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# Preface

This manual describes how to install and start up a MAXserver 6025 X.25 Gateway. It includes information on hardware installation, software installation guidelines, and cabling. The manual also explains how to use the MAXserver ROM Configuration menu.

## Organization

This manual is organized as follows:

**Chapter 1 Introduction** This chapter Briefly describes the functions and capabilities of the MAXserver 6025 X.25 Gateway. This chapter also describes software requirements and explains how the MAXserver 6025 loads its software and parameters.

**Chapter 2 Installing the MAXserver 6025** This chapter describes the hardware installation procedures and explains how to initialize a connected serial device.

**Chapter 3 Troubleshooting** This chapter describes what to do if you encounter a problem during the installation or while the MAXserver 6025 is loading software. This chapter explains how the MAXserver 6025 indicates errors and how to reset the unit. This chapter also describes how to troubleshoot network loading problems.

**Chapter 4 Using the ROM Configuration Menu** This chapter explains how to gain access to the ROM configuration menu and describes the menu options.

**Appendix A Technical Specifications** This appendix provides MAXserver 6025 technical specifications.

**Appendix B Cabling Considerations** This appendix describes cabling considerations and options you should be aware of when installing a MAXserver 6025.

## Related Publications

The following publications contain information that is helpful to MAXserver X.25 Gateway administrators. You can order copies directly from *Xyplex, Inc., 330 Codman Hill Road, Boxborough MA, 01719.*

Document	Purpose
<i>MAXserver X.25 Gateway Release Notes</i>	Describes special considerations and any known problems pertaining to the MAXserver X.25 Gateway software.
<i>Managing the MAXserver X.25 Gateway</i>	Explains how to configure the X.25 Gateway for use in a packet switched network (PSN), and make connections to other devices in the network. It includes descriptions of PAD commands, PAD parameters and MAXserver X.25 Gateway commands.
<i>Software Installation Guide</i> <ul style="list-style-type: none"><li>- UNIX</li><li>- VAX/VMS</li><li>- MAXserver Loader</li></ul>	These guides describe the procedures and tools that you use to install and configure Xyplex software on UNIX, VAX/VMS, and MAXserver loader platforms. (You need this manual if your MAXserver 6025 will load software from a network load server, rather than with diskette.)

End of Preface

# Chapter 1

## Introduction to the MAXserver 6025 X.25 Gateway

The Xyplex MAXserver® X.25 Gateway links devices on an Ethernet™ local area network (LAN) to a packet-switched network (PSN). It converts data from a TCP/IP or LAT® session into X.25 packets and converts X.25 packets into data for a TCP/IP, LAT, or TN3270 session. With the MAXserver X.25 Gateway, LAN users can gain access to remote X.25 resources such as terminals, printers, hosts, and databases, and X.25 network users can gain access to LAN resources such as terminals, printers, UNIX® hosts, VAX™ hosts, and IBM hosts.

Other MAXserver 6025 features include these:

- X.25 protocol for connections to PSN.
- Ability to load software from network load servers over the LAN.
- V.35 and RS-423, or V.35 and X.21 WAN link interfaces.
- Support for Simple Network Management Protocol (SNMP) GET and GET\_NEXT instructions, and SNMP Traps.

Refer to the *Managing the MAXserver X.25 Gateway* for more information about X.25 protocol support.

This chapter includes information about the 6025:

- The WAN Port
- The Serial Port and Console Port
- Software Requirements
- Parameter Storage

### The WAN Port

The MAXserver 6025 provides a WAN port where you can connect a communication device that supports a V.35, and an RS-423 or an X.21 interface.

Use an RS-423 interface for low speed connections. Typically, you use an RS-423 interface for connections through low speed synchronous modems; for example, a modem operating at a speed under 19,200 bps.

Use a V.35 interface for higher speed connections. Typically you use a V.35 interface for 56,000 bps DDS

service, or a 64,000 bps link. The V.35 interface can support synchronous line speeds up to 2,048 Kbps.

An X.21 interface is a European standard interface. The X.21 interface can support synchronous line speeds up to 2,048 Kbps.

Chapter 2 describes specific cabling information.

## The Serial Port and Console Port

The MAXserver 6025 provides a serial port, labeled MGMT, where you can connect a terminal, personal computer, or other asynchronous ASCII serial device. The serial port provides local access to the X.25 Gateway user interface. A serial cable and RJ-45-to-DB-25 adaptor are shipped with each MAXserver 6025. Appendix B describes other serial cabling options.

The MAXserver 6025 also supports remote console port connections, through the DEC Remote Console Protocol and TCP/IP Telnet. The console port provides remote access to the X.25 Gateway user interface, from any network device that supports RCP or Telnet.

Additionally, you can use the TELNET CONSOLE command to access the console port of a remote Xyplex MAXserver X.25 Gateway.

## Software Requirements

The MAXserver 6025 is configured at the factory to load its software from a diskette, if one is inserted in the unit's diskette drive. The diskette drive is a 3-1/2-inch high-density, 1.44 Megabyte drive, that you can use to store the unit's software image and parameters. If a diskette is not present, the unit requests software from a network load server, which can be one of the following:

- A Xyplex MAXserver Manager (MAXMAN) card
- A VAX/VMS host system running the DEC Maintenance Operations Protocol (MOP)
- A UNIX system running either of these protocols:

Bootstrap protocol (BOOTP) and Trivial File Transfer Protocol (TFTP)

Reverse Address Resolution Protocol (RARP) and TFTP

The load server downloads a software image to the MAXserver 6025 over the network whenever the unit is powered on or reinitialized. By default, the MAXserver 6025 requests software from each type of load server, until a server responds with a software load offer. If you need to install software on a network load server, refer to the *Software Installation Guide* for the type of load server you plan to use.

### **Changing the Software Loading Method**

You can change the method the MAXserver 6025 uses to load its software. For example, you can configure the unit to load exclusively from a specific type of load server. You use the ROM Configuration menu to change the software loading method. Refer to Chapter 4 for more information about how to do this.

### **Parameter Storage**

The MAXserver 6025 is configured at the factory to store its configuration parameters on diskette. Alternatively, you can configure the unit to load parameters from a network host, called a parameter server, using the ROM Configuration Menu. Refer to Chapter 4 for more information about how to do this

End of Chapter

## Chapter 2

# Installing the MAXserver 6025

This chapter explain how to install a MAXserver 6025 and place it into operation. The basic installation consists of these procedures:

1. Unpack and inspect the MAXserver 6025.
2. Mount the 6025 in a rack or place it on a flat surface
3. Insert the software diskette.
4. Connect the Ethernet (LAN) Interface Transceiver cable.
5. Connect the Serial Terminal Cable and the WAN cable.
6. Connect the Power Cable
7. Gain Access to the X.25 Gateway User Interface

The following sections provide detailed information about these procedures.

### 1. Unpack and Inspect the MAXserver 6025

Use care when you unpack the MAXserver 6025 from the shipping carton. When you have removed the unit from the carton, inspect the individual parts and check that you have each part listed on the shipping order.

Place all packing materials back into the shipping carton and save the carton. If you need to return the MAXserver 6025 to Xyplex or your distributor, you should return it in the original carton.

If the MAXserver 6025 has been damaged in shipment or any parts are missing, notify your Xyplex representative or distributor immediately.



### 2. Place the MAXserver 6025 on a Flat Surface or Mount it in a Rack

Select a location for the MAXserver 6025 that meets the requirements for adequate space and environmental criteria, whether you place it on a flat server or mount it in a rack.

#### Adequate space

Use a standard 19" rack or a 19" x 15" flat, stable surface such as a shelf or desktop. You can place the MAXserver 6025 in a variety of environments, including an office or computer room, provided the space meets the environmental requirements.

To reduce the possibility of dust entering the unit and to allow easy inspection of the unit's front panel lights, make sure that the MAXserver 6025 is not less than 18 inches/45 centimeters from the floor.

#### Environment

The temperature and humidity of the room affect the successful operation of the MAXserver 6025 unit. Be sure that the temperature in the area is between 40° and 105° Fahrenheit or 5° and 40° Centigrade. The humidity in the area should be 20% to 80%, noncondensing. Do not expose the 6025 to direct sunlight or subject it to vibration.

Place the MAXserver 6025 on the flat, stable surface you have chosen for its location, or use the instructions in the following section to mount it in a standard 19" rack.

<i>Notes:</i>	Do <i>not</i> remove the "feet" on the MAXserver 6025.
cooling	Do not place an object on top of the MAXserver 6025. This can restrict the air flow.

### Rack Mount Installation

Rack mount installation is easier when performed by two persons -- one person holding the MAXserver 6025 while another secures the mounting bolts with a Phillips-head screwdriver.

Complete these steps:

1. Locate a mounting position on the rack that allows at least one inch of space above the unit.
2. Secure the MAXserver 6025 to the mounting rack using the supplied bolts, as shown in Figure 2-1. If the rack is not threaded, use the threaded clips supplied with the server.

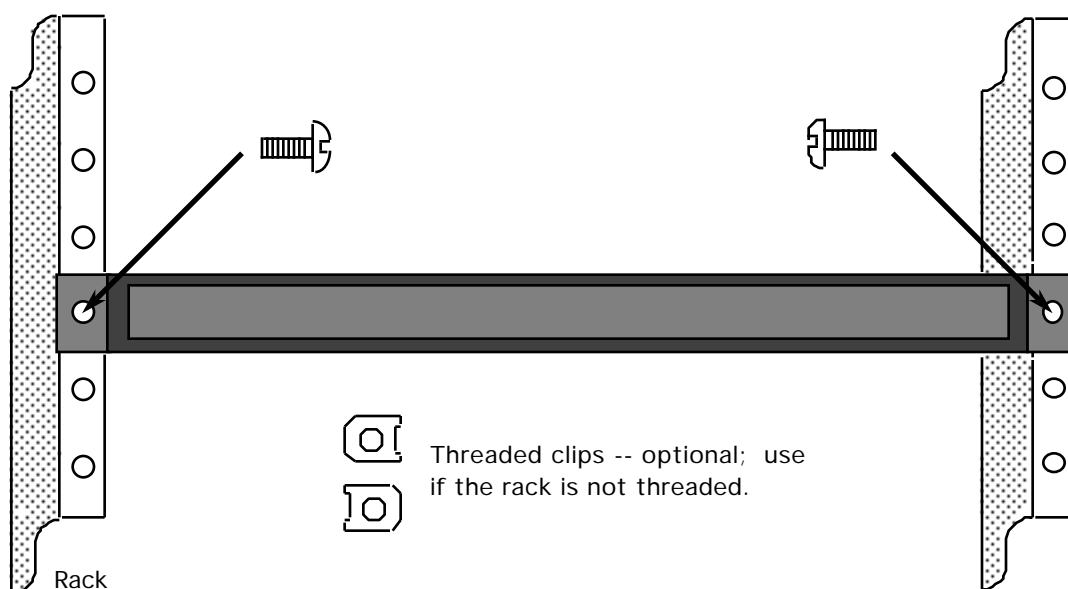


Figure 2-1. Mounting the MAXserver 6025 in a Rack

### 3. Insert the Software Diskette

If you have obtained software on a diskette, insert the software diskette into the diskette drive. Push the metal end into the drive, label side up, until it clicks into place. If you plan to load software from a LAN host, see the appropriate *Software Installation Guide* for the load server you are using.

