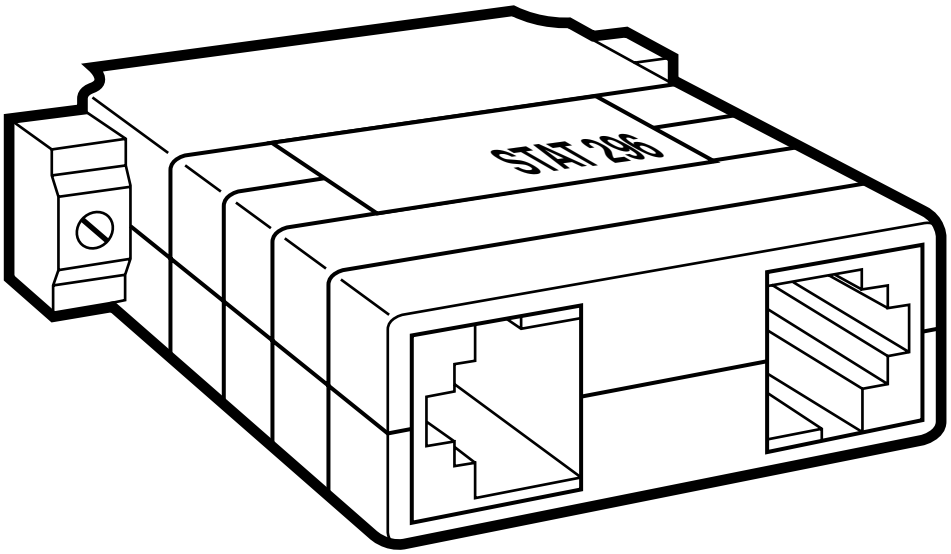
FEBRUARY 1995
MX900A

Stat 296



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1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.

2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.

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4. Todas las instrucciones de operación y uso deben ser seguidas.

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7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.

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11. El aparato eléctrico deberá ser connectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.

12. Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.

13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.

14. El equipo eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.

15. En caso de existir, una antena externa deberá ser localizada lejos de las lineas de energia.

16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.

17. Cuidado debe ser tomado de tal manera que objectos liquidos no sean derramados sobre la cubierta u orificios de ventilación.

18. Servicio por personal calificado deberá ser provisto cuando:

    A: El cable de poder o el contacto ha sido dañado; u

    B: Objectos han caído o líquido ha sido derramado dentro del aparato; o

    C: El aparato ha sido expuesto a la lluvia; o

    D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o

    E: El aparato ha sido tirado o su cubierta ha sido dañada.

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1. Specifications

Multiplexor Type — Statistical

User Channels — 2

Speed — Channel: 110 to 9600 bps Composite: 110 to 9600 bps

Data Format — Channel and composite: Asynchronous

Flow Control — Local: Hardware CTS/DTR; End-to-end: Hardware CTS/DTR and software X-ON/X-OFF

Diagnostics — Local and remote loopback

Interface — Channel: RS-232 Composite: RS-232

Connectors — Channel: (1) RJ-45 female
Composite: (1) DB25 male

Power — Derived from modem's RS-232 signals

Size — 0.7"H x 2.6"W x 2.1"D (1.8 x 6.6 x 5.3 cm)

Weight — 0.1 lb. (<0.1 kg)

2. Introduction

2.1 General

Using statistical multiplexing techniques, the Stat 296 multiplexes two asynchronous channels at data rates of 110 to 9600 bps onto a single asynchronous communication link. Operating without connection to AC power, the Stat 296 derives the power it needs to operate from the standard RS-232 data and control voltages.

Hardware and software flow control for each channel manages data flow end to end and between a serial device and the Stat 296. The Stat 296 includes three serial connectors: a DB25 male connector for attachment to a modem, and two RJ-45 connectors for attachment to serial devices such as computers, terminals, or printers.

