hex code of the character (uppercase oblique Ø) to be printed in place of the normal character. For this example, the hex code is 9D. (See the printer's user's guide for the printer hex codes to be changed in the table.)

6. Press **<Enter>** to save the change.

7. Make any other changes to the set by repeating steps 5 and 6, and press **<Enter>** to save each change.

8. Press **<Alt><Alt><U>** to exit the Printer Code Editor and save the changes.

9. Enter the Setup Screen non-restricted options, printer setup, and select "User defined" as the printer character set (see Chapter 3, Configuration).

I-O Command Pass-Thru™

The Command Pass-Thru™ feature allows access to all of the built-in features of a printer, even if the features aren't normally available through the host software. Command Pass-Thru provides a method of placing printer-specific command sequences into the data sent to the printer from the host. The display station recognizes these special sequences and "passes the command through" to the printer. The steps below describe how to use Command Pass-Thru:

1. Find the command for the print feature in the user's guide of the printer.

2. Convert the printer command to hexadecimal.

3. Place the EBCDIC delimiters, as defined in the display station setup (refer to page 3-10), in the document at the point where the feature should take effect. This signals the start of the print feature. Enter the beginning printer command, then enter the delimiter again. Do not put spaces between the delimiter and the hexadecimal characters.

4. Move the cursor to the point in the text where the print feature should end. Enter the delimiter, followed by the ending printer command and then the delimiter again, into the document.

Example: If **ESC E** begins bold printing and **ESC F** ends bold printing on the printer, first convert ESC E to the hexadecimal **1B45** (ESC = 1B and E = 45) and ESC F to **1B46**. And, if the delimiter is the default **&%** (hex 50 6C), then enter the commands as follows:

This is a &%1B45&%bold&%1B46&% word.

to print on the printer as:

This is a **bold** word.

Notes: Spaces are not allowed between the delimiter and the hex code.

Only numbers or the letters A F are allowed.

Errors in the I-O Command Pass-Thru™ sequence will cause the display module to ignore the command and printing will resume at the point the error occurred.

I-O Command Pass-Thru™ may invalidate horizontal spacing.

Other Printer Commands (3812/5219 printer emulation only)

You can also enter commands into your document that allow you to control true LPI and response to host commands. These commands (shown below) are similar to font change commands.

Command	Function
¬E	Sends an ASCII ESC command to the printer
¬TY	Enables true LPI printing
¬TN	Disables true LPI printing
¬I	Ignores all host formatting commands
¬S	Stops ignoring host formatting commands

The ¬E command allows you to send an escape command to the printer to control the printing. For example, ¬E(s3B would begin bold printing (see your printer's user's guide for a list of the printer or escape commands).

The printer may compress line spacing to fit 66 lines onto the page. This may be undesirable, such as when using pre-printed forms that must align correctly. In these cases, the ¬TY command prevents the printer from compressing the line spacing.

Use the ¬I and ¬S commands to remove unwanted host commands from a print file. For example, when printing with forms-generating software, the files are recognized by the host as text files and formatted with unwanted

carriage returns and line feeds. Placing the ¬I at the end of a line and ¬S at the front of the next line causes the interface to remove the host carriage return and line feed commands and send only the data to the printer.

Diacritic Mode

The I-O 2677M Display Module can send characters with diacritic accents to the display or printer when any diacritic accent symbol key is pressed. Pressing circumflex (^), grave accent (`), tilde (~), cedilla (¸), diaeresis (¨), acute accent (´), or overcircle (°) on the I-O 2677M enters the diacritic mode and a "ð" appears on the status line.

The cursor will not move, but the scan code which tells the display module to go into diacritic mode is transmitted to the host. When the next valid accent character is pressed, the accented character will display at the cursor position and the cursor will advance a position.

Note: The diacritic mode is a function of the host application, not the I-O 2677M. Refer to the system program manual for more information on how to use the diacritic mode.

Hex Feature

The hex function is used to enter the hexadecimal value for a character. This will allow use of characters that normally do not appear on the keyboard.

To enter the hex code, press the **<Alt><Hex>** keys. Enter the corresponding hexadecimal value using alphanumeric keys. This function must be repeated for each hexadecimal value entered. Valid values are 40 through FE.

Note: The hex feature is a function of the host application, not the I-O display module. Refer to the system program manual for more information on how to use the hex feature.

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5 PROBLEM RESOLUTION

This chapter provides information to help analyze and solve common problems with the I-O 2677M Display Module.

Before calling your I-O dealer for assistance, look for the problem in the tables in this chapter and try the suggested actions to solve it. If you still have problems, contact your dealer and have the following information ready:

- Model number (I-O 2677M)
- Serial number (located on the bottom of the display module)
- Type of host and/or remote controller
- Date of purchase
- Model of printer (if attached)
- Description of problem and/or error message and diagnostic results
- Emulations selected on setup screen
- Devices configured on host

General Display Station Problems

When the I-O display module is turned on, two beeps will sound followed by a display of the internal self-test results. After a few moments, another beep sounds and the sign-on screen appears.

If you do not hear the final beep, the display station has failed to pass the power-on self tests. Repeat the power-on operation to confirm the failure.

If the display passes the self-test, yet no sign-on screen appears and a message appears at the bottom of the screen, this generally means the display station is functioning, but a problem exists in the cabling, addressing, host configuration, etc.

PROBLEM RESOLUTION

Problem (or Message)	Probable Cause	Action
RAM BAD or ROM BAD message.	Display module requires service.	Contact your I-O dealer or I-O Customer Support.
Status Line not displayed at bottom of screen.	No power to the display station.	Verify that the display module and monitor are turned on.
		Verify power to the outlet the display module and monitor are plugged into.
		Make sure the power cord is firmly connected to the display module and monitor.
	Contrast or brightness is turned all the way down.	Adjust the contrast or brightness control on the monitor.
	Picture tube has been turned off by the power saver.	Check to see that LED is on. Press any key to continue.
Display: Disabled	No terminal session enabled on the setup screen.	Enable the appropriate session on the setup screen (restricted options).
Display: Not Ready and *Display:* Ready alternately displayed with repetitive beeps.	Address conflict with other devices on cable or on setup screen.	Correct address conflicts between ALL sessions enabled on the display module and other devices on the same twinax cable.
		Disable any sessions not in use.
		Press and hold the **<Reset>** key while powering on the display module, then press **<T>** to enter the "Twinax Monitor Mode" (See Appendix F). Confirm addresses in use, verify that the twinax line is active, and observe frequency of line errors.

Problem (or Message)	Probable Cause	Action
(Continued)		Verify that all sessions enabled on the display module match devices configured at the host.
	Damaged or improper cabling.	Press and hold the **<Reset>** key while powering on the display module, then press **<T>** to enter the "Twinax Monitor Mode" (see Appendix F) and check for improper termination of the last device on the twinax cable.
NV*ERR displayed on status line.	Non-volatile storage error.	Enter the setup screen and make sure all settings are as desired. The NV*ERR error should disappear after exiting setup.
R*****	New non-volatile storage is being written.	This is part of normal operation if the message is displayed for only a few seconds. If these occurrences become frequent, contact your I-O dealer or I-O Customer Support.
Display: Not Ready (cursor located in the upper right hand corner).	No communication with host (host not operating or improper or damged cabling).	Press and hold the **<Reset>** key while powering on the display module, then press **<T>** to enter the "Twinax Monitor Mode" (see Appendix F). Verify that the host system is operating. Check for improper termination of a prior device on the twinax cable. Check for damaged or disconnected twinax cable.

PROBLEM RESOLUTION

Problem (or Message)	Probable Cause	Action
(Continued)	Communication configuration on display does not match.	Verify device emulation on setup and device configuration at the host match.
Display: Not Ready (stays steady with the cursor located in the top left hand corner).	No communication with host (host is not operating, improper or damaged cabling).	Press and hold the **<Reset>** key while powering on the display module, then press **<T>** to enter the "Twinax Monitor mode: (see Appendix F). Verify that the host is operating. Check for improper termination of a prior device on the twinax cable. Check for damaged or disconnected twinax cable.
Display: Ready (but no sign-on screen).	Screen may be dimmed.	Press any key to restore the screen.
	Messages need to be answered at host.	Answer messages at host console.
		Vary device OFF then ON at host.
	Wrong configuration at host.	Verify that the display module is not at an address configured for a printer at the host.
	"Lost" address.	Try another address. The workstation controller may have a "lost" address. (A hard IPL will normally restore the lost address.)
	Damaged cabling.	Check for damaged twinax cable.

Problem (or Message)	Probable Cause	Action
(Continued)	Faulty pigtail.	Verify the pigtail is properly connected to the display and twinax cable. Verify the pigtail is properly connected to the display and twinax cable. Verify the pigtail is faulty by testing with another pigtail.
Display module "drops off line" (display module is first physical device on the cable).	Improper cabling or termination.	Verify that the device at the end of cable is properly terminated.
		Verify that a PC emulation card is not terminated at mid-line (check terminate jumpers on the board).
		Verify that other devices on cable are correctly cabled through.
		Verify that the twinax cabling is done correctly and does not violate IBM established "daisy-chain" rules.
	Faulty pigtail	Verify the pigtail is properly connected to the display module and twinax cable. Verify the pigtail is faulty by testing with another pigtail.
Display module "drops off line" (display module NOT first physical device on the cable.)	Improper cabling or termination.	Perform same actions as above.
		If display module is the last device on the cable, verify that it is properly terminated.
	Wrong configuration at host.	Match device emulation on setup screen and device configured at the host.

Problem (or Message)	Probable Cause	Action
(Continued)	Poor power source. Bad, dirty, or fluctuating AC power.	Line filtering may be necessary.
Display module causes other devices on the cable to drop off line.	Address conflicts.	Correct address conflicts between ALL sessions enabled in the display module and other devices on the same twinax cable.
	Improper or damaged twinax cabling.	Verify proper cable through/termination of devices on the cable.
		Check for damaged or improper twinax cabling.
Display screen remains “inhibited” or display screen “locks up”.	Application in use or system not in operation. Application software accessed may be busy.	Make sure the host system is operating correctly.
Display module repeatedly cycles through the self-test and “Push the RESET Key for Setup” message appears.	Address conflicts in setup. Two emulations are configured to the same address.	Correct address conflict between ALL sessions enabled on the display module.
		Disable sessions not in use.
Alarm or key click volume too loud or too soft.	Wrong selection in setup screen.	Change setup screen choices.
Dots on screen or options flashing.	Monochrome emulation chosen on color monitor.	Emulation needs to be set to a color emulation; 3197C or 3487C Non InfoW.
	4/8 color selected.	Press **<Alt><Alt><V>** to change the display from 4 to 8 colors.

Problem (or Message)	Probable Cause	Action
No power to display module or LED is off.	Power supply voltage is too high or has wrong polarity.	Disconnect power for 5 seconds to reinitialize the logic board.
		Verify correct voltage and polarity on power supply.
		Power supply should be 5VDC (⊖⊣(•⊣⊕) at 2.5 AMPS. Note: Power supply that does not meet these standards may cause damage.
Cannot get all the display emulation options.	Display module does not support the DCC specifications.	Set dipswitches to model of monitor used, whether a color or monochrome monitor.

PROBLEM RESOLUTION

Video Problems

The screen dimming feature of the display station blanks the screen completely, except for the status line. The VESA-DPMS power saving feature blanks the screen entirely. The screen restores with any keystroke, or when any command is received from the host.