### 4. Connect the Ethernet (LAN) Interface Transceiver Cable

Connect the Ethernet transceiver cable to the Ethernet connector on the back of the MAXserver 6025. Figure 2-2 shows a 6025 with an RS-423 interface and Figure 2-3 shows a 6025 with an X.21 interface. To connect an Ethernet cable, plug the cable's male connector into the 15-pin female socket on the back of the unit and fasten the slide latch. Appendix B includes a figure which shows the signal assignments of the standard 15-pin connector, referred to as an AUI connector.

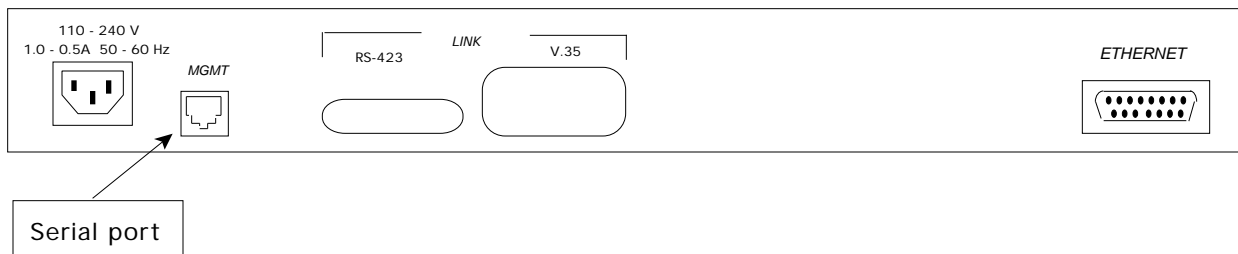


Figure 2-2. MAXserver 6025, Rear View with an RS-423 Interface

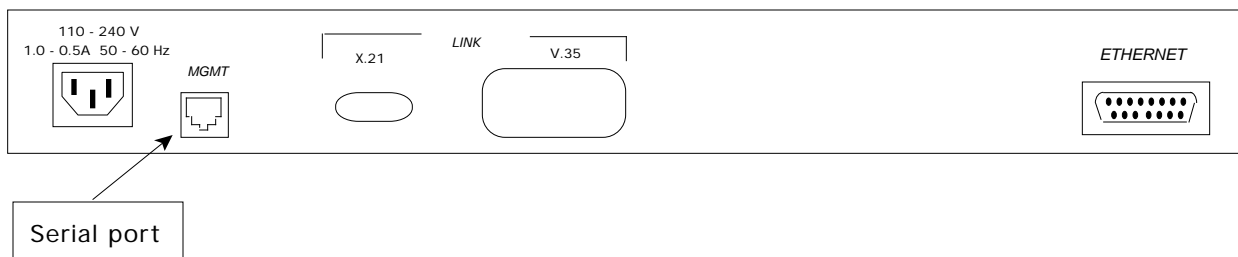


Figure 2-3. MAXserver 6025, Rear View with an X.21 Interface

## 5. Connect the Serial Terminal Cable and the WAN Cable

### Serial Terminal Cable

Connect the cable of the ASCII device, such as a terminal, to the serial port on the 6025. This terminal will provide access to the MAXserver 6025 user interface. The 6025 includes a serial cable and an RJ-45-to-DB-25 adaptor. Figure 2-4 shows the signal assignments of the 8-pin jacks.

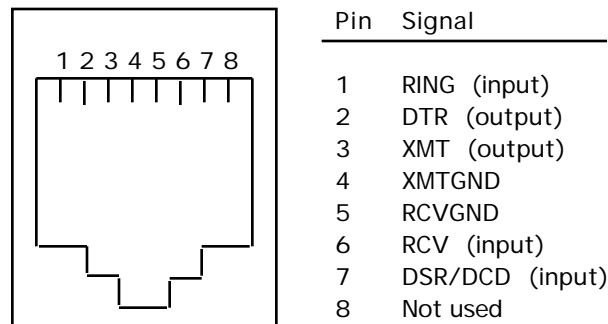


Figure 2-4. Serial Device Connector (RJ-45) Signal Assignments

Xyplex recommends that you label the cable with the name of the device connected to it. For example, label one end "Dan's PC" and label the other end "MX-6025." This way, you know where to reconnect the cable if it is removed for any reason.

### V.35, RS-423, X.21 (WAN) Cables

You can connect the V.35 cable, RS-423 cable, or the X.21 cable to the WAN port on a MAXserver 6025. The unit automatically detects which type of cable you have connected. Each port provides both a 34-pin V.35 connector and either a 25-pin RS-423 connector which is also RS-232 compatible, or an X.21 connector. Figures 2-2 and 2-3 show the locations of the connectors. Figure 2-5 shows the female connector signal assignments of the V.35 interface. Figure 2-6 shows the connector signal assignments of the RS-423 interface. Figure 2-7 shows the connector signal assignments of the X.21 Interface.

*Do not* connect cables to both the V.35 and RS-423 or X.21 connectors of an individual WAN port.

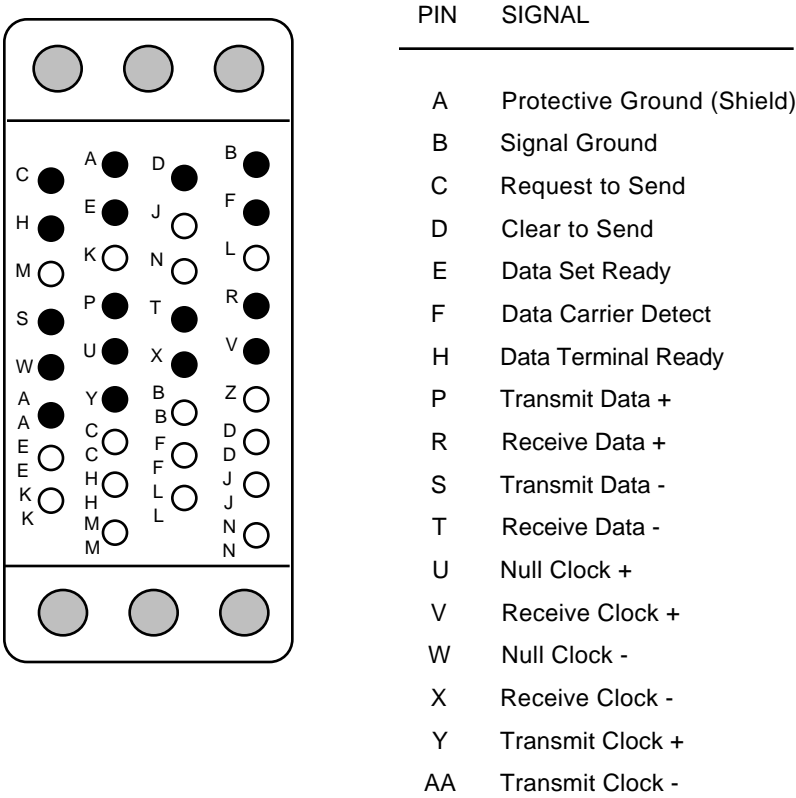
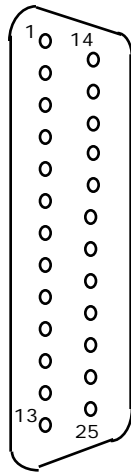
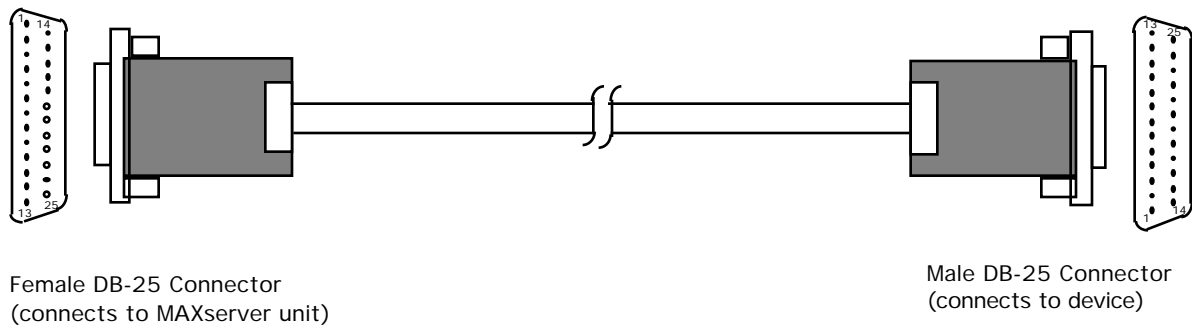


Figure 2-5. Female V.35 Connector Signal Assignments

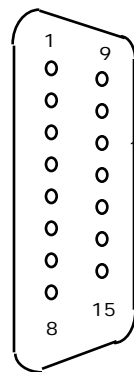
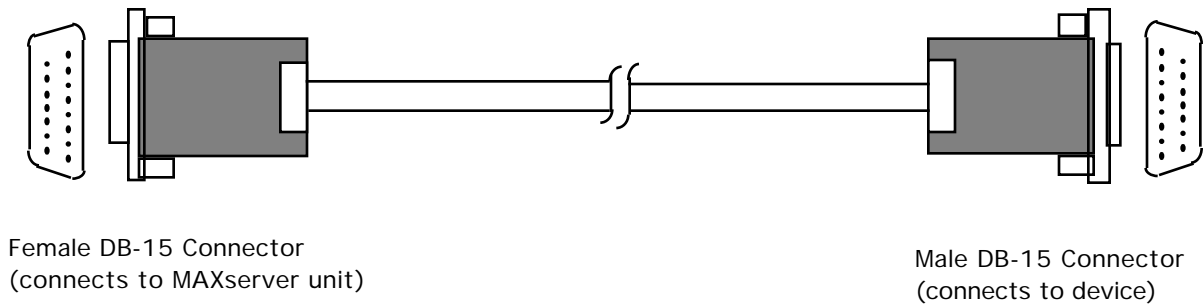
**V.35 cable** -- Male V.35 to male V.35. This cable connects the MAXserver 6025 to a DCE device using the V.35 electrical interface. One connector attaches to the back of the MAXserver; the other connects to the DCE device. This cable does not support the RING or NULL CLOCK signals.