2.2 Key Features

- Multiplexes two asynchronous channels at data rates up to 9600 bps onto a single communication link operating at up to 9600 bps.
- Requires no external power or batteries if used with an AC-powered modem (derives its power from the RS-232 interface).
- Automatically senses and configures for DTE or DCE connection to channel ports. Automatically senses presence of control signals and changes in baud rates.
- Offers independent configuration of four parameters for each channel: baud rates, parity, framing, and flow control.
- Performs end-to-end conversion for parameters: baud rates, parity, framing, and flow control.
- Provides command facility (from Channel 1) for configuration and diagnostic tests of local and remote multiplexor.
- Permanently stores system configuration in nonvolatile memory.
- Executes diagnostic tests—including local and remote loopback—on channels, communication link, and system hardware.
- Maximizes throughput by prioritizing channels according to data rates.

3. Connecting the Stat 296

The Stat 296 includes three serial connectors: a DB25 male connector for a modem and two RJ-45 connectors for serial devices such as computers, terminals, or printers. Since the Stat 296 draws its power from the signals sent by the attached modem, it needs no power connector and no internal battery.

3.1 Communication Link (Modem) Connector

On one end of the Stat 296, you will find the modem connector. It is a DB25 male connector that mates with the DB25 female connector on your modem—without a cable. If your situation requires a cable from the Stat 296 to the modem, it must be a straight-through cable, *not* a "null-modem cable" (sometimes called a "crossover cable" or a "modem eliminator cable."

Normal operation of the Stat 296 requires a communication link to another Stat 296, usually located remotely, and interconnection with a pair of modems. The two Stat 296 multiplexors logically connect Channel 1 of the local Stat 296 to Channel 1 of the remote Stat 296 and channel 2 to channel 2. See Fig. 3-1 for a typical application.

3.2 Power Requirements

Usually, the Stat 296 obtains all its power from the signals sent by the modem through its connector. The Stat 296 "powers up" when you connect it to a modem and turn on the modem's power.

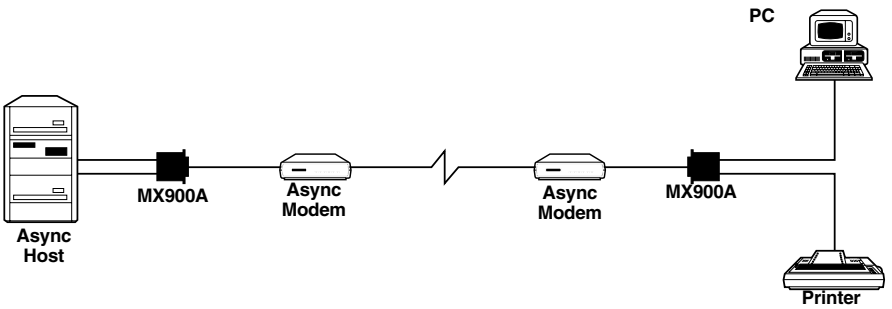

Fig. 3-1. Typical Application of the Stat 296.

Table 3-1. Communication Link Connector Pin Assignments.

Pin Number	Circuit	Description	Direction
1	AA	Protective Ground	N/A
2	BA	Transmit Data	From Stat 296
3	BB	Receive Data	To Stat 296
4	CA	Request to Send	From Stat 296
5	CB	Clear to Send	To Stat 296
6	CC	Data Set Ready	To Stat 296
7	AB	Signal Ground (Common Return)	N/A
9	Pwr	9- to 12-volt power	To Stat 296*
20	CD	Data Terminal Ready	From Stat 296

***NOTE: The modem does not supply power to Pin 9. When the Stat 296 needs more power than provided by the other signals to the Stat 296, another external device provides power between Pin 9 and Pin 7 of about 100 milliwatts.**

3.3 Channels 1 and 2 Connectors

The Stat 296 provides two serial channels, which it multiplexes over the common communication link. You connect these serial channels to computers, terminals, printers, or other serial devices. Logically, you have connected the serial device to the serial device you connected to the corresponding Channel 1 or Channel 2 of the remote Stat 296. Connecting to a serial device requires a serial cable with the proper mating connector for the device's RS-232 port and the RJ-45 channel connector of the Stat 296.