Problem	Probable Cause	Action
Screen blank.	Brightness and/or contrast too low.	Adjust brightness and contrast controls on the monitor (if any).
	No power to display module.	Verify that power to the monitor is ON (see General Display Station Problems).
	Display mode is locked.	Unlock the software security keylock (see page 4-4).
	Screen has been dimmed or is in VESA-DPMS power saver mode.	Press any key to restore screen if monitor is VESA-DPMS compatible or in manual auto-dim.
Screen displays status line only.	Screen has been dimmed.	Press any key to restore screen.
	Brightness and/or contrast too low.	Adjust brightness and contrast controls on the monitor (if any).
	Configuration problem with the host.	Verify host and display module configuration matches.
Screen is too dark, flickering, or out of focus.	Brightness and/or contrast too low.	Adjust brightness and contrast controls on the monitor (if any).
		Power the display module OFF and ON.
Screen distorted, shrunk, tilted, rolling, out of focus, flickering, or vertical/horizontal line only.	Monitor requires service.	Power off the monitor and contact the monitor's manufacturer.
Screen makes a singing or crackling sound.	Video circuitry.	Power the monitor OFF and ON.

Problem	Probable Cause	Action
Cursor is erratic, double cursor, random characters, or charcters are missing.	Faulty keyboard.	Perform keyboard test (refer to Keyboard Problems section).
	Faulty twinax cabling.	Check for twinax cable problems. (Refer to Appendix F.)
	Configuration does not match host.	Match configuration on host and display module.
Screen will not enter VESA-DPMS mode.	VESA-DPMS power saver function disabled on setup screen.	Press **<Alt><Alt><D>** to manually dim.
		Enable VESA-DPMS power saver mode on setup screen.
Cannot get 8-color operation in 3197D emulation.	Host recognizes 3197D as a monochrome terminal.	Configure host and display module to 3487C NonInfoW or 3197C emulation.
Cannot get 8-color operation in 3197C or 3487C NonInfoW emulation.	Terminal in 4-color mode.	Press **<Alt><Alt><V>** to have access to 8-color mode.
Cannot get 132 column display in 3197C emulation.	Host recognized 3197C as an 80 column emulation.	Configure host and display module to 3487C NonInfoW or 3197D emulation.
Cannot get 132 column display in 3487C emulation.	Host does not support 3487C.	Configure host and display module to 3180 or 3197D emulation, or change to a host or controller that supports 3487C emulation.
Cannot get 132 column, 8-color display.	Emulation not supported.	Configure host and display to 3487C NonInfoW emulation.
Highlighted fields not brighter than normal fields.	No contrast.	Adjust contrast control on monitor (if any).

PROBLEM RESOLUTION

Problem	Probable Cause	Action
Dots on screen or options flashing.	Color emulation chosen on display.	Emulation needs to be set at a monochrome emulation: 3197D, 3180, 3196.
Cannot get blue color fields on color monitor.	Four color mode selected.	Press **<Alt><Alt><V>** to select 8 color mode.
Cannot get out of reverse video.	Changed monochrome monitor with color one.	Power off the display module and then power it on with the <Reset> key pressed.
The switch is in Auto mode, but getting color mode on a monochrome monitor.	Display module does not support DCC specifications.	Set dipswitches to monochrome.
The switch is in Auto mode, but getting monochrome mode on color monitor.	Display module does not support DCC specifications.	Set dipswitches to color.
Characters on screen are green where they should be other colors.	Color monitor is in monochrome mode.	Set dipswitches to color.
Characters appear in normal and high intensity; red, yellow, and pink doesn't show up.	Monochrome monitor is in color mode.	Set dipswitches to monochrome.
	Color monitor is in 4 color mode.	Press **<Alt><Alt><V>**.
Screen loses sync.	Monitor does not support VESA-DPMS.	Disable the VESA-DPMS power saver mode.
		Use a monitor that is VESA-DPMS compatible.
Cannot get all the display emulation options.	Display module does not support the DCC specifications.	Set dipswitches to model of monitor used, whether a color or monochrome monitor.

Keyboard Problems

As a general rule, keyboard problems fall into four categories:

- Improper configuration
- Stuck or broken keys
- Broken keyboard cable connector (either on the cable or the display module)
- Improper installation of the attached keyboard.

On the 102/103-key enhanced keyboard, verify that the host configuration is set for the enhanced keyboard at the indicated address. On a System/36, use the "Set Device Characteristics" option in CNFIGSSP. On a System/38's CRTDEVD, specify "GUSB" in the "Workstation Controller Keyboard" field during configuration.

To help diagnose keyboard problems, perform the built-in keyboard diagnostic test. Press and hold the **<Reset>** key or the space bar while powering on the display module, then press **<K>**. All keys except <Enter> should toggle the display. Press **<Enter>** to return to the setup screen.

PROBLEM RESOLUTION

Problem	Probable Cause	Action
KEYBOARD BAD or KEYBOARD NOT ATTACHED message.	Problem with the keyboard.	Make sure the keyboard is securely connected to the display module.
		Press all keys on the keyboard to make sure there are no loose keys or sticky keys.
		If the message remains, attach a different keyboard.
	Logic board in display module may not be working correctly.	Try the keyboard with same connection on another module.
A key repeats without being pressed.	Loose or sticky key.	Firmly depress and release the key (several times, if necessary).
	Missing spring or contact.	Turn off display module and contact your I-O dealer or I-O Customer Support.
Missing keystrokes or keys not working.	Faulty keyboard.	Perform the built-in keyboard test (see page 5-11).
		Run IBM verification test on keyboard to isolate failing key. To enter verification test, press <Alt><Test> from the sign-on screen.
Characters other than those typed appear on the screen.	Incorrect host configuration.	Change host configuration (see Chapter 3, Configuration).
	Keyboard has not been programmed.	Power display module OFF and ON allowing it to be programmed with the self-test.

Printer Problems

Printer problems usually result from improper cabling, an incorrect address, or incorrect emulation. If the printout does not appear as it should, often the wrong emulation, typestyle number, forms length, or margin in the word processing document has been selected.

Note: The display module requires a standard IBM PC parallel cable (25-pin and Centronics 36-pin parallel connectors) to operate a parallel printer. A parallel to serial converter cable must be connected to the display module if an RS-232C serial printer is used.

Problem (or Message)	Probable Cause	Action
Printer: Disabled (bottom of the screen).	Printer emulation disabled on setup screen.	Select desired emulation in setup screen.
Printer: Not Line Sync (bottom of screen).	Display module not communicating with host.	*If Display: Not Ready* also appears, refer to "Display: Not Ready" in General Display Station Problems.
	Printer not communicating with host.	*If Display: Ready* also appears, answer messages at host console. Vary device OFF then ON at host. Verify the printer is not at address configured for display module at the host.
		Try another address. The workstation controller may have lost the address. (A hard IPL will normally restore the lost address.)
		Press and hold **<Reset>** key while powering on display module, then press **<T>** to enter Twinax Monitor Mode to check address. (See Appendix F.)
		Verify the printer emulation selected in setup and the host configuration match and are compatible to printer.
	Improper or damaged printer cable.	Check and verify printer cable.

Problem (or Message)	Probable Cause	Action
Printer: Off Line (bottom of screen).	No "select" signal from the attached parallel printer.	Press the On-LINE, READY, or SELECT button on the printer.
	Printer not installed properly.	Check printer installation.
	Printer not powered on.	Power on the printer.
	Parallel interface not selected on the printer.	If printer has selectable interface, make sure parallel interface is selected. Refer to the printer's user's guide.
	Proper printer is not connected.	Verify the parallel printer or a connector cable being used.
	Printer not functioning.	Verify that the printer is operational.
Printer: Stopped (bottom of screen).	Wrong printer setup selection.	For continuous forms, make sure "Cut Sheet" is not selected on the setup screen.
	Printer emulation is in "stopped" mode.	If 5219 emulation is being used, check to see if the data stream being sent down has the correct commands and parameters. Press **<Alt><Alt><Print>** to start printer.
		Check to see that the printer does not have a BEL (format) command being sent to it. Press **<Alt><Alt><Print>** to start printer.
	Printer may be out of paper.	Check the paper tray, add paper if necessary.

Problem (or Message)	Probable Cause	Action
(Continued)	Printer is off line.	Configure printer to ON LINE status.
	Printer is powered off.	Power on the printer.
	Printer has not accepted any characters for more than 90 seconds.	Check printer connections such as parallel to serial adapters, cabling, etc.
		Check printer for any paper jams.
	Local <Alt><Alt> sequences used from the I-O 2677M are interrupting the emulation. (Refer to Help Screen #2).	Press **<Alt><Alt><Print>** to start printer.
	Cut sheets option has stopped the emulation at the end of a page, so a new sheet may be added.	Remove page and insert a new page. Press **<Alt><Alt><Print>** to start the printer.
Printer: Ready (bottom of the screen). "Printer" in reverse video. Printout appears garbled.	Printer in EBCDIC hex mode.	Press **<Alt><Alt><B>** to disable hex mode.
Printer: Ready (bottom of screen) but no printout occurs.	Print job held at host.	If above test prints, check messages at host, spool file at host, printer ID the job if assigned in spool file, then try releasing job in the spool file.
	Faulty connections between display module and printer.	If above test does not print, check that printer is functioning; that cable from display module to printer is not faulty; verify hex codes (5224 and 5225 emulations). Power the display module OFF and ON.

Problem (or Message)	Probable Cause	Action
(Continued)	Printer not communicating with the display module.	Press <**Alt**><**Alt**><**P**> to send the print test pattern to the printer. This test will verify the display module and printer are communicating.
Printout is erratic. Printer stops after printing some tests, graphics characters printed, lines or paragraphs missing, random characters appear at first of printout.	Faulty or damaged cabling.	Verify that cabling from the display module to the printer is correct and undamaged.
	Wrong settings on parallel to serial cable.	In serial applications using parallel to serial converter cable, verify all serial selections between cable and printer match (i.e., baud rate, parity, stop bits, etc.).
	Wrong printer emulation.	Match the printer emulation selected on the display module to the emulation used by the printer.
	Wrong character set.	Verify that character set in setup screen agrees with printer (Code Page 850, Code Page 437, U.S. ASCII, and Roman 8).
	Possible poor power source.	Check for bad, dirty, or fluctuating AC power. Line filtering may be necessary.
Printer will not compress characters (15 CPI) or line (8 LPI).	5256 emulation selected.	Host will not send compressed commands to a 5256 printer.
	Wrong hex codes on setup screen for 15 CPI.	Verify correct hex codes on setup screen.

Problem (or Message)	Probable Cause	Action
(Continued)	Wrong emulation or configuration.	Match printer emulation on display module and device type configured at host.
	Printer not installed properly or not capable of compressed print.	Verify that printer is set up correctly and can do compressed print.
	Wrong pitch or line spacing commands.	Make sure character pitch or line spacing properly specified for output from host.
	Wrong font/typestyle number.	Make sure correct typestyle number specified. 3812/5219 emulation determines pitch by typestyle number.
	Display module needs to be reinitialize.	Reinitialize the display module by powering it OFF then ON.
The printer's print head moves back and forth but does not print.	User-defined character set selected on setup screen, but not changed in the Printer Code Editor.	Change a character set in the Printer Code Editor, or select another character set in the setup screen.
Printer stops at the end of the page and *Printer: Stopped* appears on screen.	Wrong paper selection on the setup screen.	Choose "Continuous Forms." Do not use "Cut Sheet" if using a sheet feeder.
Forms length errors or incorrect forms alignment.	Wrong page eject selection on the setup screen.	Change page eject method in setup screen, then try sending the print job again.