PIN	SIGNAL
1	Chassis Ground
2	Transmit Data
3	Receive Data
4	Request to Send
5	Clear to Send
6	Data Set Ready
7	Signal Ground
8	Data Carrier Detect
15	Transmit Clock
17	Receive Clock
20	Data Terminal Ready
22	Ring Indicator
24	Null Clock

Figure 2-6. RS-423 Cable, Female Connector Signal Assignments

**RS-423 cable** -- Male DB-25 (25-pin) connector to female DB-25 (25-pin) connector. This cable connects the MAXserver 6025 to a DCE device using the RS-423 electrical interface. The female DB-25 connector attaches to an RS-423 connector on the rear of the MAXserver; the male DB-25 connector attaches to the DCE device. The cable consists of 12-wire cable and DB-25 connectors.



PIN	SIGNAL
1	Shield, Chassis Ground
2	Transmit Data A +
3	Control A +
4	Receive Data A +
5	Indication A +
6	Signal Timing A +
8	Signal Ground
9	Transmit Data B -
10	Control B -
11	Receive Data B -
12	Indication B -
13	Signal Timing B -

Figure 2-7. X.21 Cable, Female Connector Signal Assignments

**X.21 cable** -- Male DB-15 (15-pin) connector to female DB-15 (15-pin) connector. This cable connects the MAXserver 6025 to a DCE device using the X.21 electrical interface. The female DB-15 connector attaches to an X.21 connector on the rear of the MAXserver; the male DB-15 connector attaches to the DCE device. The cable consists of 12-wire cable and DB-15 connectors.

## 6. Connect the Power Cable

Before you connect the power cable, check that a grounded AC power outlet is within six feet of the back of the MAXserver 6025. If not, you can use a UL-approved, 3-prong extension cord with sufficient current and voltage capacity. The cord must have sufficient capacity for the input power, as specified in Appendix A. AC power must meet the criteria listed in Appendix A.

You need not set the MAXserver 6025 for 115V or 230V operation. The power supply automatically adapts to the input voltage.

Plug in both ends of the power cable:

- Plug the AC line cord into the AC power receptacle on the rear of the MAXserver 6025. This cord is included with the 6025. Figures 2-2 and 2-3 show the location of the power receptacle.
- Plug the other end of the cord into a grounded 3-prong AC power outlet, or a UL-approved extension cord with sufficient capacity that is plugged into a suitable outlet.

When you apply power, the MAXserver 6025 does a self test of its circuitry and then loads its software. When the 6025 finishes loading its software, the RUN light flashes slowly and the LAN light flashes as Ethernet packets are transmitted or received. Figure 2-8 shows the locations of the lights on the front panel. If the front panel lights do flash this way after several minutes, refer to Chapter 3, Troubleshooting.



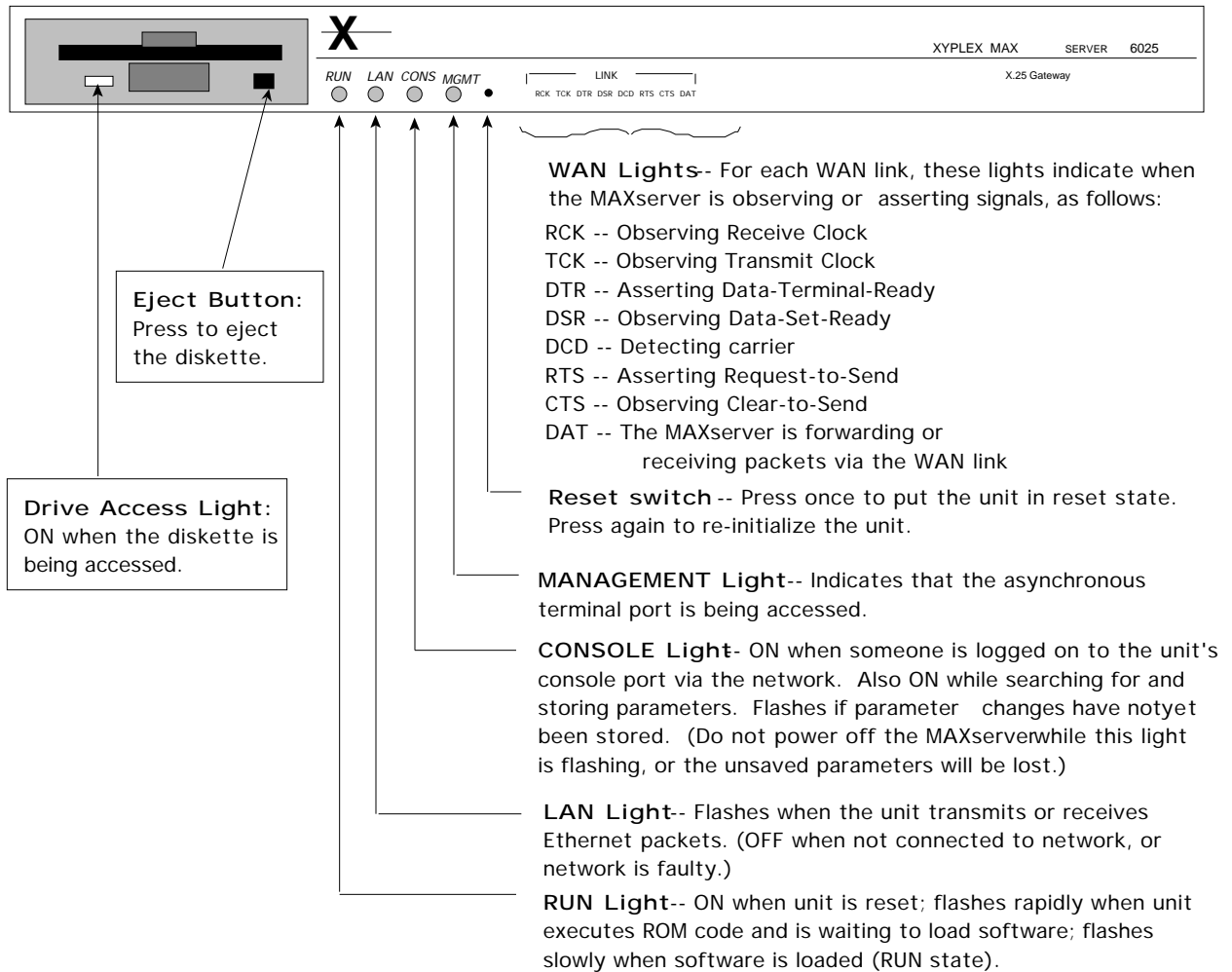


Figure 2-8 MAXserver 6025, Front View

## 7. Gain Access to the X.25 Gateway User Interface

You can gain access to the X.25 Gateway user interface through the serial port or the console port.

### Serial (MGMT) Port Access

After you have connected the terminal cable to the serial port, turn on the terminal's power. Then press the <RETURN> key a few times until the MAXserver 6025 recognizes your device. The MAXserver 6025 automatically adjusts to the communication speed (300 bps - 38.4K bps) of a connected terminal that is set up as follows:

8 bits, No Parity  
*or*  
7 bits, Even Parity

The X.25 Gateway usually responds with a Welcome message, and the "Enter Username" prompt:

```
Welcome to the Xyplex X.25 Gateway.  
Enter username>
```

If the the X.25 Gateway does not respond with a welcome message, press the <BREAK> key, and then press the <RETURN> key a few more times.

### Console Port Access

When you connect to the console port, you must press the <RETURN> key until the X.25 gateway responds with the login password prompt. The default prompt is #. Enter the login password and press return. The default password is ACCESS.

When the X.25 Gateway responds, it generates the following message which appears on your screen:

```
Welcome to the Xyplex X.25 Gateway.  
Enter username>
```

Enter a username and then press the <RETURN> key again. A username can include up to 16 characters without spaces between the characters.

The username is your identifier during this session. You can enter a different username each time you log on to the port. The username is shown whenever you or any other person on the network requests information about who is connected to the MAXserver 6025 user interface. After you enter your username, the MAXserver 6025 returns the command prompt:

```
Xyplex>
```

You can now enter commands through the MAXserver user interface. *Managing the X.25 Gateway* describes how to get started with the MAXserver X.25 Gateway software. It explains how to configure the X.25 Gateway for basic use, including how to set the X.25 Gateway server characteristics, level 2 parameters and level 3 parameters.

End of Chapter

# Chapter 3

## Troubleshooting

This chapter describes some problems that can occur when you startup the MAXserver 6025 Gateway and load the software. It also describes a successful start-up and load procedure. This chapter includes these topics:

- How to Interpret Startup Error Codes
- Diskette Software Loading Problems
- Network Software Loading Problems
- Resetting the MAXserver 6025

The following events occur when the MAXserver 6025 powers up and the unit successfully loads the software, either from diskette or from the network. These events take several minutes, but occur in this sequence:

1. All lights go ON for approximately one second while the MAXserver 6025 is tests the lights.
3. The RUN light flashes rapidly when the self test has completed.
4. The LAN light goes ON, as the MAXserver 6025 starts loading software.
5. The Disk Access light goes ON for approximately 15 seconds if the unit is loading from a diskette, while the MAXserver 6025 reads the diskette.
6. The RUN light flashes rapidly and the LAN light flashes if the unit is loading from the network. During this time the unit is receiving Ethernet packets. Then, the Link lights go On sequentially, from RCK to DAT (The lights appear to "fill up"). Then, the lights go off in the reverse order: from DAT to RCK. This indicates that the MAXserver 6025 has finished loading the software image, and is decompressing it.)
7. When the MAXserver 6025 finishes loading the software, the RUN light flashes slowly and the LAN light flashes as the 6025 receives Ethernet packets.

If these events do not occur, refer to one of the following sections, depending on the whether the problem occurred during the power-up procedure, or the network loading process.