For connection to the Stat 296, the computer must have an unused serial port, also known as an RS-232 interface. The port's jack comes in several different shapes: The most common by far is the DB25 connector, followed by the DB9, the circular 8 used on some Macintosh® computers, and the RJ-45.

In computers like the IBM PC and compatibles, which have plug-in expansion slots, the serial port is normally part of an expansion card. It can be found at the expansion-card slot openings at the back of the PC. Many other machines, particularly those without expansion slots (including laptops and other portables), have the serial port built in. Either way, it will normally be labeled "serial port" or "RS-232C."

3.4 The Serial Cable

The Stat 296 does not come with serial cables, since each computer or other serial device requires a different cable, depending on the type of serial connector and the connector's wiring.

The RS-232 standard defines two serial connector configurations: Data Communications Equipment (commonly known as DCE) and Data Terminal Equipment (commonly known as DTE). The serial port of all terminals and printers, and most computers, is DTE. For most other serial devices, the serial port is DTE if it connects to a modem, or DCE if it connects to a terminal or computer.

Each channel port of the Stat 296 automatically matches the configuration of your serial device (it adapts to a DTE or a DCE connection). This eliminates the need for "null modem," cables and simplifies concern over the serial device's connector wiring. You should provide both CTS and DTR circuits in your cable, since the Stat 296 derives power from these signals and requires them for local flow control. Also, your devices may require them for end-to-end hardware flow control. Additionally, most "null modem cable" devices do not provide for hardware flow control, so don't use them.

3.5 Flow Control

Any serial device connected to a Stat 296 subchannel must honor local flow control. Otherwise an overload on the communication link will cause loss of characters. A DTE device connected to the Stat 296 will see Clear-to-Send (CTS) raised when it is allowed to send data to the Stat 296. When the Stat 296 drops CTS, the attached device must stop sending data. All DTE devices that comply with RS-232C, V.24, and related standards do honor CTS in this manner: this includes almost all serial PCs, terminals and printers on the market. Therefore, any device you're likely to connect to the Stat 296 will not have a problem with this requirement.

For DCE devices, the Stat 296 outputs Data-Terminal-Ready (DTR) as a local flow-control signal, with the same response requirements as described above for CTS.

End-to-end flow control is the handshaking that goes on between a local serial device connected to the local Stat 296, and its remote counterpart connected to the remote Stat 296. For end-to-end flow control, the Stat 296 offers both software flow control (X-ON/X-OFF) and hardware flow control (CTS/DTR). Software flow-control characters are passed through without modification by the Stat 296. If your device uses end-to-end flow control, it must provide sufficient buffering for the round trip delay.

3.6 "Break" Character

The Stat 296 will detect the "break" character from your serial device, a space condition exceeding 200 milliseconds. In response, it sends a coded signal to the remote Stat 296, which generates a 200-millisecond break-condition signal to your device's counterpart.

4. Operation

4.1 Introduction

This chapter describes the Stat 296's two modes of operation, how to switch between the two modes, and the result codes that report the Command Mode responses of the Stat 296.

4.2 Operating Modes

Your Stat 296 operates in one of two modes: Command Mode or Data Mode. On power-up, the local Stat 296 will automatically perform a self-test, configure itself as defined in its nonvolatile memory, and enter Command Mode. You then have approximately 10 seconds to enter an AT command. If you do not enter an AT command within 10 seconds, the local Stat 296 will automatically establish a connection with the remote Stat 296 (provided it is powered-up and the pathway is clear), and enter Data Mode.

4.2.1 Command Mode

In the Stat 296's command mode, you communicate with the Stat 296 through Channel 1, using AT commands. In Command Mode you can configure the local Stat 296, the attached local modem (if the modem supports AT commands), and the remote Stat 296, all at the same time.