Problem (or Message)	Probable Cause	Action
(Continued)	Wrong forms length for the software.	If "Form Feed" is selected, adjust printer's forms length to agree with software's requirements.
		If Multiple Line Feed is used, check for proper form length commands in software.
While using DisplayWrite/36, the printer prints blank lines between lines, cuts off margins, incorrect, extra blank sheets feed, or the pagination incorrect.	Wrong page length.	Verify correct forms length in document. Make sure your document length doesn't exceed the number of maximum lines. (Maximum number of lines per page for 3812/5219 emulation is normally 65).
	Wrong parameter in document.	Verify correct parameters.
Can't change font (3812/5219 emulation only).	Incorrect typestyle number (font ID) selected.	Verify correct or valid font ID selected. Invalid font IDs are ignored by the printer. Not all typestyles are supported by emulation and/or host.
		Set correct hex value for typestyle (font ID) in OCL or CL printer statement. Use font change command as an option, i.e., ¬QXB.

Problem (or Message)	Probable Cause	Action
Right margin is not correct.	Wrong margin or paper size.	Verify margins and paper size are set correctly.
		Select “Yes” on error log option on third screen DisplayWrite/36 print options to enable host to identify problems with document. Host will print additional page if any errors.

IBM Error Codes

IBM error codes are generated by the host system when an error occurs in the application being run, such as using the wrong command key, making the wrong selection from a menu, and so on.

When an error occurs, the keyboard lock and the inhibit indicator, “X”, appears and remains at the bottom of the screen. You will also see a four-digit system error code in the left-hand corner of the screen on the error line.

To recover from an error, press **<Reset>** and continue to input information. If you cannot recover from an error condition, contact the system operator.

The table on the following page describes the error that has occurred, as indicated by the error.

Error Code	Probable Cause	Action
0000	The Help key was pressed. Either no error code was displayed, or the error was issued by a program that does not support the Help key.	Press **<Reset>** and continue entering information, or refer to previous error and perform action required.
0001	The host or remote workstation control unit is slower than the keystrokes entered. The last character you entered was not recognized.	Press **<Reset>** and continue entering data.
0002	The host system or remote workstation control unit received an invalid key code.	Press **<Reset>** and continue entering data. If the error still occurs, report the problem to your system administrator.
0003	You pressed an invalid key after pressing and holding the <Alt> key.	Press **<Reset>.**
0004	You attempted to enter data into a field that does not allow keyboard input.	Press **<Reset>.**
0005	You attempted to enter data when the cursor was not in an input field. Data cannot be entered in a protected area of the display.	Press **<Reset>.** Move the cursor to a valid input field.
0006	After pressing the SysReq/Attn key, and before pressing the <Enter> key or the <Reset> key, you pressed an invalid key.	Press **<Reset>.**

Error Code	Probable Cause	Action
0007	At least one field on the display requires that you enter data before the display can be changed or moved. (The cursor goes to the first character position of the first mandatory-entry field.)	Press <**Reset**> and enter the required data.
0008	Non-alphabetic data was attempted to be entered into an alphabetic field. Valid characters are A-Z, a blank, a comma, a period, and a hyphen.	Press <**Reset**> and use valid characters.
0009	Non-numeric data was attempted to be entered into a numeric only field. Valid characters are 0-9, a blank, a comma, a period, and a hyphen.	Press <**Reset**> and use valid characters.
0010	Data was entered into a field that will only accept signed numeric data. Valid characters are 0-9.	Press <**Reset**> and use valid characters.
0011	Data was entered into the last position of a signed numeric field.	Press <**Reset**> and make sure that the data is correct. Exit the field by using the Field -, Field +, or Field Exit keys.
0012	The cursor is either in the last position of the field or there are no spaces in the field.	Press <**Reset**>. Correct the field, if necessary. The insert key may not be used to change data or to enter the last character into the field.
0013	After pressing the Insert key, you attempted to leave a field.	Press <**Reset**>.

Error Code	Probable Cause	Action
0014	A key function was pressed that moves the cursor out of the field. However, the requirements of this mandatory-fill field have not been met. (Mandatory-fill fields must be filled completely or left blank.)	Press **<Reset>**, and enter data to fill all of the field, or move the cursor to the start of the field and use the Field -, Field +, or Field Exit keys to blank out all of the field.
0015	Data was entered in the self-check field. The number and the digit you just entered do not correspond.	Press **<Reset>**, and verify numbers entered. If numbers are valid, but error still occurs, contact your system administrator.
0016	The Field - key was pressed, but you are not in a numeric field.	Press **<Reset>**, and continue to enter data. Press **<Field Exit>** to blank the field.
0017	Field -, Field +, or the Field Exit key have been pressed, but the requirements for this field have not been met. You must fill this field completely or exit the first position of the field.	Press **<Reset>**, and enter data to the end of the field or move the cursor to the start of the field and use one of the field keys to blank out the field.
0018	A data key was used instead of a non-data key.	Press **<Reset>**, and use a non-data key such as a **<Field Exit>** key or an arrow key to leave this field.
0019	The Dup key was pressed, and is not permitted in this field.	Press **<Reset>**, and continue.
0020	An invalid key was pressed.	Press **<Reset>**, and continue by pressing the **<Field +>**, **<Field ->**, or **<Field Exit>** key.
0021	The cursor is positioned in a mandatory enter field. Data must be entered before you can exit the field by pressing the Field -, Field +, or Field Exit key.	Press **<Reset>**, and enter the required data.

PROBLEM RESOLUTION

Error Code	Probable Cause	Action
0022	A system error occurred when using the Insert or Delete key.	Press <**Reset**>. Verify if the insert or delete function was done properly. If not, correct the field.
0023	The Hex key was pressed, but the keys following were not A-F, or 0-9. This error also occurs when a hexa-decimal code is used in a numeric-only, signed numeric, alpha only, or feature I/O field.	Press <**Reset**>, and continue.
0024	A non-numeric value was entered in a numeric-only field.	Press <**Reset**>, and continue.
0026	The Field - key was pressed to exit a numeric-only field, but last position of the field is not numeric.	Press <**Reset**> and correct the last position of the field.
0027	A key was pressed not used by the display module.	Press <**Reset**>, and continue using valid keys.
0029	Second key pressed during the diacritic mark key function was not a valid combination.	Press <**Reset**>, and enter a valid combination.
0040	The “Data Set Ready” line is inactive, and should be active.	Recovery must be made at the remote control unit.
0042	The “Receive Clock” signal failed.	Recovery must be made at the remote control unit.
0043	The “Data Set Ready” line is active and should be inactive.	Recovery must be made at the remote control unit.
0044	The 30-second communica-tions time-out expired with-out valid data received.	Recovery must be made at the remote control unit.

Error Code	Probable Cause	Action
0045	"Data Set Ready" will not activate.	Recovery must be made at the remote control unit.
0050	Either the "Clear to Send" line was inactive while the "Request to Send" line was active or the "Clear to Send" line was active while the "Request to Send" line was inactive.	Recovery must be made at the remote control unit.
0051	The transmit clock signal failed during a transmit operation.	Recovery must be made at the remote control unit.
0052	The remote control unit detected an error.	Recovery must be made at the remote control unit.
0054	The remote control unit received invalid commands from the system during communication.	Recovery must be made at the remote control unit.
0072	The key pressed is not valid in the current area of the screen.	Recovery must be made at the remote control unit.
0097	On-line verification tests not supported by the host program were trying to run.	Press <**Reset**>, and continue to use display module without performing the verification tests.
0099	An error occurred before, after, or during the sign-on.	Press <**Reset**>, and if error occurs again, contact you system administrator.

Record/Playback Error Codes

The following error codes indicate a problem with the Record/Playback feature on the 102/103-key or 122-key keyboard. These codes appear in the bottom left-hand corner of the screen.

Error Code	Probable Cause	Action
9001	Recordable keystroke memory is full (There is no room to enter additional keystrokes).	Press **<Reset>**, and then **<Record>** to exit. Erase a recorded keystroke sequence for one or more CMD keys to clear memory for the new keystroke sequence.
9002	The program detected an error in the recorded data, and the contents of that CMD key were automatically erased.	Press the **<Reset>** key.
9003	While performing the Record or Play function, a key other than Alt, Record, Erase Input, Reset, or Shift was pressed before pressing a valid CMD key.	Press **<Reset>** followed by a valid CMD key (one containing a recorded keystroke sequence.)
9004	While performing the Record or Play function, a CMD key was pressed with an Alt key.	Press **<Reset>**, then press only the CMD key.
9007	While recording a keystroke sequence, an invalid sequence key (such as the Play or Setup keys) were pressed. These keys cannot be recorded in a sequence.	Press **<Reset>**, and continue with valid sequences.
9010	During the play function, a CMD key was pressed that does not contain a recorded keystroke sequence.	Press **<Reset>**, then choose the CMD key that contains the required recorded keystrokes. (one containing a recorded keystroke sequence.)
9015	During normal operation, the <Quit> or <Pause> key was pressed.	Press the **<Reset>** key.

Error Code	Probable Cause	Action
9019	While the Record/Play Pause Indicator (^R, ^P) was displayed on the status line, an invalid key was pressed.	Press the **<Reset>** key.
9020	The Record or Play key was pressed while the Record/Playback function was inhibited.	Press **<Reset>**. Refer to the Record/Playback Security feature on page 4-14.
9021	The Record or Play key was pressed in a non-display field when the Record/Playback security level is prohibited.	Press **<Reset>**. Refer to the Record/Playback Security feature on page 4-14.

Split Screen Error Codes

The following error codes indicate a problem with the split screen feature. These codes appear in the bottom left-hand corner of the screen.

Error Code	Probable Cause	Action
9030	The <Jump> key was pressed while in only one session.	Press the **<Reset>** key.
9031	The <Back> or <Fwd> key was pressed when the local scroll function was unavailable.	Press the **<Reset>** key.
9032	The <Zoom> key was pressed while in a one-session display mode.	Press the **<Reset>** key.
9033	The print key was pressed while in the split screen mode. There has also been an attempt to print while one or more sessions were in the 29 x 132 screen format.	Press the **<Reset>** key.

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APPENDIX A

Typestyle Reference Chart

IBM Typestyle Numbers for HP LaserJet Fonts

The following tables list the IBM typestyle numbers (font IDs) that the display module uses to select fonts internal to the printer and from HP font cartridges. I-O font change commands for each font are also listed.

Typestyle numbers with an asterisk (*) next to them are acceptable IBM font IDs for device configuration and OCL or CL printer commands (in hexadecimal).

I-O font change commands begin with a logical not (¬), which is upper Shift 6 on U.S. keyboards. The caret (^) symbol may be substituted in non-U.S. applications.

Pitch 19.0 permits 198-columns to be printed in landscape on 8 1/2" x 11" paper.

Proportional fonts cannot be right justified through use of the IBM justify command.

Note: Typestyle number 86 prints the resident 10 CPI Courier font at 12 CPI spacing in portrait (¬QXM). Typestyle number 85 prints the resident 16 CPI Line Printer font at 12 CPI spacing in landscape (¬QXN).

Numbers is parenthesis are alternatives that more closely match the IBM CPI spacing of the font.