## How to Interpret Startup Error Codes

If the lights do not behave normally during the software loading process, the MAXserver 6025 might display an error code. This happens whether the unit is loading from a diskette or from a network. These error codes can help diagnose the problem. Figure 3-1 shows how startup error codes appear on the MAXserver 6025 front panel lights:

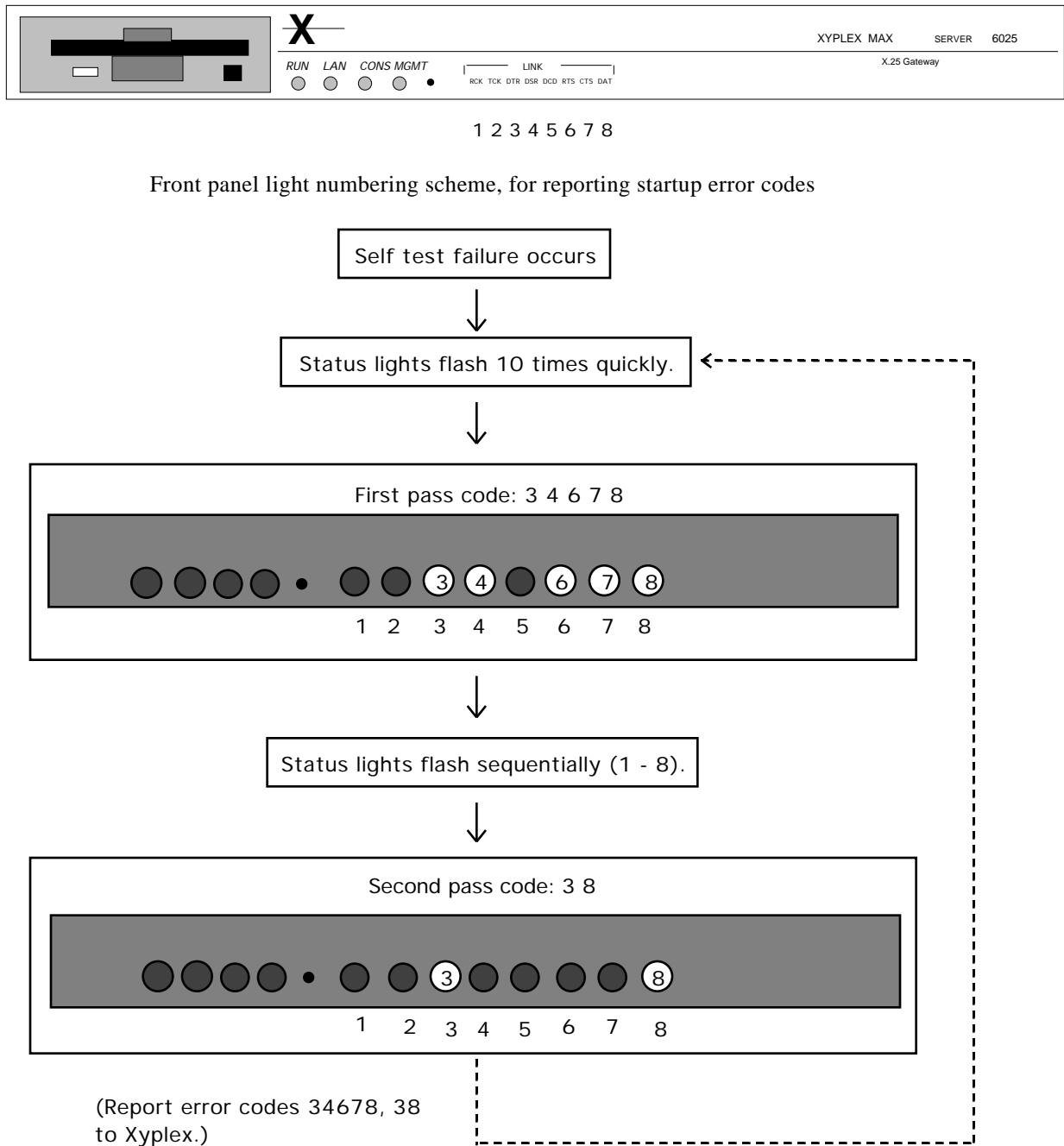


Figure 3-1. MAXserver 6025 Startup Error Code Display

Write down the numbers of the error code (the lights that are ON) and contact your support representative. (In the U.S., call Xyplex Customer Support at 1-800-435-7997. For international calls, the number is 508-264-9903.) Your support representative can provide instructions on how to handle the condition.

### **Diskette Software Loading Problems**

The MAXserver 6025 requires about five seconds to copy permanent parameters to diskette. If you power off the MAXserver 6025, before it has finished copying parameters to diskette, or the unit loses power, the unit might display the error code 1, 2, 7, 8 the next time it is powered on. This code indicates a corrupt parameter file. If this code is displayed, use the following procedure to return the MAXserver 6025 to operation. If the error code is still displayed after you complete the procedure, call your support representative. (In the U.S., call Xyplex Customer Support at 1-800-435-7997. For international calls, the number is 508-264-9903.)

1. Access the configuration menu, following the instructions in Chapter 4.
2. Select Option 3 "Initialize server and port parameters".
3. Answer 'Y' to the "Initialize server and port parameters?" prompt.
4. Select Option 6 "Exit saving configuration changes".
5. Answer 'Y' to the "Save changes and exit?" prompt.

### Network Software Loading Problems

This section explains how to troubleshoot some software loading problems, based on the various loading error messages that can appear on the screen during the loading process. For some problems, however, you need to check the software installation guide you received with the card. The guide you received depends on the type of load server you use: the *Software Installation Guide, for UNIX Hosts*, the *Software Installation Guide, for VMS Hosts*, or the *Software Installation Guide, for MAXserver Loaders*. These manuals describe how to configure these hosts as load servers.

**Problem:** During network software loading, no messages appear after you press the <RETURN> key several times.

**Correct Operation:**

The port normally *autobauds* to the correct baud rate when you press the <RETURN> key several times. Once a port speed has been selected, the port light illuminates. In the first 20 seconds after power up, the server runs the self tests and does not respond to the <RETURN>s. Twenty seconds after power up, however, the port displays a message in response to a <RETURN> if the MAXserver 6025 is attempting a network load.

**Possible Solutions:**

Determine whether the port is receiving characters properly. Type the <RETURN> key several times and make sure that the MGMT light remains on steadily. This indicates that the MAXserver 6025 has received characters and selected a baud rate.

If the port is receiving characters, the MAXserver might have autobauded to the wrong speed. Press the <BREAK> key to restart the autobaud process, then type the <RETURN> key several times.

If the port is not receiving characters, a cable or device problem exists. Try changing the type of cable. For example, change from a crossover to a straight-through cable or vice versa. Note that a MAXserver 6025-to-DTE device configuration requires a crossover cable connection.

**Problem:** The MAXserver 6025 is configured to load software from a network host. The unit does not appear to load, or is slow to load.

### Correct Operation:

The MAXserver 6025 should load within two minutes after power up if it is properly configured on a load server. The RUN light flashes rapidly (3 times per second -- 3 Hz) after successful completion of the self tests. During the software loading process, the MAXserver 6025 sends status messages to the terminal attached directly to the serial (MGMT) port. Be sure to press the <RETURN> key continuously: first to autobaud the terminal speed, and then to receive updated status messages.

If you enter <CTRL><T> now, the MAXserver 6025 displays the load server offer table when it receives load offers. (You only need to type <CTRL><T> once.)

After the software load image and parameter files have been downloaded from the load server, the RUN light should blink at a 1-Hz rate. Then, if you type the <RETURN> key several times, the following message appears:

```
Welcome to the Xyplex X.25 Gateway.

Enter username>_
```

### Possible Solutions:

The MAXserver 6025 can display several messages as it loads software from a network host, and these can help you resolve the problem. Record the displayed messages and refer to the following descriptions for assistance in correcting the problem. Note that each time you press the <RETURN> key, the 6025 generates a single message. You must type the <RETURN> key again and again to receive updated messages.

If you enter <CTRL><L> following any status message, the MAXserver 6025 generates a WAN link status display. This display indicates the transmit/receive clock speeds, the cable type, and the status of the DTR, DSR, DCD, RTS, CTS, and RNG signals for the WAN link.

The following sample load procedure assumes that a terminal is physically connected to the serial (MGMT) port of a MAXserver 6025.

```
X25 Gateway, Type 64, Rev x.xx.xx
Ethernet address 08-00-87-xx-xx-xx
Initializing...
```

A message similar to this one appears for approximately 10 seconds after the self tests complete. (Your address will be different.) If the next message does not appear after you press the <RETURN> key several times, the MAXserver 6025 could be at fault.

```
X25 Gateway, Type 64, Rev x.xx.xx
Ethernet address 08-00-87-xx-xx-xx
Requesting network load service
```



## Troubleshooting

---

A message similar to this one appears while the MAXserver 6025 waits for a response to the load request. If this message remains displayed for more than 20 seconds after you press <RETURN> several times, either the MAXserver 6025 is not configured on a load server, or the unit cannot communicate with a load server. Refer to the *Software Installation Guide* that you received with your software.

```
X25 Gateway, Type 64, Rev x.xx.xx
Ethernet address 08-00-87-xx-xx-xx
Evaluating service offers
```

A message similar to this one appears when the MAXserver 6025 receives a load offer from a load server.

If you entered <CTRL><T> after you had "autobauded" the port, the following messages appear:

```
Received load service offers:
```

Host	Address	protocol	merit	filename
xxx.xxx.xxx.xxx	0800	F000000F	xxxxxxx.img	

The MAXserver can display up to ten load server addresses, although it usually displays only one. The MAXserver 6025 selects the load server with the highest merit value. If two or more load servers have the same merit value, the unit selects the first server listed. The load server selection algorithm proceeds to find the load server with the highest merit value that is on line. After checking the list of servers, the cycle repeats until a load server responds.

After the MAXserver 6025 has chosen a load server, the following messages appear:

```
X25 Gateway, Type 64, Rev x.xx.xx
Ethernet address 08-00-87-xx-xx-xx
Loading file /XYPLEX/xxxx/xxxx over Link L1 from server xx-xx-xx-xx,
message 0
```

If the message count remains at zero after you press the <RETURN> key many times, the load server was configured to load the MAXserver 6025, but encountered a problem with the load file or directory. Check the file name and directory at the load server. Additionally, in some VAX/VMS installations, the logical name "MOM\$LOAD" might not be defined properly.

After the MAXserver 6025 loads the software image, it checks its contents for proper identification and size.

If the MAXserver 6025 encounters a problem during the loading process, one of the following messages can appear:

```
Server xx-xx-xx-xx-xx-xx File error: not a load file.
```

This message indicates that the load image that was incompatible with the MAXserver 6025. This occurs if the load image does not have a Xyplex ASCII identification string header.

```
Server xx-xx-xx-xx-xx-xx File error: corrupted data.
```

This message indicates that although the load image is compatible with the MAXserver 6025, the image is corrupted. To correct this problem, install a new file on the load server. Refer to the *Software Installation Guide* for information about how to install a new file on a load server.

```
Server xx-xx-xx-xx-xx-xx File error: not executable.
```

This message indicates that the load image is a Xyplex file, but that the MAXserver 6025 cannot execute it. To correct this problem, install the proper load image at the host. Refer to the *Software Installation Guide* that you received with your software for instructions.

```
Server xx-xx-xx-xx-xx-xx Timed out, will retry.
```

This message indicates that the MAXserver 6025 has stopped waiting for the load server to send a software image, and has restarted the load request process. If the message count was not zero, and the "timed out" message was displayed, the network may have a communication problems. If the message count remains at zero, a load server problem probably exists. If the message count stops at a number other than zero, a network problem probably exists.