After executing an AT command, the local Stat 296, the local modem, and/or the remote Stat 296 will return result codes to show execution of the command. In Command Mode, you can also do loopback tests on the local Stat 296 and local modem, and/or the remote Stat 296 and remote modem. With these loopback tests, you can isolate faults that can cause communication problems.

Once you have been entering AT commands in Command Mode, there are two ways to get into data mode: You can enter the AT "on-line" command (see **Chapter 5.0**) to force the Stat 296 into Data Mode immediately. Or you can wait for the MicroStat to "time-out" (approximately 2 minutes) and enter Data Mode automatically.

4.2.2 Data Mode

In the data mode, the Stat 296 transparently transfers data end-to-end between your serial devices and their counterparts on the remote Stat 296. It receives characters from Channels 1 and 2, and multiplexes these characters onto the communication link. Your modem sends this data stream through the remote modem to the remote Stat 296, which demultiplexes the stream and sends the characters to its own Channels 1 and 2, respectively.

The Stat 296 constantly checks the data from Channel 1 for the escape-code sequence (three backslashes, \\\, followed by one second with no data). The escape-code sequence allows you to send a command to the Stat 296 while it is in Data Mode.

Entering Commands in Data Mode

Since the Stat 296 does not respond to any commands in the Data Mode, the escape code allows you to return to the Command Mode.
Here's how to send a command to the local Stat 296 or the remote Stat 296 while it is in data mode:

1. On channel 1, type "\\\"
2. Wait one second before typing any other character.
3. Type in the desired AT commands.
4. Check for the OK result code.
5. After completing your command session, type **AT[O** (the On line Command) to restore the data mode.

NOTE: While in command mode, the local Stat 296 will halt all data transfers on channel 2, and if a connection exists to a remote Stat 296, will halt all data transfers on both channels of the remote Stat 296.

Result Codes

Result codes report the responses of the Stat 296 to your commands. You may select result codes as English words or numeric digits, or you may disable them entirely (see the "**Q...**" command in **Chapter 5**). Some example result codes are shown in Table 3-1.

Table 3-1. Stat 296 Result Codes.

Digit Code	Word Code	Meaning of Code
0	Ok	Command line executed without errors
4	Error	Error in the command line

5. Commands

5.1 Introduction

This chapter describes AT command execution, gives AT command guidelines, and lists all the AT commands recognized by the Stat 296.

5.2 Command Execution

Your Stat 296 accepts only ASCII characters from Channel 1 as commands. When the Stat 296 receives characters during Command Mode, it stores local commands (those following the "[" local directive) in a 30-character buffer. Unless you disable the echo-back (**E0** command), the Stat 296 also echoes local command characters back to Channel 1. When it encounters a carriage-return character showing the end of the command, the Stat 296 executes the stored command.

A command line starts with the attention code **AT**. You may string commands together in a single command line, and you may separate commands with spaces for readability. However, you may not exceed 30 characters and spaces following the **AT[** directive for the local commands. The command or string of commands executes when you press the RETURN key. You receive a result code after execution of the last command unless you intentionally disabled result codes.

5.2.1 Local and Remote Stat 296 Commands

The Stat 296 echoes all command characters back to Channel 1 (unless you disable the echo-back). After receiving the attention command **AT** and the local directive **[** character, the Stat 296 also stores all subsequent characters in a 30-character command buffer. When you enter the **AT** code immediately followed by the remote directive **@**, the Stat 296 directs the remainder of the command line to the remote Stat 296, which echoes these characters back to your Channel 1 (unless you disable its echo-back). If your Stat 296 doesn't have a connection to a remote Stat 296, the **AT@** command returns an error result code to you, before you press RETURN.

5.2.2 Modem Commands

If you enable modem commands **AT[M1** the Stat 296 passes all command characters to the attached modem until it encounters the attention command **AT** and the local directive **[** character. The Stat 296 echoes all characters from the modem to your Channel 1. Thus if your modem is in Command Mode and it has echo enabled, your Stat 296 echoes these command characters back to you. After receiving a **[**, the Stat 296 stores all subsequent characters in a 30-character command buffer and directly echoes these back to you.