APPENDIX A

Hewlett Packard LaserJet Internal Resident Fonts						
Printer Model	**Font**	**Orient**	**Pitch**	**Point Size**	**Type-style No.**	**Font Change Command**
All Models	Courier	P	10	12	*11	¬ QXG
		L	10	12	*5	¬ QXH
Plus & Series II	Line Printer	P	16.66	8.5	*221	¬ QXJ
		L	16.66	8.5	*222	¬ QXR
Series II	Line Printer (8 LPI)	P	16.66	8.5	*223	¬ QXL
Series II	Line Printer (8 LPI)	L	19.0	8.5	*225	¬ QXP
			13.3	8.5	*91	¬ QXK

HP Cartridge Fonts							
				Typestyle No		**Font Change Command**	
Font	**Orient**	**Pitch**	**Point Size**	**Standard**	**Legal**	**Standard**	**Legal**
A Cartridge *Courier 1 (Roman 8 Symbol Set)*							
Courier bold	P	10	12	8	--	¬ QLA	--
	L	10	12	9	--	¬ QLC	--
Courier light	P	10	12	6	--	¬ QLB	--
	L	10	12	7	--	¬ QLC	--
Line Printer light	P	16.66	8.5	*221	--	¬ QLE	--
B Cartridge *TMS Proportional 1 (US ASCII Symbol Set)*							
Helvetica bold	P	Prop.	14.4	175	--	¬ QBA	--
Tms Rmn med	P	Prop.	10	*158	--	¬ QBB	--
Tms Rmn bold	P	Prop.	10	*159	--	¬ QBC	--
Tms Rmn med itl	P	Prop.	10	*162	--	¬ QBD	--
Tms Rmn light	P	Prop.	8	154	--	¬ QBE	--
Line Printer light	L	16.66	8.5	255	--	¬ QBF	--
		19.0	8.5	*225	--	¬ QBG	--

Font	Orient	Pitch	Point Size	Typestyle No.		Font Charge Command	
				Standard	Legal	Standard	Legal
E Cartridge *Letter Gothic (Roman 8, US ASCII Symbol Set)*							
Letter Gothic med	P	12	12	*84	--	¬ QNA	--
	L	12	10	88	--	¬ QND	--
Letter Gothic bold	P	12	10	97	--	¬ QNB	--
	L	12	10	98	--	¬ QNE	--
Letter Gothic med italic	P	12	10	107	--	¬ QNC	--
	L	12	10	108	--	¬ QNF	--
G Cartridge *Legal Elite (US ASCII Symbol Set)*							
Prestige Elite medium	P	12	10	*80	90	¬QGUA	¬QGLA
Prestige Elite bold	P	12	10	82	92	¬QGUC	¬QGLC
Prestige Elite med italic	P	12	10	81	93	¬QGUB	¬QGLB
Prestige Elite medium	P	16.66	7	*222 (252)	227 (253)	¬QGUD	¬QGLD
	L	16.66	7	261 (250)	228 (254)	¬QGUE	¬QGLE
		19.0	7	214	--	¬QGUF	--
Line Draw Set	P	12	12	110	--	¬QGUB ¬QGF	--

APPENDIX A

Font	Orient	Pitch	Point Size	Typestyle No.		Font Charge Command	
				Standard	Legal	Standard	Legal
H Cartridge *Legal Courier (US ASCII Symbol Set)*							
Courier medium	P	10	12	*20	30	¬ QHUA	¬QHLA
Courier bold	P	10	12	22	32	¬ QHUC	¬QHLC
Courier med italic	P	10	12	21	31	¬ QHUB	¬QHLB
Prestige Elite medium	P	16.66	7	*222 (252)	227 (253)	¬ QHUD	¬QHLD
	L	16.66	7	216 (250)	228 (254)	¬ QHUE	¬QHLE
		19.0	7	214	--	¬ QHUF	--
Line Draw Set	P	10	12	40	--	¬ QHF	--
L Cartridge *Courier P&L (Roman 8 Symbol Set)*							
Courier bold	P	10	12	8	--	¬ QLA	--
	L	10	12	9	--	¬ QLC	--
Courier medium italic	P	10	12	6	--	¬ QLB	--
	L	10	12	7	--	¬ QLD	--
Line Printer Medium	P	16.66	8.5	*221	--	¬QLE	--
	L	16.66	8.5	255	--	¬QLF	--
		19.0	8.5	*225	--	¬QLG	--

Font	Orient	Pitch	Point Size	Typestyle No		Font Change Command	
				Standard	Legal	Standard	Legal
M Cartridge *Prestige Elite (Roman 8 Symbol Set)*							
Prestige Elite medium	P	12	10	*87	--	¬QMA	--
	L	12	10	88	--	¬QMD	--
Prestige Elite bold	P	12	10	97	--	¬QMB	--
	L	12	10	98	--	¬QME	--
Prestige Elite med italic	P	12	10	107	--	¬QMC	--
	L	12	10	108	--	¬QMF	--
N Cartridge *Letter Gothic P&L (Roman 8 Symbol Set)*							
Letter Gothic medium	P	12	12	*84	--	¬ QNA	--
	L	12	12	*85	--	¬ QND	--
Letter Gothic bold	P	12	12	94	--	¬ QNB	--
	L	12	12	95	--	¬ QNE	--
Letter Gothic medium italic	P	12	12	104	--	¬ QNC	--
	L	12	12	105	--	¬ QNF	--
Q Cartridge *Memo 1 (Roman 8 Symbol Set)*							
Courier bold	P	10	12	8	--	¬ QQA	--
	L	10	12	9	--	¬ QQE	--
Courier medium italic	P	10	12	6	--	¬ QQB	--
	L	10	12	7	--	¬ QQF	--

Font	Orient	Pitch	Point Size	Typestyle No.		Font Change Command	
				Standard	Legal	Standard	Legal
Letter Gothic med	P	12	12	*84	--	¬ QQC	--
Letter Gothic bold	P	12	12	94	--	¬ QQD	--
R Cartridge *Presentations 1*							
Presentation bold	P	6.5	18	18 (240)	28 (242)	¬ QRUA	¬QRLA
	L	6.5	18	19 (241)	29 (243)	¬ QRUD	¬ QRLD
Presentation bold	P	8.1	16	16 (260)	26 (262)	¬ QRUB	¬ QRLB
	L	8.1	14	17 (261)	27 (263)	¬ QRUE	¬ QRLE
Presentation bold	P	10	14	14	24	¬ QRUC	¬ QRLC
	L	10	14	15	25	¬ QRUF	¬ QRLF
Letter Gothic medium	P	10	14	*12	34	¬ QRUG	¬ QRLG
	L	10	14	*13	35	¬ QRUH	¬QRLH
PCLine bold	P	10	14	36	--	¬ QRJ	--
	L	10	14	37	--	¬ QRK	--
Line Draw	P	10	14	38	--	¬ QRM	--
	L	10	14	39	--	¬ QRN	--

APPENDIX B

Cabling Specifications

This appendix lists the cable specifications for the parallel printer port and the display module connectors.

Printer Port

The I-O 2677M Display Module has a standard IBM PC parallel printer port that utilizes a standard parallel printer cable with 25-pin male connector on one end and a 36-pin Centronics-type male connector on the other end. The display module printer port is a DB25 connector.

WARNING! DO NOT connect a serial printer cable with an RS-232C connector to the display module's 25-pin connector without using a converter cable. If you do, you will damage the display module. Damage from improper connection to a serial printer is not repairable under the display module's warranty.

APPENDIX B

I-O 2677M Display Module DB25 Printer Port and Cable Connector Pinouts			
Display Station Connector Pin Number	**AT Standard TTL Levels Signal Name**	**Direction of Signal**	**Printer Cable Connector Pin Number**
1	Strobe	To Printer	1
2	Data Bit 0	To Printer	2
3	Data Bit 1	To Printer	3
4	Data Bit 2	To Printer	4
5	Data Bit 3	To Printer	5
6	Data Bit 4	To Printer	6
7	Data Bit 5	To Printer	7
8	Data Bit 6	To Printer	8
9	Data Bit 7	To Printer	9
10	Acknowledge	From Printer	10
11	Busy	From Printer	11
12	P.End (Out of Paper)	From Printer	12
13	Select	From Printer	13
14	Auto Feed	To Printer	14
15	Error	From Printer	32
16	Initialize Printer	To Printer	31
17	Select Input	To Printer	36
18-25	Ground		19, 21, 23, 25, 27, 29, 30, 33

Host Connector

The cable used to connect the display module to the host twinax cable is an auto-terminating, 15-pin V-connector. The 15-pin male connector on the display module has the following printout:

Twinax Cable Pinouts	
Pin Number	**Signal**
1	Shield Ground
2	ITest
3	Shield Ground
4	Shield Ground
5	Shield Ground
6	N/C
7	Y-Phase (IBM "B")
8	Shield Ground
9	Shield Ground
10	Shield Ground
11	Shield Ground
12	Shield Ground
13	Shield Ground
14	B-Phase (IBM "A")
15	Shield Ground

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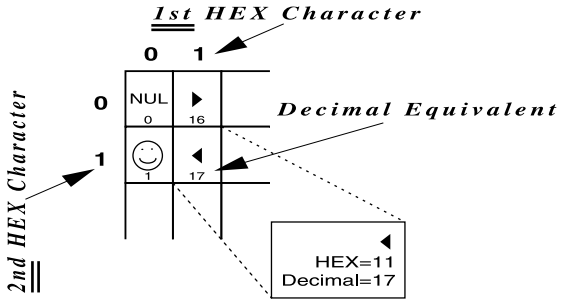
APPENDIX C - Code Conversion Tables

Code Page 850 Symbol Set

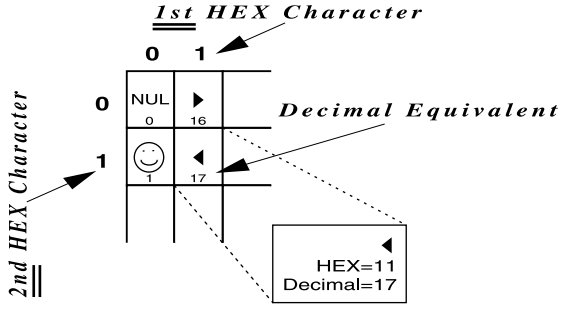
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL 0	▶ 16	32	0 48	@ 64	P 80	` 96	p 112	Ç 128	É 144	á 160	▒ 176	└ 192	ð 208	Ó 224	- 240
1	☺ 1	◀ 17	! 33	1 49	A 65	Q 81	a 97	q 113	ü 129	æ 145	í 161	▓ 177	┴ 193	Ð 209	ß 225	± 241
2	☻ 2	↕ 18	" 34	2 50	B 66	R 82	b 98	r 114	é 130	Æ 146	ó 162	▓ 178	┬ 194	Ê 210	Ô 226	‗ 242
3	♥ 3	‼ 19	# 35	3 51	C 67	S 83	c 99	s 115	â 131	ô 147	ú 163	│ 179	├ 195	Ë 211	Ò 227	¾ 243
4	♦ 4	¶ 20	$ 36	4 52	D 68	T 84	d 100	t 116	ä 132	ö 148	ñ 164	┤ 180	─ 196	È 212	õ 228	¶ 244
5	♣ 5	§ 21	% 37	5 53	E 69	U 85	e 101	u 117	à 133	ò 149	Ñ 165	Á 181	┼ 197	ı 213	Õ 229	§ 245
6	♠ 6	▬ 22	& 38	6 54	F 70	V 86	f 102	v 118	å 134	û 150	ª 166	Â 182	ã 198	Í 214	µ 230	÷ 246
7	• 7	↨ 23	' 39	7 55	G 71	W 87	g 103	w 119	ç 135	ù 151	º 167	À 183	Ã 199	Î 215	þ 231	¸ 247
8	◘ 8	↑ 24	(40	8 56	H 72	X 88	h 104	x 120	ê 136	ÿ 152	¿ 168	© 184	╚ 200	Ï 216	Þ 232	° 248
9	○ 9	↓ 25	) 41	9 57	I 73	Y 89	i 105	y 121	ë 137	Ö 153	® 169	╣ 185	╔ 201	┘ 217	Ú 233	¨ 249
A	◙ 10	→ 26	* 42	: 58	J 74	Z 90	j 106	z 122	è 138	Ü 154	¬ 170	╩ 186	╦ 202	┌ 218	Û 234	· 250
B	♂ 11	← 27	+ 43	; 59	K 75	[91	k 107	{ 123	ï 139	ø 155	½ 171	╗ 187	╠ 203	▓ 219	Ù 235	¹ 251
C	♀ 12	∟ 28	, 44	< 60	L 76	\ 92	l 108	| 124	î 140	£ 156	¼ 172	╝ 188	═ 204	▬ 220	ý 236	³ 252
D	♪ 13	↔ 29	- 45	= 61	M 77	] 93	m 109	} 125	ì 141	Ø 157	¡ 173	¢ 189	╬ 205	¦ 221	Ý 237	² 253
E	♫ 14	▲ 30	. 46	> 62	N 78	^ 94	n 110	~ 126	Ä 142	× 158	« 174	¥ 190	╧ 206	Ì 222	¯ 238	■ 254
F	☼ 15	▼ 31	/ 47	? 63	O 79	_ 95	o 111	⌂ 127	Å 143	ƒ 159	» 175	┐ 191	¤ 207	▬ 223	´ 239	255