If a failure other than a timeout occurs during the load process, the MAXserver 6025 aborts the load process and sends a small dump file (approximately 60 bytes) to a server that is configured to accept memory dumps. You can analyze the dump file to determine the fault. Call your support representative for assistance. (In the U.S., call Xyplex Customer Support at 1-800-435-7997. For international calls, the number is 508-264-9903.)

The MAXserver 6025 uses the same algorithm for selecting a dump server as for selecting a load server. Normally, the following messages appear:

```
X25 Gateway, Type 64, Rev x.xx.xx
Ethernet address 08-00-87-xx-xx-xx
Requesting dump service
Crash code = xxxxxxxx
```

This message appears while the MAXserver 6025 waits for a response to its dump request. If this message remains displayed for more than 30 seconds after you press the <RETURN> key several times, the unit is not configured on a dump server, or it cannot communicate to a dump server. Refer to the *Software Installation Guide* that you received with your software for information about specifying the proper dump configuration.

```
X25 Gateway, Type 64, Rev x.xx.xx
Ethernet address 08-00-87-xx-xx-xx
Evaluating dump service offers
Crash code = xxxxxxxx
```

## Troubleshooting

---

A message similar to this one appears when the MAXserver 6025 receives a dump offer from a server. If you typed <CTRL><T> after you had "autobaused" the port, these messages appear:

Received dump service offers:

Host	Address	protocol	merit	filename
xxx.xxx.xxx.xxx		0800	F000000F	xxxxxxx.dmp

The MAXserver selects the dump server with the highest merit value. If two or more dump servers have the same merit value, the MAXserver selects the first dump server listed.

```
X25 Gateway, Type 64, Rev x.xx.xx
Ethernet address 08-00-87-xx-xx-xx
Maintenance dump to xx-xx-xx-xx-xx-xx, message 0
Crash code = xxxxxxxx
```

If a failure occurs during the dump process, the MAXserver 6025 aborts the dump and attempts to dump to the next dump server on the list. This process occurs until the dump is successful, or until the MAXserver attempts to use every dump server on the list. After the dump process completes, the MAXserver 6025 selects the load server with the next highest merit value on the load offer list. If the load list is exhausted, the MAXserver 6025 will restart the load process.

Once the load image file is accepted by the MAXserver 6025, the MAXserver X.25 Gateway software requests a parameter file from the load server. If the MAXserver 6025 does not receive a parameter file, the unit will wait indefinitely for it. The following types of messages can be generated during the parameter file load process. The process is similar to the load process.

```
X25 Gateway, Type 64, Rev x.xx.xx
Ethernet address 08-00-87-xx-xx-xx
Requesting parameter load service
```

This message appears while the MAXserver 6025 waits for a response to the parameter load request. If this message remains displayed for more than five seconds after you press the <RETURN>key several times, the MAXserver 6025 is not configured on a load server for parameter load service. Refer to the *Software Installation Guide* that you received with your software.

```
X25 Gateway, Type 64, Rev x.xx.xx
Ethernet address 08-00-87-xx-xx-xx
Loading parameters over Link (L1) from server xx-xx-xx-xx-xx,
message 0
```

If the message count remains at zero after you press the <RETURN> key several times, the load server is properly configured, but does not have a parameter file defined.

## Resetting the MAXserver 6025

Certain conditions require that you reset or reinitialize the MAXserver 6025. You can also reset the MAXserver 6025 to force it to run a self test. Before resetting the unit, check the Port 1 light and Console light to make sure that no connections are in progress. All connections are terminated when you reset the MAXserver 6025.

To reset the MAXserver 6025, follow these steps:

1. Make a simple "tool" from an ordinary paper clip by bending one end outward. You need this tool to press the Reset switch, which is located behind the MAXserver 6025 front panel. Figure 3-3 shows the location of the Reset switch.

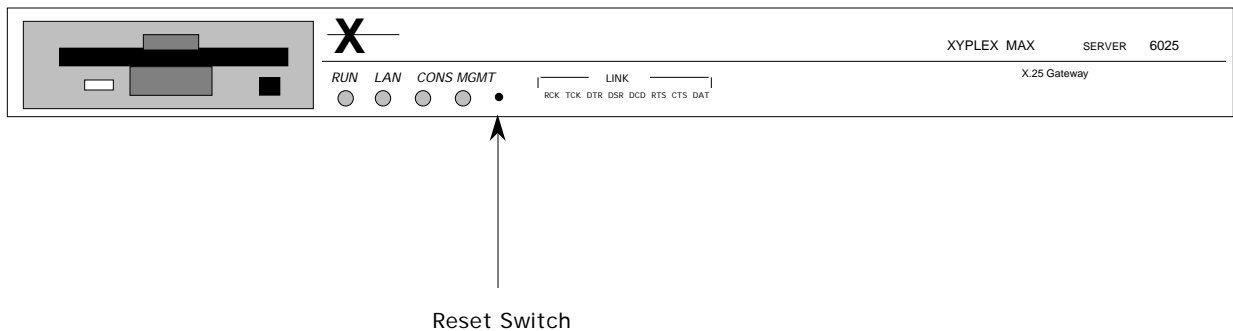


Figure 3-2. Reset Switch Location

2. Press the Reset switch once with the paper clip tool. This halts all operations on the MAXserver 6025, and the unit no longer sends or receives network data or data from its connected devices. The unit enters Reset state and all front panel lights illuminate.
3. Press the Reset switch again. The MAXserver 6025 begins its self test, described earlier in this chapter.

If the MAXserver 6025 detects an error, the front panel lights display a diagnostic code. The diagnostic code sequence repeats continuously until you power off or reset the unit. During this time, no data is exchanged over the LAN link or the WAN link.

If the MAXserver 6025 does not detect an error, the unit begins loading software from its diskette or requests a software load over the network. Once loaded, the MAXserver 6025 resumes normal operations.

### **What to do if the LAN light on the Front Panel Goes Out**

The LAN light on the MAXserver 6025 front panel indicates whether or not the MAXserver is communicating with the network. When the LAN light is on, communications exist. When the LAN light is out, and you cannot communicate with the network, check the following:

- Make sure that the Ethernet transceiver cable is securely connected to the back of the MAXserver 6025.
- Check the status of other devices on the network. If other devices cannot communicate with the network, a problem may exist on the network.
- Check the front panel lights for a diagnostic code. These codes indicate a MAXserver 6025 hardware or software error.

If none of these checks indicate a problem and the LAN light is out, contact your support representative for assistance. (In the U.S., call Xyplex Customer Support at 1-800-435-7997. For international calls, the number is 508-264-9903.)

End of Chapter

## Chapter 4

# Using the ROM Configuration Menu

The MAXserver 6025 provides a ROM configuration menu that you use to do the following:

View and change how the MAXserver loads parameters.

View and change how the MAXservers receives a software load image.

Change the name of the load image.

You can also use the ROM configuration menu to revert to the default terminal server and port parameters if you have changed these. This chapter includes this information:

- How to Bring Up the Configuration Menu
- Using the Configuration Menu Options

The MAXserver 6025 is configured at Xyplex to load software and parameters from a diskette.

### How to Bring Up the ROM Configuration Menu

Follow these steps to bring up the configuration menu:

1. Make a simple "tool" from an ordinary paper clip by straightening one end. You need this tool to press the RESET button.
2. Find the reset button, which is the small hole to the right of the MGMT light.
3. Press the RESET button once with the paper clip tool. This halts all operations on the MAXserver 6025. The unit no longer sends or receives data from the network or data from its connected devices. All front panel lights illuminate when the 6025 is in the Reset state.
4. Press the RESET button again, and hold the button in. With the button held in, observe the front panel lights. The port lights should flash in sequence from left to right and then from right to left. At the end of this sequence, release the RESET button. The MAXserver 6025 performs the standard self-test diagnostics, which last about 20 seconds
5. Press the <RETURN> key a few times at the terminal connected to the port when the self test has completed, and the RUN light flash rapidly. This causes the serial port to set the port speed, or baud rate, automatically (autobaud). Once the MAXserver 6025 has selected a port speed, it generates a message similar to this:

## Using the ROM Configuration Menu

---

```
X.25 Gateway, Type 64, Rev x
Ethernet address 08-00-87-xx-xx-xx, port 1
Configuration in progress. Please wait.
```

6. Enter the password ACCESS (note that there is no prompt). The main Configuration menu, shown in Figure 4-1, appears on the screen.

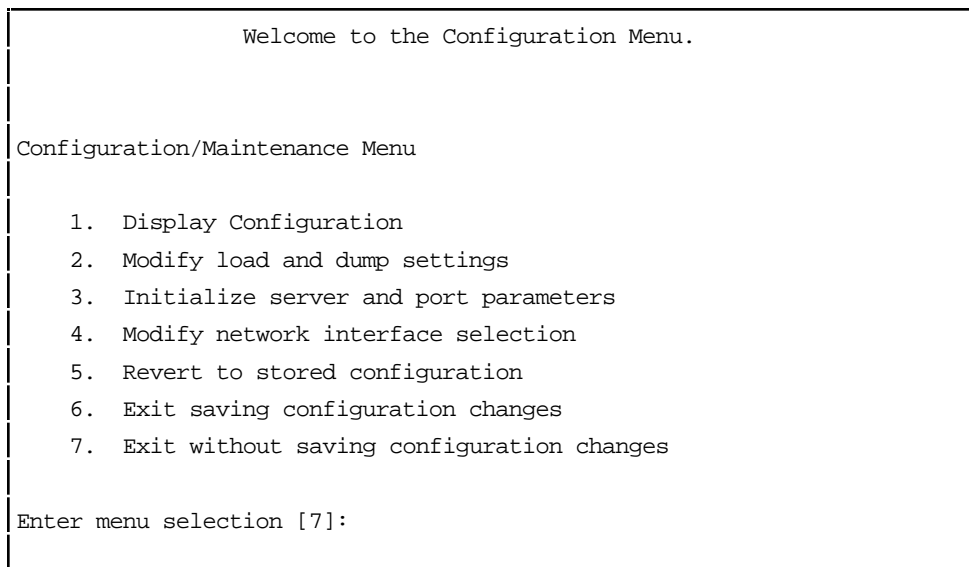


Figure 4-1. MAXserver 6025 Main Configuration Menu

## Using the Configuration Menu Options

The configuration menu includes seven options. To select an option, enter the option number at the "Enter menu selection" prompt. The default, option 7, appears in brackets at this prompt. The default options on all other menus and prompts from the ROM configuration menu also appear in brackets at the prompt. To select the default, simply press the <RETURN> key.