5.3 Command-Line Format

This is the command-line format for commands directed to the local modem and to the local Stat 296:

AT modem commands . . . **[** local Stat 296 commands . . . <**CR**>

The Stat 296 first executes its commands and returns a result code. Then the modem receives a <CR>, executes its commands, and returns its result code. This is the command line format for commands directed to the remote Stat 296:

AT@ Stat 296 commands . . . <CR>

The remote Stat 296 executes its commands and returns a result code.

5.4 Command Guidelines

Here are some guidelines for entering commands:

1. Each command line must end with <CR> (press the RETURN key). The Stat 296 does not begin command execution until it receives a carriage-return character. When you enable modem commands **AT[M1**, the attached modem also receives the carriage-return character, and then the modem will interpret its commands.

2. If you made an error while keying a command, you can edit your entry before you press the RETURN key. Pressing the BACKSPACE key normally deletes the last character entered. By pressing the BACKSPACE key repeatedly, the entire command line may be deleted, except the AT command at the beginning of the command line.

NOTE: Not all modems support the backspace-edit function.

3. Many commands require a numeric parameter. If you omit this parameter, it will be assumed to be zero.

4. The command buffer is 30 characters long. If a command line exceeds 30 characters, the Stat 296 aborts execution of the command line and displays an error reply code. This code will appear before you press the RETURN key.

5.5 The AT Command Set Recognized by the Stat 296

The Stat 296 command set has two types of commands: mode-setting commands and channel-configuration commands. All the commands take immediate effect when you press the RETURN key. Most also have a permanent effect, and are saved in nonvolatile memory.

5.5.1 Mode-Setting Commands

The mode setting commands select operating modes and parameter values for the Stat 296.

Table 5-1. The Mode-Setting Commands.

Command	Function
An	Enables or disables answer only operation. If enabled, the Stat 296 does not originate communication with a remote unit. This prevents the unit from sending data to an attached modem until a connection exists. You should not enable this feature unless the modem answering an incoming call disconnects because of data from its attached Stat 296. A better solution is to disable the disconnect feature of the modem. A0 = disable answer only A1 = enable answer only This has the effect that the unit does not send request for connection to a remote unit. It only responds to a remote unit's requests. Thus, it does not send data to a modem until a remote Stat 296 speaks to it. Both Stat 296 units must not have A1 set, or neither will ever connect to the other. Also, a unit in command mode with A1 set will never connect to the remote, effectively disabling remote configuration of the other unit.
AT	Attention: this command line prefix. precedes all other commands.

Table 5-1. The Mode-Setting Commands (continued).

Command	Function
[	Directs the local Stat 296 to execute the following commands. The Stat 296 ignores all characters before the **[**, unless it has a connection to a remote Stat 296 or you have enabled modem commands.
@	Directs the remote Stat 296 to execute the following commands. The remote Stat 296 responds to all the commands after the **@** and returns a result code. The local unit does not process the following commands. The **@** command must immediately follow the **AT**, the local Stat 296 must have a connection to the remote Stat 296, and the remote Stat 296 must not be in Local Command Mode.
Cn	Selects channel number for subsequent channel-configuration commands. At each command line, selection reverts to the default. 0 = deselects any channel 1 = Channel 1 2 = Channel 2 3 = Communication link (modem)
En	Command-mode data echoed back to Channel 1. 1 = echo on 0 = echo off

Table 5-1. The Mode-Setting Commands (continued).