APPENDIX C

Code Page 437 Symbol Set

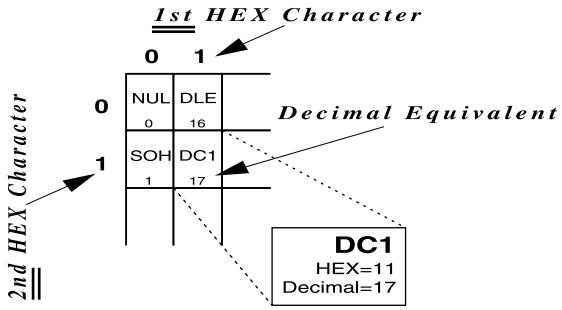
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL 0	16	32	0 48	@ 64	P 80	` 96	p 112	Ç 128	É 144	á 160	176	192	208	α 224	≡ 240
1	1	17	! 33	1 49	A 65	Q 81	a 97	q 113	ü 129	æ 145	í 161	177	193	209	ß 225	± 241
2	2	18	" 34	2 50	B 66	R 82	b 98	r 114	é 130	Æ 146	ó 162	178	194	210	Γ 226	≥ 242
3	3	19	# 35	3 51	C 67	S 83	c 99	s 115	â 131	ô 147	ú 163	179	195	211	π 227	≤ 243
4	4	20	$ 36	4 52	D 68	T 84	d 100	t 116	ä 132	ö 148	ñ 164	180	196	212	Σ 228	⌠ 244
5	5	21	% 37	5 53	E 69	U 85	e 101	u 117	à 133	ò 149	Ñ 165	181	197	213	σ 229	⌡ 245
6	6	22	& 38	6 54	F 70	V 86	f 102	v 118	å 134	û 150	ª 166	182	198	214	µ 230	÷ 246
7	7	23	' 39	7 55	G 71	W 87	g 103	w 119	ç 135	ù 151	º 167	183	199	215	τ 231	≈ 247
8	8	↑ 24	(40	8 56	H 72	X 88	h 104	x 120	ê 136	ÿ 152	¿ 168	184	200	216	Φ 232	° 248
9	9	↓ 25	) 41	9 57	I 73	Y 89	i 105	y 121	ë 137	Ö 153	⌐ 169	185	201	217	θ 233	· 249
A	10	→ 26	* 42	: 58	J 74	Z 90	j 106	z 122	è 138	Ü 154	¬ 170	186	202	218	Ω 234	· 250
B	♂ 11	← 27	+ 43	; 59	K 75	[91	k 107	{ 123	ï 139	¢ 155	½ 171	187	203	219	δ 235	√ 251
C	♀ 12	∟ 28	, 44	< 60	L 76	\ 92	l 108	| 124	î 140	£ 156	¼ 172	188	204	220	∞ 236	n 252
D	♪ 13	↔ 29	- 45	= 61	M 77	] 93	m 109	} 125	ì 141	¥ 157	¡ 173	189	205	221	ø 237	2 253
E	♫ 14	▲ 30	. 46	> 62	N 78	^ 94	n 110	~ 126	Ä 142	Pt 158	« 174	190	206	222	ϵ 238	■ 254
F	☼ 15	▼ 31	/ 47	? 63	O 79	_ 95	o 111	⌂ 127	Å 143	ƒ 159	» 175	191	207	223	∩ 239	255



Roman-8 Symbol Set

Includes US ASCII (dec. 1-127) and Roman Extension Symbol Sets

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL 0	DLE 16	32	0 48	@ 64	P 80	‘ 96	p 112	128	144	160	¯ 176	â 192	Å 208	Á 224	þ 240
1	SOH 1	DC1 17	! 33	1 49	A 65	Q 81	a 97	q 113	129	145	À 161	Ý 177	ê 193	î 209	Ã 225	þ 241
2	STX 2	DC2 18	" 34	2 50	B 66	R 82	b 98	r 114	130	146	Â 162	ý 178	ô 194	Ø 210	ã 226	. 242
3	ETX 3	DC3 19	# 35	3 51	C 67	S 83	c 99	s 115	131	147	È 163	° 179	û 195	Æ 211	Đ 227	µ 243
4	EOT 4	DC4 20	$ 36	4 52	D 68	T 84	d 100	t 116	132	148	Ê 164	Ç 180	á 196	å 212	ð 228	¶ 244
5	ENQ 5	NAK 21	% 37	5 53	E 69	U 85	e 101	u 117	133	149	Ë 165	ç 181	é 197	í 213	Í 229	¾ 245
6	ACK 6	SYN 22	& 38	6 54	F 70	V 86	f 102	v 118	134	150	Î 166	Ñ 182	ó 198	ø 214	Ì 230	— 246
7	BEL 7	ETB 23	' 39	7 55	G 71	W 87	g 103	w 119	135	151	Ï 167	ñ 183	ú 199	æ 215	Ó 231	¼ 247
8	BS 8	CAN 24	(40	8 56	H 72	X 88	h 104	x 120	136	152	´ 168	¡ 184	à 200	Ä 216	Ò 232	½ 248
9	HT 9	EM 25	) 41	9 57	I 73	Y 89	i 105	y 121	137	153	` 169	¿ 185	è 201	ì 217	Õ 233	ª 249
A	LF 10	SUB 26	* 42	: 58	J 74	Z 90	j 106	z 122	138	154	^ 170	¤ 186	ò 202	Ö 218	õ 234	º 250
B	VT 11	ESC 27	+ 43	; 59	K 75	[91	k 107	{ 123	139	155	¨ 171	£ 187	ù 203	Ü 219	Š 235	« 251
C	FF 12	FS 28	, 44	< 60	L 76	\ 92	l 108	| 124	140	156	~ 172	¥ 188	ä 204	É 220	š 236	■ 252
D	CR 13	GS 29	- 45	= 61	M 77	] 93	m 109	} 125	141	157	Ù 173	§ 189	ë 205	ï 221	Ú 237	» 253
E	SO 14	RS 30	. 46	> 62	N 78	^ 94	n 110	~ 126	142	158	Û 174	ƒ 190	ö 206	ß 222	Ÿ 238	± 254
F	SI 15	US 31	/ 47	? 63	O 79	_ 95	o 111	▒ 127	143	159	£ 175	¢ 191	ü 207	Ô 223	ÿ 239	255



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APPENDIX D

Related Documentation

The following documentation may be helpful to you in the installation and operation of the I-O 2677M Display Module.

IBM 5250 Information Display Station Introduction, GA21-9246 Describes the work stations that make up the 5250 information display system and their available functions and features

IBM 5250 Information Display System Planning and Site Preparation Guide, GA21-9337 Information to assist you in planning for the installation, including detailed cabling and switch settings

IBM 5250 Information Display System Functions Reference Manual, SA-21-9247 Describes SNA, SDLC, and Data Streams for 5250 type devices

IBM System/36 Changing Your System Configuration, SC21-9052 Provides instructions and reference information on how to change your system configuration

IBM System/38 Guide to Program Products Installation and Device Configuration, GC21-7775 Provides instructions and reference information on how to change your system configuration

IBM AS/400 Device Configuration Guide, SC21-8106 Provides instructions and reference information on how to change your system configuration

AS/400 Workstation Customization Function Programmer's Guide, **SC41-0056** Provides instructions and reference information on how to remap the keyboard on your system

IBM 3197 Model D Display Station User's Guide, GA18-2545 Identifies functions, controls, features, and how to operate the IBM 3197 Model D

IBM 3197 Model C Display Station User's Guide, GA18-2559 Identifies functions, controls, features, and operation of the IBM 3197 Model C

APPENDIX D

IBM 3180 Display Station Model 2 User's Guide, GA21-9469 Identifies functions, controls, features, and operation of the IBM 3180

IBM 3196 Display Station User's Guide, GA18-2482 Identifies functions, controls, features, and operation of the IBM 3196

IBM 4214 Printer Model 2 Operator's Guide, GC31-2581 Identifies functions, controls, features, and operation of the IBM 4214 Mod 2 Printer

IBM 5219 Printer Models D01/D02 Setup Procedures/Operator's Guide, GA34-0054 Provides information on how to setup and operate the IBM 5219 printer and a description of the printer's features and functions

IBM 5224 Printer Operator's Guide, GA34-0092 Identifies functions, controls, features, and operation of the IBM 5224 Printer

IBM 5225 Printer Models 1, 2, 3 and 4 Operator's Guide, GA34-0054 Identifies functions, controls, features, and operation of the IBM 5225 Printer

IBM 5256 Printer Operator's Guide, GA21-9260 Identifies functions, controls, features, and operation of the IBM 5256 Printer

English

APPENDIX E

The following on-line help screens are available. To enter the on-line Help mode, press <Alt><Alt><Help>.