The default values for many options can change, depending on the changes you make to the parameters on the MAXserver. The first time you run the configuration menu, the default values are the factory default values. After you exit from the menu, having saved changes, the default values shown for a prompt are the currently-stored values, not the factory default values.

The following sections describe each of the configuration menu options.

## 1 Display Configuration

Option 1 displays a list of the previously-stored configuration values and the values that the 6025 will use after you exit from the menu using option 6 "Exit saving configuration changes". To select this option, enter 1 at the main Configuration menu prompt. The MAXserver 6025 displays a list of currently stored configuration values and the new configuration values, similar to the display in Figure 4-2.

```
Stored Configuration

    Load software from LOCAL
    Load parameters from LOCAL
    Enabled Protocols: MOP, XYPLEX
    Standard Ethernet network interface selected.

New configuration

    Load software from REMOTE
    Load parameters from REMOTE
    Enabled Protocols: MOP XYPLEX BOOTP RARP TFTP
    Xyplex/MOP load filename is #1
    Standard Ethernet network interface selected.

(Type any key to continue)
```

Figure 4-2. Configuration Options Display

If a temporary TFTP load server has been configured for the MAXserver 6025, the display shown in Figure 4-3 appears when you press any key at the Configuration Options display. Refer to the next section "2 Modify Load and Dump Settings," for information about selecting a temporary TFTP load server. If a temporary TFTP load server has not been configured, the MAXserver 6025 displays the main Configuration menu when you press any key at the Configuration Options display.

```
Temporary TFTP Load Server

    Unit IP address: 191.22.117.0
    Host IP address: 191.24.113.22
    Gateway IP address: 0.0.0.0
    TFTP Load filename: maxload.parm

(Type any key to continue)
```

Figure 4-3. Temporary TFTP Load Server Display



## Using the ROM Configuration Menu

---

### 2 Modify Load and Dump Settings

Option 2 allows you to change how the MAXserver 6025 receives a software load image, to change the name of the load image that it requests, if any, or to change how the MAXserver 6025 requests parameter service. To select this option, enter 2 at the main Configuration menu prompt. The MAXserver 6025 displays this prompt:

```
Initialize load and dump settings [N]?
```

If you select the default, N, the MAXserver 6025 generates several prompts, described in the steps below. If you answer Y, to initialize load and dump settings, the MAXserver 6025 returns all configuration options to their default values.

#### Initialize Load and Dump Settings ? (Y)

If you select Y at the "Initialize load and dump settings?" prompt, the MAXserver 6025 returns all configuration options to their default values:

```
Load software from LOCAL
Load parameters from LOCAL
Protocol is MOP, XYPLEX, BOOTP, RARP, TFTP
Load file name is "#1"
```

The MAXserver 6025 then displays this prompt:

```
Select a temporary TFTP load server [N] ?
```

If you answer Y, go to step 3 of this section, which explains how to respond to this prompt.

#### Initialize Load and Dump Settings ? (N)

If you select N at the "Initialize Load and Dump Settings" prompt, the default, the MAXserver 6025 generates the following series of prompts:

1. The MAXserver 6025 prompts:

```
Load software from (Local or Remote) [L]

Load parameters from (Local or Remote) [L]:
```

Select the default, L (Local), to load software and parameters from a diskette. Select R (Remote) to load parameters from a parameter server on the network, such as a VAX/VMS or UNIX host system, or a MAXman card.

2. The MAXserver 6025 prompts:

```
Enable ALL protocols for loading and dumping [Y]?
```

You can enter Y (yes) or N (no):

Y -- Use any protocol: MOP, XYPLEX, BOOTP, RARP, TFTP

N -- Use specific protocol(s).

If you answer N, go to Step 4.

If you select Y, the MAXserver 6025 prompts:

```
Load file name (16 characters max) [#1]:
```

This prompt requests the Xyplex/MOP load file name. You can enter a file name or a numerical value.

**File names:** File names can include up to 16 ASCII characters. Valid characters are letters, numbers, the underscore (\_), the hyphen (-), and the period (.). The default Xyplex/MOP load file name is #1.

**Numerical values:** Numerical values specify that a MAXserver loader should determine the appropriate load file based on the MAXserver 6025 hardware type (71), or that a Maintenance Operations Protocol (MOP) loader must determine the appropriate load file based on the contents of the Network Control Program (NCP) database.

Numerical values consist of the pound-sign character (#) and a number in the range of 0 through 128. Xyplex load servers respond to the numbers #1 through #3. The default numerical value is #1. The value #1 allows you to specify a load file name with the NCP commands at a VAX/VMS load server. Numerical values #2 and #3 are reserved for use by Xyplex.

3. The MAXserver 6025 prompts:

```
Select a temporary TFTP load server [N]?
```

If you do not want a temporary TFTP load server, press the <RETURN> key and go to Step 4.

If you enter Y at the prompt, you can designate a specific TFTP load/parameter server, and bypass the process which MAXserver 6025 uses to select a load/parameter server. This type of designation is a *directed TFTP request*. If you select this option, you must specify a TFTP load/parameter server each time you initialize the MAXserver 6025.

To specify a temporary TFTP load server, supply the following information when prompted:

The Internet address of the MAXserver 6025 ("IP address of this unit")

The Internet address of the load/parameter server ("Host IP address")

If the load/parameter server is not on the same network as the terminal server, the Internet address of a gateway ("Gateway IP address")

The name of the file to load (max. 64 characters; the default load file name is #1.sys)

The MAXserver 6025 uses this information to load files through TFTP. The information disables loading through other protocols. After supplying the information, go to Step 5.

## Using the ROM Configuration Menu

---

4. This step describes how to specify a TFTP load server. The MAXserver 6025 prompts:

```
Select (MOP, Xyplex, BOOTP, RARP) protocols [M,X,B,R]?
```

The letters in brackets represent the protocols that the MAXserver 6025 can use to load a file, save dump files, and store parameters:

M      MOP loader protocol

The MOP loader protocol requires the MAXserver 6025 to select a VAX/VMS system with the DEC MOP loader facility as its load server or dump server.

X      Xyplex protocol

The Xyplex protocol requires the MAXserver 6025 to select a XYPLEX MAXserver Manager (MAXman) as its load server or dump server.

B      Bootstrap protocol (BOOTP)

The Bootstrap protocol requires the MAXserver 6025 to select a BOOTP host as its load server or dump server.

R      Reverse Address Resolution Protocol (RARP)

The RARP protocol requires the MAXserver 6025 to select a RARP host as its load server or dump server.

You have the following options at this prompt:

Select the MOP and Xyplex proprietary protocols by pressing <RETURN>.

Select specific protocols by removing letters from or adding letters to the brackets. To remove a letter that is within the brackets, type the letter and press the <RETURN> key. The prompt reappears without the letter within the brackets. To add a letter that is not within the brackets, type the letter and press the <RETURN> key. The prompt reappears and the letter is included within the brackets.

*Note:* You cannot select RARP only. If you try to select RARP only, the software automatically selects      BOOTP as well.

When the letters within the brackets represent all the protocols you want to use, press the <RETURN> key.

If you select the Xyplex or MOP protocol, the MAXserver 6025 prompts:

```
Load file name (16 characters max) [#1]:
```

Refer to the description of this prompt in Step 2. Enter your selection and press the <RETURN> key. If you want to specify a numerical value as the answer to this prompt, you can only specify the value #1.

If you specify a numerical value other than #1, the MAXserver 6025 displays the messages:

Only the default numeric value can be used with the MOP protocol.

Default numeric value (1) selected.

The MAXserver 6025 prompts:

Select a temporary TFTP load server [Y]?

If you selected the BOOTP or RARP protocol and you want to assign a temporary TFTP load server, refer to the description of this prompt in Step 3. Otherwise, proceed to Step 5.

5. The MAXserver 6025 prompts:

(Type any key to continue)

Press any key. The MAXserver 6025 returns you to the main Configuration menu.

### 3 Initialize Server and Port Parameters

Option 3 changes all server and port parameters back to the factory default values. All current server and port parameters are restored to default values if you exit from the menu using Option 6 "Exit saving configuration changes" following this operation. To select this option, enter 3 at the Configuration menu prompt. The MAXserver 6025 displays this prompt:

Initialize server and port parameters [N]?

Valid answers are Y (Yes) and N (No). If you answer No, the MAXserver 6025 returns you to the main Configuration menu. If you answer Yes, the MAXserver 6025 displays these messages:

WARNING! Server and port parameters will be reset to initial values.

(Type any key to continue)

Press any key and the MAXserver 6025 displays the Configuration menu. If you select Option 1 "Display configuration," these messages appear on the Display Configuration screen in Figure 4-2.

The configuration change takes effect after you exit from the main Configuration menu and the MAXserver 6025 loads its image. (You must have answered Y to option 6, Save Configuration Changes.) If you decide that you do not want to revert to the initial values, you can again select option 3, and answer No to the preceding prompt, or exit without saving the changes (option 7).

### 4 Network Interface Selection

The "The Modify Network Interface Selection" option is not available, because the MAXserver 6025 supports the standard Ethernet interface only. If you enter Option 4, the MAXserver 6025 displays this message:

Only the standard Ethernet interface is supported.

Press any key. The MAXserver 6025 returns to the main Configuration menu.

## Using the ROM Configuration Menu

---

### 5 Revert to Stored Configuration

This option discards any changes you have made in the current menu session and resets the new configuration to match the currently stored configuration. To select this option, enter 5, at the Configuration main menu. The MAXserver 6025 displays the messages:

```
Configuration reset to stored values
```

```
(Type any key to continue)
```

Press any key; the MAXserver 6025 returns you to the main Configuration menu.

### 6 Exit Saving Configuration Changes

This option exits from the menu and stores any changes you have made. To select this option, enter 5 at the Configuration menu. The MAXserver 6025 displays this prompt:

```
Save changes and exit [Y]?
```

Valid answers to this prompt are Y (Yes) and N (No). The default answer is Yes. If you answer Yes, the MAXserver 6025 displays the message

```
Changes saved.
```

The MAXserver 6025 then begins the software loading process. If you answer No, the MAXserver 6025 returns you to the main configuration menu.

### 7 Exit Without Saving Configuration Changes

This option exits from the configuration menu without saving the configuration changes that you have made. (The 6025 uses the configuration that was last saved). To select this option, enter 7 at the main Configuration menu prompt. The MAXserver 6025 prompts:

```
Exit without saving changes [Y]?
```

Valid answers to this prompt are Y (Yes) and N (No). The default answer is Yes. If you answer Yes, the MAXserver 6025 displays:

```
No changes made.
```

The MAXserver 6025 then begins the software loading process. If you answer No, the MAXserver 6025 returns you to the main Configuration menu.