Command	Function
Kn	Sets the command to activity kill timer, in one quarter minute increments. Valid values are 0 through 7. K0 = 2 minutes K1 = 1/4 minute K2 = 1/2 minute Kx = x/4 minutes K0 is the default, resulting in a command mode timeout of about 110 seconds. The timer starts running when the "T" key of the "AT" command is keyed. Thus, this should not be set too short, or timeouts will occur while still entering a command.
Mn	Enables or disables modem commands. Enabled commands go to the attached modem and the local Stat 296. Disabled commands go to the local Stat 296 and possibly a remote Stat 296. If the modem is not in Command Mode, it might not echo your key entries. Whenever you go on-line, selection reverts to the default. M1 does not echo online request form the remote Stat 296, and it resets when the command mode times out. M0 = disable (default) M1 = enable
O	Return to on-line Data Mode (command for local unit only). If you have enabled multiplexer operation, the Stat 296 waits for a connection to the remote Stat 296.
Qn	Format of result codes sent to Channel 1. 0 = word codes (default) 1 = digit codes 2 = result codes not sent

Table 5-1. The Mode-Setting Commands (continued).

Command	Function
Tn	Enter Local Loopback Data Mode (local unit only). Each channel echoes received data back to itself. To stop this test, enter the escape code (\\\), or power down the Stat 296. 0 = no test 1 = run loopback test (default)
V0	View the selected channel's configuration (last **Cn** command).
V1	View the current operation mode for the Stat 296.
Yn	Enable or disable multiplexor operation (local unit only). If disabled, the Stat 296 logically connects Channel 1 to the communication link, and disables Channel 2. You can then use the attached modem or serial device for any single-channel purpose without physically disconnecting the Stat 296. 0 = disable multiplexor 1 = enable multiplexor (default)
Z	Software reset. All modes and channel configurations revert to default values.

5.5.2 Channel Configuration Commands

The following commands change the configuration of the channel that you last selected with the Cn command. The Cn command must be in the command line precede a channel configuration command.

Table 5-2. The Channel-Configuration Commands.

Command	Function
Bn 0 = autoselect (default) 1 = 110 2 = 300 3 = 1200	Select baud rate for the channel (in bps) 4 = 2400 5 = 4800 6 = 9600
In	Select signal for hardware flow control of data to the peripheral. The peripheral must be configured to activate this signal when its Receive buffer is about to fill, and must have enough buffer capacity for end-to-end round-trip delay. 0 = none 1 = DTR/CTS enabled (default)
Ln	Select data length for the channel. 0 = 7 bits data 1 = 8 bits data (default)
Pn	Select parity for the channel. 0 = no parity 1 = odd parity 2 = even parity
Sn	Selects the number of stop bits for the channel. 1 = 1 stop bit (default) 0 = 2 stop bits

6. Quick Configuration

6.1 Introduction

This chapter describes how to set up and configure the Stat 296 Muxes, connect them to the modems, and establish a data session between the end-point terminals. Follow the Easy Set-Up procedure below:

6.2 Configuring the Modems and Terminals

Verify the modem and terminal configurations, flow-control methods, data rates, number of parity bits and stop bits, and duplex mode.

1. Configure the Modem for hardware flow control.

6.3 Connecting the Stat 296

1. Make the line connection between the terminal and Port 1 of the Stat 296 (see **Section 2.3**).

2. Plug the Stat 296 into the Modem (see **Section 2.1**).

6.4 Configuring the Stat 296 Multiplexors

1. The autodetect features on the Stat 296 will automatically configure to match the word length, parity, and number of stop bits of the connected device. The default flow-control method is DTR/CTS, and each channel is given equal priority.

1. Since modems typically have autobaud serial ports, you will have to set the bit rate of the composite channel (Channel 3) of the Stat 296 to the desired bit rate for the modem.

2. Press <RETURN> 5 or 6 times. The Stat 296 should now be in Command Mode (see **Section 4.2.1**).

3. Enter the AT command to change the bit rate of the composite channel.

   For example, if the bit rate on the modem is 9600 bps, type:

AT[C3B6 <RETURN>

NOTE: if your bit rate is different, see Section 5.5.2.

4. Disconnect the first Stat 296 from the terminal and modem. Connect the second Stat 296, and repeat Steps 2 and 3 above to set the composite-channel bit rate.

6.5 Establishing the Connection Between the Modems.

1. With the Stat 296 in its default configuration, you can send commands to the modem. Enter the the following:

AT[M1 <RETURN>

NOTE: See Section 5.5.1 for mode-setting commands.