Help Screen - Screen Functions

Screen Functions

Function	Keystrokes
Cursor Blink, on/off:	ALT, ALT, X
Cursor Position, on/off:	ALT, ALT, K
Cursor Type, block/underline:	ALT, ALT, ERROR RESET
Dim Screen, manually:	ALT, ALT, D
Extended Display Mode, on/off:	ALT, ALT, T
Help Screens, Local:	ALT, ALT, HELP
Jump to Another Session:	ALT, ALT, J or ALT-JUMP
Session Change Within Window:	ALT, ALT, W
Zoom, on/off:	ALT, ALT, Z or a-A or Zoom
Keyboard Click, on/off:	ALT, ALT, A
Parity Error Indicator, on/off:	ALT, ALT, E
Ruler, on/off:	ALT, ALT, R or Rule
Setup Screens:	ALT, ALT, S or Setup
4/8 Colors (color only):	ALT, ALT, V
White Cursor, on/off (color only):	ALT, ALT, Y
Reverse Video (monochrome only):	ALT, ALT, V
Reverse Intensity (monochrome only):	ALT, ALT, Y
Password/Lock:	ALT, ALT, I
Record/Playback Security:	ALT, ALT, ATTN
SPACE BAR = Next help screen	ENTER = Exit help screens

APPENDIX E

Help Screen - Print Functions

Printer Functions

Function	Keystrokes
Cancel Print Job:	ALT, ALT, C
EBCDIC HEX Print Mode:	ALT, ALT, B
Start or Stop Printer:	ALT, ALT, PRINT
Local Screen Print:	ALT, ALT, O
Form Feed:	ALT, ALT, F
Line Feed:	ALT, ALT, L
Test Pattern Print:	ALT, ALT, P
Printer Code Editor:	ALT, ALT, U

SPACE BAR = Next help screen ENTER = Exit help screens

Help Screen - Status Line Indicators

Status Line Indicators

Indicator		Explanation
Display:	Ready	Display communicating with host system
	Not Ready	Display not communicating with host system
	Disabled	Display has been disabled on the setup screen
^		Insert mode active
↑		Keyboard shift
x		Input inhibited
ð		Diacritic mode active
MSG		Message waiting
Printer:	Ready	Printer communicating with host system
	No Line Sync	Printer not communicating with host system
	Disabled	Printer has been disabled on the setup screen
	Off Line	Attached printer is off-line
	Stopped	Printer has been stopped by operator
Printer:		Printer is in EBCDIC HEX print mode

SPACE BAR = Next help screen ENTER = Exit help screen

ANHANG E

Die folgenden on-line-Hilfsanzeigen sind erhältlich. Drücken der Tasten <Alt> <Alt> <Bed Hilfe> bewirkt den Eingang in den Hilfsmodus.

Bedienungshilfe 1 von 3

Bildschirmfunktionen

Funktionen	Tasteneingabe
Cursor Programmgesteuert, ein/aus:	ALT, ALT, X
Cursorposition, ein/aus:	ALT, ALT, K
Cursortyp, Block/Strich:	ALT, ALT, Grdst
Dunkelschaltung, manuell:	ALT, ALT, D
Erweiterte Anzeige, ein/aus:	ALT, ALT, T
Bedienungshilfe:	ALT, ALT, Bed Hilfe
Sprung zum nächsten logischen Bildschirm:	ALT, ALT, J oder ALT-Sprg
Wechseln des log. Bildschirmes im Fenster:	ALT, ALT, W
Split screen, ein/aus:	ALT, ALT, Z oder a-A oder Zoom
Tastaturklicker, ein/aus:	ALT, ALT, A
Paritätsfehler-Anzeige, ein/aus:	ALT, ALT, E
Lineal, ein/aus:	ALT, ALT, R oder Linie
Konfigurationsmenüs:	ALT, ALT, S oder Bs Defin
4/8-Colors (Farb nur):	ALT, ALT, V
Weiß cursor, ein/aus (Farb nur):	ALT, ALT, Y
Umkenr Anzerge, ein/aus (monochrom nur):	ALT, ALT, V
Reverse Intensities on/off:	ALT, ALT, Y
Passwort/Sperre:	ALT, ALT, I
Aufnahme/Wiedergabe Sicherung:	ALT, ALT, Abruf

LEERTASTE = Nächste Hilfs-Seite
TASTE "DAT FREIG" = Bedienungshilfe verlassen

Deutsch

ANHANG E

Bedienungshilfe 2 von 3

Druckerfunktionen

Funktionen	Tasteneingabe
Druckauftrag löschen:	ALT, ALT, C
EBCDIC HEX Druckmodus:	ALT, ALT, B
Drucker, stoppen/starten:	ALT, ALT, Druck
Bildschirminhalt drucken (lokal):	ALT, ALT, O
Formularvorschub (Form feed):	ALT, ALT, F
Zeilenvorschub:	ALT, ALT, L
Testmuster drucken:	ALT, ALT, P
Drucker-Befehls Editor:	ALT, ALT, U

LEERTASTE = Nächste Hilfs-Seite
TASTE "DAT FREIG" = Bedienungshilfe verlassen

Bedienungshilfe 3 von 3

Statusanzeigen

Anzeige		Erklärung
Bildsch:	Bereit	Bildschirm hat Systemverbindung
	Nicht Ber	Bildschirm hat keine Systemverbindung
	Außer Betr	Bildschirm wurde in Konfigurationsmenü nicht definiert
^		Einfügemodus aktiv
↑		Tastaturumschaltung
X		Eingabe unterdrückt
ð		Diakritischer Modus aktiv
MSG		Nachricht wartet
Drucker:	Bereit	Drucker hat Systemverbindung
	Kein Sync	Drucker hat keine Systemverbindung
	Außer Betr	Drucker wurde in dem Konfigurationsmenü nicht definiert
	Off Line	Angeschlossener Drucker ist Off-Line
	Gestoppt	Drucker wurde vom Bediener gestoppt
Drucker:		Drucker befindet sich im EBCDIC HEX Druckmodus

LEERTASTE = Nächste Hilfs-Seite
TASTE "DAT FREIG" = Bedienungshilfe verlassen

APPENDICE E

Les écrans d'assistance en ligne suivants peuvent être affichés sur votre moniteur. Pour entrer en mode d'assistance en ligne, appuyez simultanément sur les touches <Alt>, <Alt> et <Aide> du clavier.

Ecran d'aide 1 de 3

Fonctions de l'ecran

Fonction	Touches
Curseur Clignotant, actif/inactif:	ALT, ALT, X
Position du curseur, actif/inactif:	ALT, ALT, K
Forme du curseur, pavé/souligné:	ALT, ALT, REST
Intensité de l'écran, réglage manuel:	ALT, ALT, D
Mode Affichage étendu, actif/inactif:	ALT, ALT, T
Ecrans d'aide, locaux:	ALT, ALT, AIDE
Changement de session:	ALT, ALT, J ou ALT-SAUT
Changement de session dans la fenêtre:	ALT, ALT, W
Zoom, on/off:	ALT, ALT, Z ou Zoom
Déclic du clavier, actif/inactif:	ALT, ALT, A
Indicateur d'erreur de parité, actif/inactif:	ALT, ALT, E
Règle, actif/inactif:	ALT, ALT, R ou TRAIT
Ecrans de configuration:	ALT, ALT, S ou CONFIG
4/8 Colors (couler only):	ALT, ALT, V
White cursor, actif/inactif (couler only):	ALT, ALT, Y
Videó inversée, on/off (monochrome only):	ALT, ALT, V
Reverse Intensity (monochrome only):	ALT, ALT, Y
Verrou par mot de passe:	ALT, ALT, I
Sécurité de Mémorisation/Exécution:	ALT, ALT, ATTN

BARRE D'ESPACEMENT = Ecran d'aide suivant
ENTRÉE = Sortie des écrans d'aide

Français

APPENDICE E

Ecran d'aide 2 de 3

Fontions de l'imprimante

Fonction	Touches
Annuler l'impression:	ALT, ALT, C
Mode d'impression EBCDIC HEX:	ALT, ALT, B
Mettre en marche ou arreter l'imprimante:	ALT, ALT, IMPR
Impression de l'écran local:	ALT, ALT, O
Avancement de page:	ALT, ALT, F
Avancement de ligne:	ALT, ALT, L
Test d'impression:	ALT, ALT, P
Éditeur de code d'Imprimante:	ALT, ALT, U

BARRE D'ESPACEMENT = Ecran d'aide suivant
ENTRÉE = Sortie des écrans d'aide

Ecran d'aide 3 de 3

Ligne d'etat (en bas de l'écran)

Etat		Explication
Affichage:	Prêt	Affichage en communication avec le système central
	Pas prêt	Affichage ne communique pas avec le système central
	Désactivé	Affichage désactivé sur l'écran de configuration
^		Mode insertion actif
↑		Clavier en majuscule
X		Clavier verrouillé
ð		Mode diacritique actif
MSG		En attente de message
Imprim.:	Prête	Imprimante en communication avec le système central
	Sans ligne	Imprimante ne communique pas avec le système central
	Desactivée	Imprimante desactivée sur l'écran de configuration
	Hors ligne	Imprimante connectée est hors ligne
	Arrêtée	Imprimante arrêtée par l'operateur
Imprim.:		Imprimante est en mode d'impression EBCDIC HEX

BARRE D'ESPACEMENT = Ecran d'aide suivant
ENTRÉE = Sortie des écrans d'aide

APÉNDICE E

Las siguientes pantallas de ayuda en línea están disponibles. Para entrar al modo de ayuda en línea, pulse <Alt><Alt><Ayuda>.

Pantalla de ayunda 1 de 3

Funciónes de la pantalla

Función	Teclas
Suprimir Cursor Intermitente, activar/desactivar:	ALT, ALT, X
Posición del cursor, encendido/apagado:	ALT, ALT, K
Tipo de cursor, bloque/subrayado:	ALT, ALT, REST
Luminosidad baja de pantalla, manual:	ALT, ALT, D
Visualización de códigos, encendido/apagado:	ALT, ALT, T
Pantallas de ayuda, local:	ALT, ALT, AYUDA
Pasar a otra sesión:	ALT, ALT, J o ALT-SALTO
Cambio de sesión dentro de la ventana:	ALT, ALT, W
Zoom, encendido/apagado:	ALT, ALT, Z or a-A o ZOOM
Ruido del teclado, encendido/apagado:	ALT, ALT, A
Indicar error de paridad, encendido/apagado:	ALT, ALT, E
Regla, encendido/apagado:	ALT, ALT, R o ESCAL
Pantalla de configuración:	ALT, ALT, S o ESTBL
4/8 Colores (solo colores):	ALT, ALT, V
Cursor blanco, encendido/apagado (solo colores):	ALT, ALT, Y
Video Invertido, on/off (solo mono):	ALT, ALT, V
Reverse Intensities on/off:	ALT, ALT, Y
Clave/Bloqueo de pantalla:	ALT, ALT, I
Seguridad para Reproducción teclado:	ALT, ALT, ATENC

BARRA ESPACIADORA = Siguiente pantalla
INTRO = Salida de pantallas de ayuda

Español

APÉNDICE E

Pantalla de ayuda 2 de 3

Funciónes de la impresora

Función	Teclas
Cancelar impresión:	ALT, ALT, C
Modo de impresión EBCDIC HEX:	ALT, ALT, B
Iniciar o parar impresión:	ALT, ALT, IMPR
Impresión de pantalla local:	ALT, ALT, O
Alimentación de formularios:	ALT, ALT, F
Alimentación de línea:	ALT, ALT, L
Prueba de patrón de impresión:	ALT, ALT, P
Editor Códigos Impresora:	ALT, ALT, U

BARRA ESPACIADORA = Siguiente pantalla
INTRO = Salida de pantallas de ayuda

Pantalla de ayuda 3 de 3

Indicadores de estado de linea

Indicador		Explicacion
Terminal:	Lista	Terminal comunicandose con el ordenador
	No lista	Terminal no se comunica con el ordenador
	Inhibida	Terminal inhibida en la pantalla setup
^		Inserte el modo activo
↑		Cambio del teclado
X		Entrada inhibida
ð		Modo diacrítico activado
MSG		Mensaje espera
Impres.:	Lista	Comunicación de impresora con el ordenador
	Sin Línea	La impresora no se comunica con el ordenador
	Inhibida	La impresora se ha inhibido en la pantalla setup
	Fuera de L.	La impresora conectada está fuera de linea
	Parada	El operador ha parado la impresora
Impres.:		La impresora está en el modo de impresión EBCDIC HEX

BARRA ESPACIADORA = Siguiente pantalla
INTRO = Salida de pantallas de ayuda

APÊNDICE E

Para utilizar as funções do módulo de visualização tem disponível. Para aceder ao modo Ajuda em linha, prima <Alt><Alt><Help>.