End of Chapter

## Appendix A

### Technical Specifications

Table A-1 lists MAXserver 6025 technical specifications:

**Table A-1. MAXserver 6025 Technical Specifications**

Item	Description
Terminal Signals (MGMT Port)	Transmit Data, Receive Data, Transmit Ground, Receive Ground, Data Terminal Ready (DTR), Data Set Ready/Data Carrier Detect (DSR/DCD), and Ring (RNG)
V.35 Signals (WAN Port)	Signal Ground, Protective Ground, Request-to-Send, Clear-to-Send, Data Set Ready, Data Carrier Detect, Data Terminal Ready, Transmit Data +, Receive Data +, Transmit Data -, Receive Data -, Receive Clock +, Receive Clock -, Transmit Clock +, Transmit Clock -, Null Clock +, Null Clock -
RS-423 Signals (WAN Port)	Chassis Ground, Transmit Data, Receive Data, Request-to-Send, Clear-to-Send, Data Set Ready, Signal Ground, Data Carrier Detect, Transmit Clock, Receive Clock, Data Terminal Ready, Ring Indicator, Null Clock
X.21 (WAN Port)	Chassis Ground, Transmit Data A (+), Control A (+), Receive Data A (+), Indication A (+), Signal Timing A(+), Signal Ground, Transmit Data B (-), Control B (-), Receive Data B (-), Indication B (-), Signal Timing B (-)
Port Cabling	MGMT port -- Modular RJ-45 MX-6025 WAN port -- V.35 , RS-423 or X.21 compatible
Maximum Cable Lengths	MGMT port -- 15.25 meters (50 feet). WAN port -- V.35: 15.25 m. (50 ft.) for 2 Mbps, 152.5 m. (500 ft.) for 56 Kbps; RS-423: 30.5 m. ( 100 ft.), X.21 4.57 m (15 ft)
Serial Line Speed (MGMT Port)	300 bps to 38.4 Kbps

## Technical Specifications

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Item	Description
Supported Clock Rates for WAN Link	V.35 -- 2.048 Mbps RS-423 -- 100 Kbps X.21 - 2.048 Mbps
Sessions Per Port	MGMT port -- 4 sessions
Controls	Run/Reset push button switch
Dimensions	Height -- 4.45 cm. (1.75 in.)
	Depth -- 30.48 cm. (12 in.)
	Width -- 48.26 cm. (19 in.)
Weight	3.64 kg. (8 lbs.)
Environment	5 - 40 <sup>0</sup> C (40 to 105 <sup>0</sup> F) 20% to 80% humidity, noncondensing
Power	110 - 240 VAC, 0.5 - 1.0 A, 50 - 60 Hz, less than 20 W, less than 65 BTU/hr.
Diskette Drive	3-1/2 in. 1.44 MB
Software	MAXserver X.25 Gateway software, Release 1.2B1
Ethernet Interface	Ethernet AUI Transceiver Connection

End of Appendix

# Appendix B

## Cabling Considerations

This appendix describes the cabling considerations you should be aware of when installing a MAXserver 6025. This appendix includes these topics:

- Ethernet Transceiver Cable
- Cabling Options
  - Wan Cables
  - Serial Device Cables
  - RJ-45 Wiring Considerations
  - DECnet Cables (RJ-45)
- Order Codes

### Ethernet Transceiver Cable

Figure B-1 shows the standard 15-pin AUI connector signal assignments:

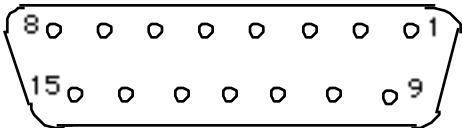
	Pin	Signal
	1	Chassis Ground
	2	Collision +
	3	Transmit +
	4	Chassis Ground
	5	Receive +
	6	Power Return
	7	Not Used
	8	Not Used
	9	Collision -
	10	Transmit -
	11	Chassis Ground
	12	Receive -
	13	Power (+12Vdc)
	14	Chassis Ground
	15	Not Used

Figure B-1. 15-Pin Female AUI Connector Signal Assignments



### Cabling Options

The cabling options available from Xyplex are as follows. Refer to the section Order Codes, later in this Appendix, for order codes and available lengths.

#### WAN cables

**V.35 cable** -- Male V.35 to male V.35. This cable connects the MAXserver 6025 to a DCE device using the V.35 electrical interface. One connector attaches to the rear of the MAXserver; the other connects to the DCE device. This cable does not support the RING or NULL CLOCK signals. (See Chapter 2 for an illustration and connector signal assignments.)

**RS-423 cable** -- Male DB-25 (25-pin) connector to female DB-25 (25-pin) connector. This cable connects the MAXserver 6025 to a DCE device using the RS-423 electrical interface. The female DB-25 connector attaches to an RS-423 connector on the rear of the MAXserver; the male DB-25 connector attaches to the DCE device. The cable consists of 12-wire cable and DB-25 connectors. (See Chapter 2 for an illustration and connector signal assignments.)

#### Serial device cables

A serial cable and RJ-45-to-DB-25 adaptor are shipped with each MAXserver 6025. Other serial cabling options include:

- Crossover cables (male RJ-45 to male RJ-45, 10 and 25 feet)
- Straight-through cables (male RJ-45 to male RJ-45; lengths: 1, 10, and 25 feet)
- DEConnect crossover cable (male RJ-45 to male MMJ, 10 and 25 feet)
- Modular adaptors:
  - Female RJ-45 to male DB-25
  - Female RJ-45 to female DB-25
  - Female RJ-45 to female MMJ
  - Female RJ-45 to female RJ-45
  - Male RJ-45 to female RJ-12
  - Male RJ-45 to female MMJ

Xyplex also supplies DEConnect-compatible crossover cables and adaptors for use with the MAXserver 6025. These cables are described later in this appendix.

### RJ-45 Wiring Considerations

You should give special consideration to the wiring scheme when connecting a device such as a terminal to a MAXserver Router serial port. The MAXserver Router is considered a DTE device. If you want to connect to another DTE device such as a terminal that is also DTE, you will need a crossover wiring scheme somewhere in the cabling. (Communication between DTE-to-DTE devices requires a crossover.) When a DCE device is connected to a MAXserver Router serial port, straight-through wiring is required.

To make a modular cable with a crossover, you need only crimp the RJ-45 connector in the same direction at both ends. This crosses all wires in the cable. To make a modular straight-through cable, you need only crimp the RJ-45 connector in opposite directions at both ends. Figure B-2 shows the crossover and straight-through wiring schemes.

The crossover connects the MAXserver Router transmit data (XMT) line to the receive data (RCV) line of the user DTE device. Similarly, the MAXserver Router receive data (RCV) line crosses over to the transmit data (XMT) line of the user DTE device.

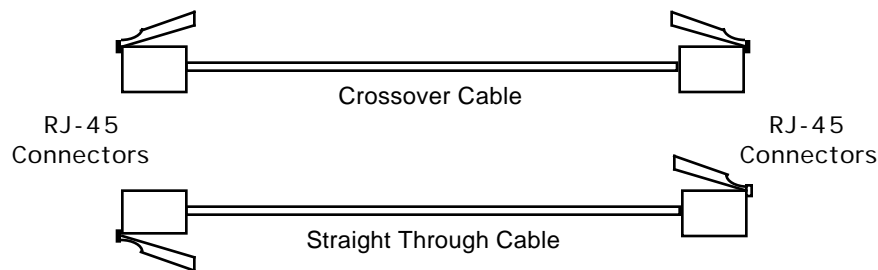
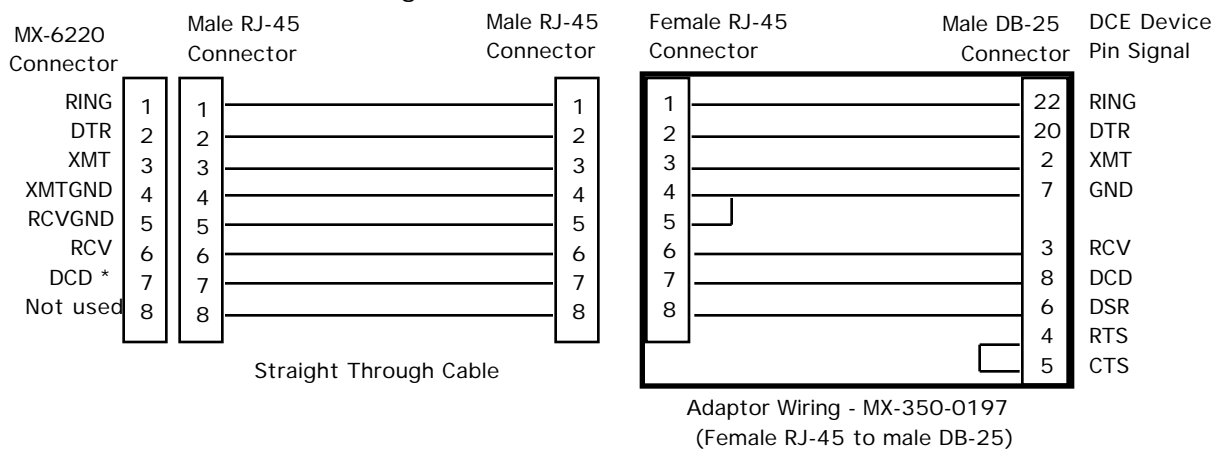


Figure B-2. Crossover and Straight-through Wiring Schemes

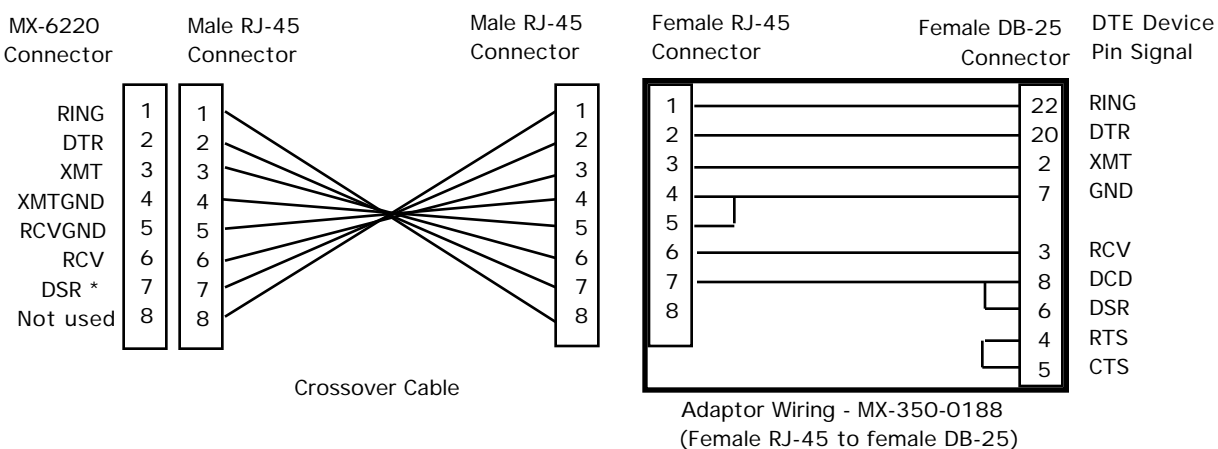
You can obtain modular adaptors with male and female DB-25 connectors from Xyplex. These adaptors direct signals from the RJ-45 connector on the cable to the correct pin on the DB-25 connector. Figure B-3 shows the cabling of devices when using these adaptors, and the wiring of the adaptors. Figure B-4 shows the RJ-45 and DB-25 pin assignments.