2. After an OK response from the modem, you can establish the session between the modems. Refer to your modem user's manual to determine how to establish the session.

6.6 Entering Stat 296 Data Mode

After you have established the session between modems, the Stat 296 will be in Command mode. You now need to enter Data Mode. Type the following command to Channel 1 on each Stat 296.

AT[O <RETURN>

6.7 Data/File Transfer

You should now be up and running on all four Stat 296 subchannels. If you have problems, please review the commands for viewing your configuration. If you are unable to resolve these problems, call your dealer or Technical Support.

Appendix: Cabling

Connect to Sub-Channels (Serial Devices)

The two asynchronous, serial sub-channels on the Stat 296 are RJ-45 female ports that conform to the EIA/TIA-561 interface. These ports connect to the two serial devices to be multiplexed through the main RS-232 port of the Stat 296. You may connect any combination of RS-232 devices to the Stat 296's sub-channels: PCs, terminals, printers, laptops, Macintosh® computers, plotters, etc.

Regardless of the serial devices you choose to connect to Channels 1 and 2 (the Stat 296's sub-channels), you will need a special interface cable for each device. the interface cable must have an RJ-45 male plug on one end, and whatever connector mates with your RS-232 serial device at the other end. The following diagrams show pin connections between the Stat 296's sub-channels and common RS-232 serial interfaces.

DCE/DTE Conversion

Each serial device that interfaces with the Stat 296's sub-channels will be either a DTE (Data Terminal Equipment) or a DCE (Data Commuications Equipment) device, depending upon which pins are designated “transmit data” and “receive data.” Normally, you’d need a null-modem cable (pins swapped) to allow both kinds of devices to commuicate with the Stat 296. However, the Stat 296 has a special circuit that discerns whether a connected device is DTE or DCE, and routes the signals properly. Therefore, the same interface cable will work for both DTE and DCE devices.

Serial DB25 Pin No.	Stat 296 Pin No.
20 (DTR)	3
7 (SG)	4
3 (RX Data)	5
2 (TX Data)	6
5 (CTS)	7

Figure A-1. PC/XT™ or Serial Printer to Stat 296 Pinouts.

Serial DB9 Pin No.	Stat 296 Pin No.
4 (DTR)	3
5 (SG)	4
2 (RCV Data)	5
3 (TX Data)	6
8 (CTS)	7

Figure A-2. AT to Stat 296 Pinouts.

Serial RJ-45 Pin No.	Stat 296 Pin No.
1 (DTR)	3
3 (SG)	4
5 (TX Data)	5
6 (RCV Data)	6
7 (CTS)	7

Figure A-3. EIA/TIA 561 to Stat 296 Pinouts.

Connect ot Sub-Channels (Serial Devices)

The two asynchronous, serial sub-channels on the Stat 296 are RJ-45 female ports that conform to the EIA/TIA-561 interface. These ports connect to the two serial devices to be multiplexed through the main RS-232 port of the Stat 296. You may connect any combination of RS-232 devices to the Stat 296's sub-channels: PCs, terminals, printers, laptops, Macintosh® computers, plotters, etc. Regardless of the serial devices you choose to connect to Channels 1 and 2 (the Stat 296's sub-channels), you will need a special interface cable for each device. the interface cable must have an RJ-45 male plug on one end, and whatever connector mates with your RS-232 serial device at the other end. The following diagrams show pin connections between the Stat 296's sub-channels and common RS-232 serial interfaces.

DCE/DTE Conversion

Each serial device that interfaces with the Stat 296's sub-channels will be either a DTE (Data Terminal Equipment) or a DCE (Data Commuications Equipment) device, depending upon which pins are designated “transmit data” and “receive data.” Normally, you’d need a null-modem cable (pins swapped) to allow both kinds of devices to commuicate with the Stat 296. However, the Stat 296 has a special circuit that discerns whether a connected device is DTE or DCE, and routes the signals properly. Therefore, the same interface cable will work for both DTE and DCE devices.

NAME

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