Écran de Ajudas 1 de 3

Funções do Écran

Funções	Teclas
Variação da Luminosidade do Cursor, liga/desliga:	ALT, ALT, X
Posicão do cursor, liga/desliga:	ALT, ALT, K
Tipo de cursor, bloco/sublinhado:	ALT, ALT, RESET
Escurecimento Manual do Écran:	ALT, ALT, D
Visual Extendido, liga/desliga:	ALT, ALT, T
Ajudas Locais:	ALT, ALT, HELP
Saltar a Outra Sessão:	ALT, ALT J ou ALT JUMP
Câmbio de Sessão dentro do Quadro:	ALT, ALT, W
Zoom, liga/desliga:	ALT, ALT, Z ou a-A ou Zoom
Som do teclado, liga/desliga:	ALT, ALT, A
Indicador de Erro de Paridad, liga/desliga:	ALT, ALT, E
Régua, liga/desliga:	ALT, ALT, R ou Rule
Écrans de Disposição:	ALT, ALT, S ou SETUP
4/8-Colores (colores):	ALT, ALT, V
White Cursor, liga/desliga (colores):	ALT, ALT, Y
Video reverso, liga/desliga (mono):	ALT, ALT, V
Reverse Intensities, on/off (mono):	ALT, ALT, Y
Senha/Trava:	ALT, ALT, I
Gravação/Cópia de Segurança:	ALT, ALT, ATTN

BARRA de ESPACEJAMENTO = Pròmixo Écran de Ajudas
ENTER = Sair das Ajudas

Português

APÊNDICE E

Écran de ajudas 2 de 3

Funções da Impressora

Função	Teclas
Cancelar impresão	ALT, ALT, C
Modalidade de Impresão EBCDIC HEX:	ALT, ALT, B
Partida ou Parada de Impressora:	ALT, ALT, Print
Impresão de Écran local:	ALT, ALT, O
Alimentação de formulários:	ALT, ALT, F
Avança de Linhas:	ALT, ALT, L
Impresão da Matrix de Prova:	ALT, ALT, P
Código Editor Impressora:	ALT, ALT, U

BARRA de ESPACEJAMENTO = Pròmixo Écran de Ajudas
ENTER = Sair das Ajudas

Écran de Ajudas 3 de 3

Indicações da Linha de estado

Indicação		Explicação
Visual:	Pronto	Visual em comunicação com sistema principal
	Não Pronto	Visual não em comunicação com sistema prinicipal
	Desativado	Visual foi desativado no écran de disposição
^		Está em função a Modilidade de Inserção
-		Maiúsculas do Teclado
X		Entrada Inibida
ð		Está em função a Modilidade diacrítica
MSG		Recado esperando
Impres:	Pronta	Impressora em comunicação com sistema principal
	Falta Sinc	Impressora não em comunicação com sistema prinicipal
	Desativada	Impressora foi desativada no écran de disposição
	Fora Linha	Impressora ligada está fora-de-linha
	Parada	Impressora foi parada pelo operador
	Impress:	Impressora está em modalidade de impressão EBCDIC HEX

BARRA de ESPACEJAMENTO = Pròmixo Écran de Ajudas
ENTER = Sair das Ajudas

APPENDIX F

Twinax Monitor Mode

The Twinax Monitor Mode feature of the 2677M Display Module was designed to be a simple yet effective twinax line monitoring tool. It has several useful functions, such as:

- Verifying that the cable and host are connected and communicating.
- Determining which host addresses are currently in use, and which are available for use.
- Diagnosing various cabling problems.
- Identifying defective twinax devices, or pigtails.

When the 2677M Display Module is operating in Twinax Monitor Mode, it does not communicate with the host, therefore it does not require, nor use, any host addresses. The Twinax Monitor Mode simply monitors, or "listens," to the communications between the host and all active twinax devices on the same cable. The display module's own session addresses are automatically disabled whenever Twinax Monitor Mode is in use, and reactivated upon exiting the Twinax Monitor Mode.

To enter the twinax monitor mode screen, power off the display module press and hold <RESET> until the setup screen appears, then press the <T> key.

Once the Twinax Monitor Mode screens appears, you will see seven columns, numbered 0 through 6, representing the seven possible host addresses. Each column lists a total count for all "Polls" from the host, both "Responses" and "Parity Err" from all active twinax devices, and any "Commands," and "Data" transmissions going across the cable. At the lower, middle portion of the screen are the "FB Err" (first-byte errors), "AB Err" (all-byte errors), and "BF Err" (bad formation errors) total error counts. Also shown is the time, in minutes, that the Twinax Monitor Mode has been running. All of the error counts go from 0 to 65535, and then start back over at 0. A spinning character, at the top of the screen, indicates that the Twinax Monitor Mode is currently running.

To exit the Twinax Monitor Mode, simple press any key. The display module will beep and re-enter the self test diagnostics.

APPENDIX F

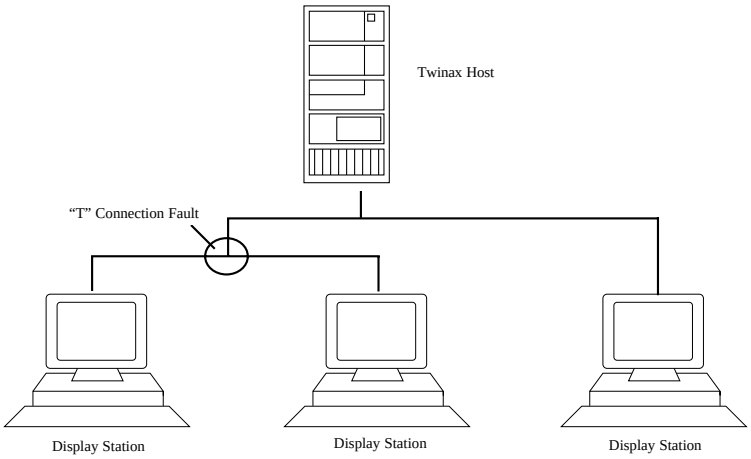
Troubleshooting With The Twinax Monitor Mode

Knowing a little about twinax communications and how the Twinax Monitor Mode works can be very useful for troubleshooting various twinax problems. Included below, is a outline for using the Twinax Monitor Mode to diagnose a variety of twinax problems.

As part of the normal twinax communications, all active twinax devices detect a parity errors and automatically report the errors to the host. The Twinax Monitor Mode counts each of the parity errors as they are reported to the host, and displays the results under the "Parity Err" error counts. The Twinax Monitor Mode also has the unique ability to identify three different points at which an error can occur in the transmission. This information is displayed under the "FB Err," "AB Err" and "BF Err" error counts.

First-byte errors are parity errors that occur in the first byte of the transmission. The first byte of a transmission contains the address of the device intended to receive that transmission. If the first byte of a transmission somehow becomes corrupted, then the intended address cannot be determined. Since most parity errors are generated due to faulty conditions, such as a bad cable or twinax device, naturally the first sign of an error is in the first byte of a transmission. This is why first-byte errors are so common.

For example, if only some active addresses are reporting parity errors, while other active addresses are not showing errors, this is most likely some sort of cable problem in between those twinax devices whose addresses are working and the other twinax devices that are reporting parity errors. Cable problems, which are a very common, can result from improper cable termination, excessively "T'd" cables, cables with poor solder joints or corroded connectors, faulty connections, and shorted cables (see figure on next page).



Other problems that the Twinax Monitor Mode can help diagnose are defective twinax devices, and defect pigtails. These sorts of problems would be indicative of the Twinax Monitor Mode reporting parity errors for all of the active addresses of a particular twinax device, while the rest of the twinax devices do not report parity errors for their active addresses.

All-byte parity errors are errors that occur in the transmission at some point after the first byte. Bad formation errors are parity errors that result from the lose of the mid-bit signal transition, and can occur at any time during the transmission. Errors in either of these two categories are usually less frequent. The cause of these errors are usually random noise or glitches caused by power line spikes, or possibly lightning strikes, that occur during the transmission. Other potential sources include a twinax device with a faulty transmitter, and various cable problems.

Other Uses For The Twinax Monitor Mode

The Twinax Monitor Mode can also be useful for determining which host address are available, simple by noting those twinax addresses which are polled, and do not show any responses or other activity.

On some host systems, the user can learn to tell whether an active address is being used by a display or printer. This is because, some systems poll printers at a different rate than they poll displays.

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Manufacturer's Three Year Limited Warranty (United States)

The following warranty applies only to products purchased and operated within the United States.

I-O Corporation (I-O) warrants this product against defects in material and workmanship for a period of three years commencing from date of purchase by the original end-user, when operated and maintained in accordance with I-O's published specifications. I-O's liability shall be limited, at its option and expense, to refund to original end-user the actual amount paid by original end-user or to repair or replace any defective or nonconforming product or part thereof, F.O.B. I-O's authorized repair depot. Original end-user may obtain a replacement product by meeting the terms of the I-O Customer On-Site Exchange Repair Policy in effect at the time of the request.

THE EXPRESS WARRANTY SET FORTH ABOVE IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. OTHERWISE, THE PRODUCTS ARE SOLD AS IS WITHOUT FURTHER OBLIGATION OR LIABILITY ON THE PART OF I-O. I-O EXPRESSLY EXCLUDES ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

EXCEPT AS EXPRESSLY SET FORTH HEREIN, IN NO EVENT SHALL I-O BE LIABLE FOR ANY CLAIMS OR DAMAGE ARISING DIRECTLY OR INDIRECTLY FROM THE FURNISHING OR FAILURE TO FURNISH PRODUCTS, SPARE OR REPLACEMENT PARTS, INFORMATION OR SERVICES HEREUNDER. UNDER NO CIRCUMSTANCES SHALL I-O BE LIABLE IN ANY WAY FOR INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO LOST BUSINESS OR PROFITS, WHETHER OR NOT FORESEEABLE AND WHETHER OR NOT BASED ON BREACH OF WARRANTY, CONTRACT, OR NEGLIGENCE.

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Customer On-Site Exchange Repair Policy

Terms, Conditions, and Limitations
Effective May 1, 1994[a]

For products covered by the I-O Corporation (I-O) Manufacturer's Limited Warranty (United States), I-O's Customer On-Site Exchange (COE) Repair Policy provides customers with a replacement unit for a defective product, subject to the following terms and conditions:

Call Customer Support

- If a product fails call I-O Customer Support for assistance at (801) 972-1446.

Verify Product Failure

- I-O will verify the product serial number, warranty coverage and product failure.

* You are responsible for assisting in verifying the product failure.

- When I-O Customer Support verifies a product failure they will issue a Return Merchandise Authorization (RMA) number for the failed product.

Replacement Units

- Replacement units are shipped from I-O's stock of refurbished units, subject to availability.

- Replacement units carry the same warranty as remaining on the original product.

- I-O's COE Repair Policy applies only to warranted product failures. Buyer guarantees payment for non-warranted product repairs or replacement.

Customer On-Site Exchange Repair Policy
(Continued)

Return Your Failed Unit

- When you return the failed product it must be shipped freight prepaid. Always note the RMA number on the outside of the package.

Install the Replacement Unit

- You are responsible for installing the replacement unit.
- After receiving the replacement unit please call I-O Customer Support if any assistance is required.

[a] I-O reserves the right to change the terms and conditions of this policy without notice.

Manufacturer's Three Year Limited Warranty (International)

The following warranty applies only to products purchased or operated outside the United States.