## Cabling Considerations

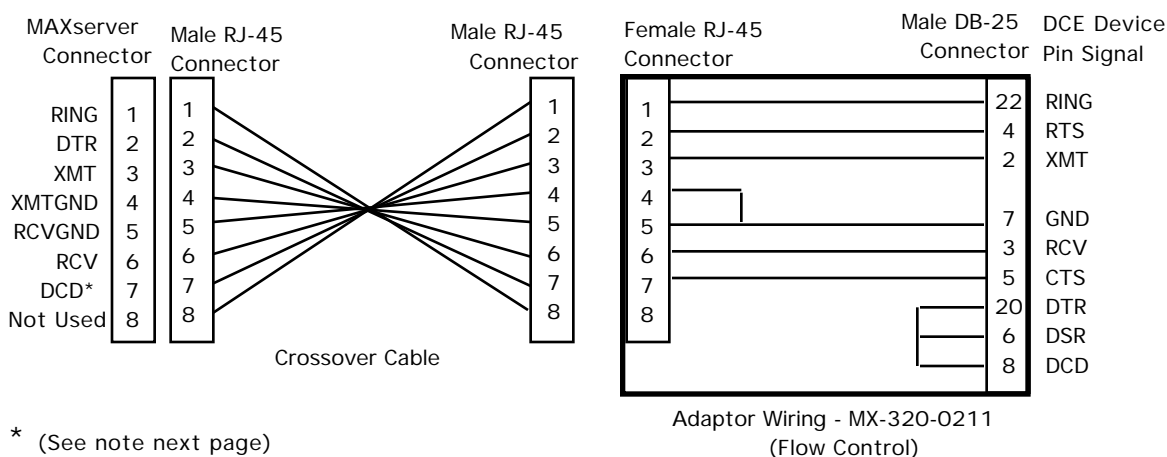
### 3-3 a. MAXserver to DCE Wiring



### 3-3 b. MAXserver to DTE Wiring



### B-3 c. MAXserver to DTE Wiring (Flow Control)



\* (See note next page)

Figure B-3. MAXserver Cable and Adaptor Wiring

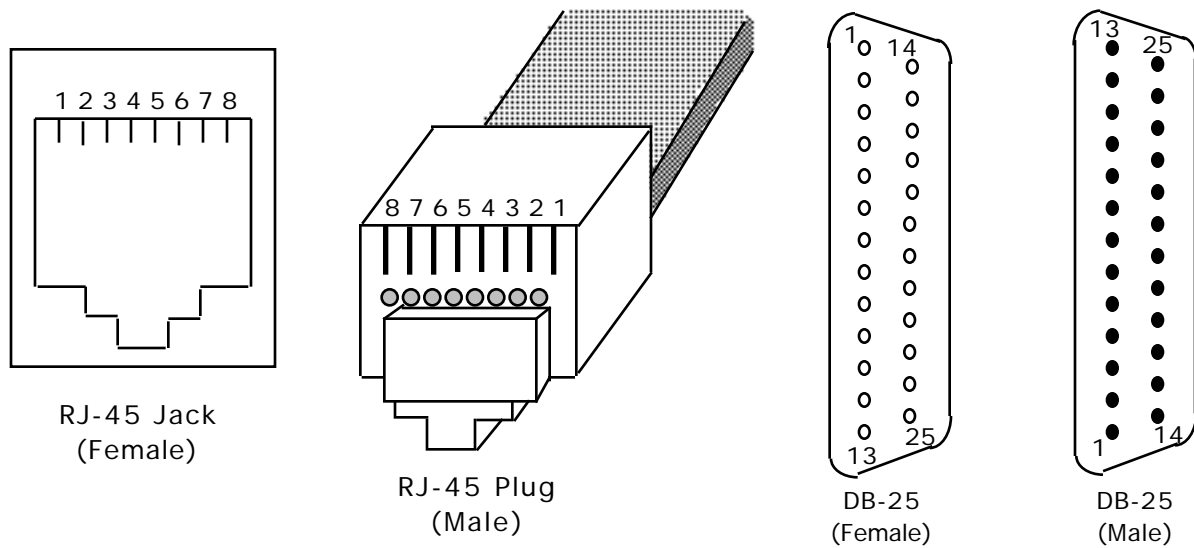


Figure B-4. RJ-45, DB-25 Pin Assignments

#### Note

*In order to expand the functionality of the serial interface, the MAXserver Router modular cabling allows you to connect different signals to pin 7 of the MAXserver. (This pin is an input to the MAXserver Router.) When a DCE device is connected to the MAXserver Router serial port, the device's DCD output is connected to pin 7. In this case, the signal at pin 7 is referred to as DCD.*

*When a DTE device is connected to the MAXserver Router serial port, the device's DTR output is connected to pin 7 of the MAXserver. In this case, the signal at pin 7 is referred to as DSR. (This cabling scheme also provides DECconnect compatibility, since DECconnect does not support the DCD signal.)*

DEConnect Cables (RJ-45)

Figure B-5 shows the Xyplex-supplied DEConnect-compatible cables and shows how the cables are wired. The male RJ-45 connector is attached to the server. The MMJ connector attaches to the DEConnect-compatible device (DTE). The cable is a crossover cable that uses the six inner pins of the server port and makes the signals available at the MMJ connector. The cable is constructed using standard six-wire cable.

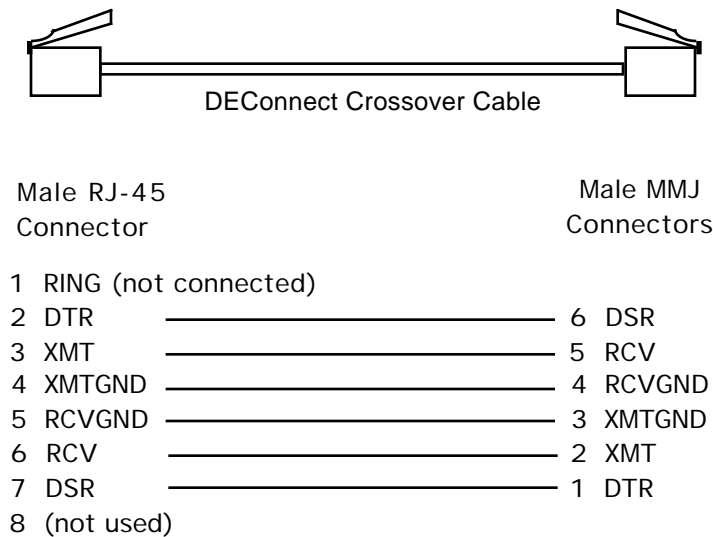


Figure B-5. MAXserver DEConnect Cable

Note

*If you have existing DEConnect cables that you want to use with the MAXserver Router, the one-foot straight through cable and the RJ-45 to MMJ adaptor or modular adaptor allow you to use these cables without making any changes. You can also use the male RJ-45 to female MMJ modular adaptor.*

## Order Codes

### RJ-45 Straight Through and Crossover Cables (see Figure B-1)

Straight through cable, male RJ-45 to male RJ-45, 7.62 m (25 feet)	MX-151-3025
Crossover cable, male RJ-45 to male RJ-45, 7.62 m (25 feet)	MX-151-3026
Straight through cable, male RJ-45 to male RJ-45, 3.05 m (10 feet)	MX-151-3027
Crossover cable, male RJ-45 to male RJ-45, 3.05 m (10 feet)	MX-151-3028
Straight through cable, male RJ-45 to male RJ-45, 0.305 m (1 foot)	MX-151-3033

### Modular Adaptors

Modular adaptor, female RJ-45 to male DB-25, with red/gray casing (see Figure B-2a)	MX-350-0187
Modular adaptor, female RJ-45 to female DB-25, with red/white casing (see Figure B-2b)	MX-350-0188
Modular adaptor, female RJ-45 to female MMJ connector	MX-350-0190
Modular adaptor, female RJ-45 connector to female RJ-45 connector Coupling used to connect 2 RJ-45 and/or RJ-12 style modular cables.	MX-350-0191
Modular adaptor, male RJ-45 to female RJ-12, used to adapt MAXserver cabling to TSERV-style cabling	MX-350-0197
Modular adaptor, male RJ-45 to female MMJ	MX-350-0198
Modular adaptor, flow control (uses RTS/CTS flow control; see Figure B-3c)	MX-320-0211

### DEConnect Cables (Serial)

Crossover cable, male RJ-45 to male MMJ, 7.62 m (25 feet; see Figure B-5)	MX-151-3032
Crossover cable, male RJ-45 to male MMJ, 3.05 m (10 feet; see Figure B-5)	MX-151-3031

### WAN Cables for MAXServer 6025

RS-423 cable, male DB-25 (25-pin) connector to female DB-25 (25-pin) connector, 4.57 meters (15 feet, see Figure 2-6)	MX-151-3074
V.35 Cable, male V.35 connector to male V.35 connector 4.57 meters (15 feet, see Figure 2-5)	MX-151-3039
X.21 Cable, male DB-15 (15-pin) connector to female DB-15 (15-pin) connector (see Figure 2-7)	MX-151-3137

### **Null Modem Cables for MAXserver 6025**

(These cables are typically used for demonstrations only.)

V.35 Null modem cable, male V.35 to male V.35; connects two  
MAXserver 6025 units; 4.57 meters (15 feet)

MX-151-3128

RS-423 Null modem cable, female DB-25 to female DB-25; connects two  
MAXserver 6025 units; 4.57 meters (15 feet)

MX-151-3129

(No X.21 Null modem cable)

End of Appendix