I-O Corporation (I-O) warrants this product against defects in material and workmanship for a period of three years commencing from date of purchase by the original end-user, when operated and maintained in accordance with I-O's published specifications. I-O's liability shall be limited, at its option and expense, to refund to original end-user the actual amount paid by original end-user or to repair or replace any defective or nonconforming product or part thereof, F.O.B. I-O's author ized repair depot. Original end-user may obtain warranty service by meeting the terms of the I-O Return-to-Depot Repair Policy in effect at the time of the request.

THE EXPRESS WARRANTY SET FORTH ABOVE IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. OTHERWISE, THE PRODUCTS ARE SOLD AS IS WITHOUT FURTHER OBLIGATION OR LIABILITY ON THE PART OF I-O. I-O EXPRESSLY EXCLUDES ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

EXCEPT AS EXPRESSLY SET FORTH HEREIN, IN NO EVENT SHALL I-O BE LIABLE FOR ANY CLAIMS OR DAMAGE ARISING DIRECTLY OR INDIRECTLY FROM THE FURNISHING OR FAILURE TO FURNISH PRODUCTS, SPARE OR REPLACEMENT PARTS, INFORMATION OR SERVICES HEREUNDER. UNDER NO CIRCUMSTANCES SHALL I-O BE LIABLE IN ANY WAY FOR INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO LOST BUSINESS OR PROFITS, WHETHER OR NOT FORESEEABLE AND WHETHER OR NOT BASED ON BREACH OF WARRANTY, CONTRACT, OR NEGLIGENCE.

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Return-to-Depot Repair Policy

Terms, Conditions, and Limitations
Effective May 1, 1994a

For products covered by the I-O Corporation (I-O) Manufacturer's Limited Warranty (International), I-O's Return-to-Depot (RTD) Repair Policy provides customers with warranty service for a defective product, subject to the following terms and conditions:

Call Customer Support

- If a product fails call I-O Customer Support for assistance at:

  (801) 972-1446 for all locations outside the United States.

Verify Product Failure

- I-O will verify the product serial number, warranty coverage and product failure.
- You are responsible for assisting in verifying the product failure
- When I-O Customer Support verifies a product failure they will issue a Return Merchandise Authorization (RMA) number to authorize return of the failed product.

Select Your Preferred Repair Location

- I-O's Customer Support Representative will assist you in identifying the nearest I-O authorized repair depot.
- I-O's Customer Support Representative will provide you with an RMA transmittal form referencing the assigned RMA number and the authorized repair depot address.

Return-to-Depot Repair Policy

(Continued)

Return Your Failed Unit

- Return the failed product to the I-O authorized repair depot previously identified, enclosing the RMA transmittal form. When you return the failed product it must be shipped freight prepaid.

- I-O's RTD Repair Policy applies only to warranted product failures. Buyer guarantees payment for non-warranted product repairs.

Install Your Repaired Unit

- I-O's authorized repair depot will service the faulty unit and return it to you, freight prepaid.

- You are responsible for installing the returned unit.

- After receiving the repaired unit please call I-O Customer Support if any assistance is required.

[a] I-O reserves the right to change the terms and conditions of this policy without notice.

Manufacturer's Three Year Limited Warranty (European Area)

The following warranty applies only to products purchased and operated within the European Area.

I-O Corporation (I-O) warrants this product against defects in material and workmanship for a period of three years commencing from date of purchase by the original end-user, when operated and maintained in accordance with I-O's published specifications. I-O's liability shall be limited, at its option and expense, to refund to original end-user the actual amount paid by original end-user or to repair or replace any defective or nonconforming product or part thereof, F.O.B. I-O's authorized repair depot. Original end-user may obtain a replacement product by meeting the terms of the I-O Customer On-Site Exchange Repair Policy in effect at the time of the request.

THE EXPRESS WARRANTY SET FORTH ABOVE IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. OTHERWISE, THE PRODUCTS ARE SOLD AS IS WITHOUT FURTHER OBLIGATION OR LIABILITY ON THE PART OF I-O. I-O EXPRESSLY EXCLUDES ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

EXCEPT AS EXPRESSLY SET FORTH HEREIN, IN NO EVENT SHALL I-O BE LIABLE FOR ANY CLAIMS OR DAMAGE ARISING DIRECTLY OR INDIRECTLY FROM THE FURNISHING OR FAILURE TO FURNISH PRODUCTS, SPARE OR REPLACEMENT PARTS, INFORMATION OR SERVICES HEREUNDER. UNDER NO CIRCUMSTANCES SHALL I-O BE LIABLE IN ANY WAY FOR INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO LOST BUSINESS OR PROFITS, WHETHER OR NOT FORESEEABLE AND WHETHER OR NOT BASED ON BREACH OF WARRANTY, CONTRACT, OR NEGLIGENCE.

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Customer On-Site Exchange Repair Policy

Terms, Conditions, and Limitations
Effective June 1, 1997[a]

For products covered by the I-O Corporation (I-O) Manufacturer's Limited Warranty (European Area), I-O's Customer On-Site Exchange (COE) Repair Policy provides original end-users with a replacement unit for a defective product, subject to the following terms and conditions:

Call Customer Support

- If a product fails call I-O Customer Support for assistance at 44(0) 1908 567722.

Verify Product Failure

- I-O will verify the product serial number, warranty coverage and product failure.
- You are responsible for assisting in verifying the product failure.
- When I-O Customer Support verifies a product failure they will issue a Return Merchandise Authorization (RMA) number for the failed product.

I-O Ships Replacement Unit

- Replacement units are shipped from I-O's stock of refurbished units, subject to availability.
- I-O will invoice you for full retail value of the replacement unit upon shipment from I-O.
- Replacement units carry the same warranty as remaining on the original product.
- I-O's COE Repair Policy applies only to warranted product failures. You must pay for non-warranted product repairs or replacement.

Customer On-Site Exchange Repair Policy
(Continued)

Return Your Failed Unit

- When you return the failed product it must be shipped freight prepaid. To insure proper tracking always note the RMA number on the outside of the package.
- I-O will issue you a credit (reversing the replacement unit invoice amount) when the failed product is received by I-O.
- If you do not return the failed product (or pay the replacement unit invoice) within 14 calendar days of the date the replacement unit is shipped from I-O, your warranty coverage and service will be suspended on all I-O products you own.

Install the Replacement Unit

- You are responsible for installing the replacement unit.
- After receiving the replacement unit please call I-O Customer Support if any assistance is required.

[a] I-O reserves the right to change the terms and conditions of this policy without notice.

GLOSSARY

active session - The host session currently being used, as opposed to an inactive session.

address - The location, such as device or session, where data is entered and stored.

application - A software program.

ASCII (American Standard Code for Information Interchange) - A specific code page commonly used in PC printers and ASCII displays. Systems that link printers to IBM Systems must include a translating device to connect the two codes. (Most IBM systems use EBCDIC).

attribute - A characteristic, such as bold, italic, blinking, underline, etc.

auto configure - Configures a program or system automatically during the initialization process.

blank character - A character that is invisible but occupies a position on the display screen.

buffer - An area in the memory that holds data temporarily.

character - A letter of the alphabet, a number, punctuation mark, or any other symbol that represents information.

character set - A set of alphabetic, numeric, and special characters that may be displayed or printed by the system unit or device.

code page - Set of coded characters often displayed as an array or code table.

column separator - A dot or vertical line used to separate one column in a field from another column. Also used to delineate all the columns of a field.

command keys - The keys on the top row(s) of the keyboard that are used to request a preassigned function of the system.

Command Pass-Thru™ - This feature allows access to all built-in features of a printer, even if these features are not normally available through the host software. Printer-specific command sequences are placed into the data sent to the printer from the host. The display station recognizes these sequences and "passes the command through" to the printer.

configuration - Software setup of a computer program or system.

GLOSSARY

connector - A plug connected to a cable which fastens to a port on the back of a device.

CPI (characters per inch) - The number of characters per inch of paper. A measure of "pitch."

cursor - A visual indicator of the position that data entry will occur.

default - The value assumed when no other value is specified.

default setting - The standard setting for a feature which automatically appears unless the user selects a different setting.

delimiter - A character that marks the beginning and/or end of a unit of data.

display screen - A cathode ray tube that is used to display alphanumeric characters.

display station - An input/output device containing a display screen and an attached keyboard. Also known as a terminal.

dot matrix - A text printer that prints a series of dots to create characters.

duplex - Prints on both sides of the paper.

EBCDIC (Extended Binary Coded Decimal Interchange Code) - A standard computer character set used to represent 256 standard characters. IBM systems use EBCDIC coding.

emulation - The duplication or imitation of one device by another device.

FGID (Font Global Identifier) - Font identifier used by IBM to standardize typestyle numbers used globally.

field attributes - Control characters stored in the character buffer in the first character position of a field. These control characters determine the attributes in effect for the field, such as underlining, blinking, reverse video, etc.

field - Defined area in which the same type of information is regularly recorded.

font - (1) A collection of characters of a given typeface and size; (2) Used generically to mean the collection of coded fonts, font character sets, and code pages; (3) A font file that contains characters that must be used in conjunction with a code page file.

form feed - (1) The advancing of a form in the printer to the top of the next page by a code sent to

the printer from the computer; (2) The code that causes the advance.

hex (hexadecimal) - A number system with a base of sixteen. Symbols used are digits 0-9 and alpha A-F.

hex transparency - See Command Pass-Thru .

host - The central controlling processing unit in a twinax environment.

HP mode - Third party printer (if compatible) will receive HP Laserjet commands.

IBM mode - Third party printer that will receive IBM Laserjet commands.

intensity - The brightness level used to display characters on the screen.

key click - Keys will make clicking sounds when depressed unless disabled.

landscape - A printing orientation in which the text prints across the length of a page.

LED (light emitting diode) - A light located on the front of the display station that lights up when the display station is powered on.

line feed - A character code that advances the cursor in the printer to the next line.

LPI (lines per inch) - The number of lines per vertical inch of paper.

pitch - The number of characters per horizontal inch, or positioning intervals of characters in a line of text. See CPI.

portrait - A printing orientation in which the text prints across the width of a page.

power saver mode - Conserves energy by blanking the screen of the display.

PPDS (Personal Printer Data Stream) - A printer programming language for some IBM laser printers.

RAM (Random Access Memory) - A storage device in which data is entered and retrieved in a non-sequential manner.

record/playback - Keyboard macro used to save and play back keystrokes.

scan code - Code used to transmit data from the keyboard to the host.

session - An active connection between the display station and a

host system. A session is opened when the user signs on.

set text orientation - Text is printed in a specified orientation regardless of paper size when this command is used.

simplex - Prints only one side of the paper.

status line - A line on the screen that displays information to the operator concerning the processing of the text and the status of the terminal.

truncate - Discards or breaks off a part of a number or character string.

twisted pair - A pair of small diameter insulated wires commonly used in telephone cables that are twisted around each other to minimize interference from other wires in the cable.

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DECLARATION OF CONFORMITY

EUROPEAN COMMUNITY COMPLIANCE STATEMENT:

This product is in conformity with the protection requirements of EC Council Directives 72/23/EEC, and 89/336/EEC on the approximation of the laws of the Member States relating to: Standard EN60950 (Safety of Information Technology Equipment); Standard EN50082-1 (Generic Immunity Standard for Residential, Commercial, and Light Industrial Products); and Standard EN55022 (Limits and Methods of Measurement of Radio Interference from Information Technology Equipment).

WARNING: This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

DECLARATION OF CONFORMITY

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