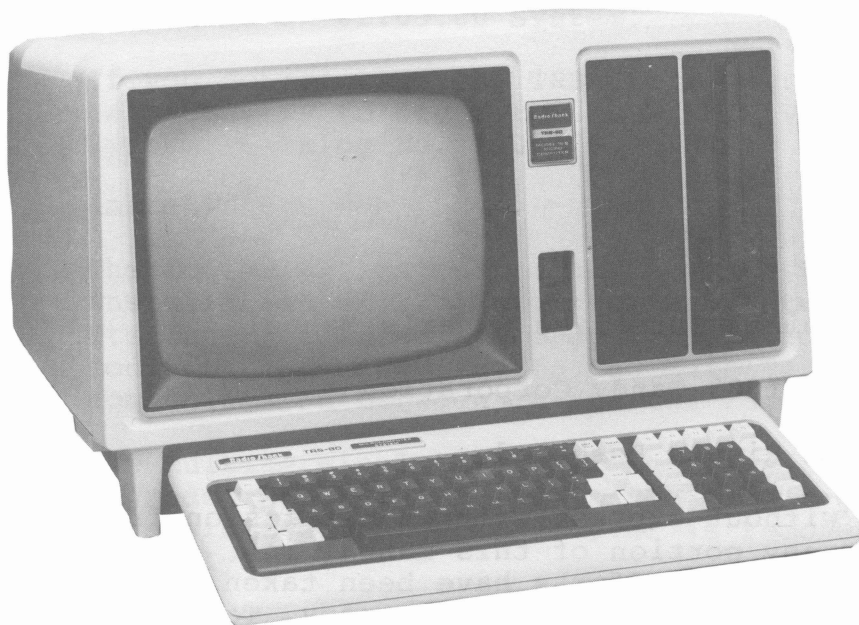


Multiterminal Interface



OWNER'S MANUAL

PLEASE READ BEFORE
USING THIS EQUIPMENT

Radio Shack®

**Cat. No.
26-6013**

CUSTOM MANUFACTURED BY RADIO SHACK, A DIVISION OF TANDY CORPORATION

TRS-80® Multiterminal Interface Owner's Manual

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Multiterminal Interface 26-6013

Congratulations for selecting this Radio Shack product. Included in the following pages are instructions for installing and interconnecting the Multiterminal Interface PCB in your Model 16B or upgraded Model 12 Radio Shack Computer. This option allows you to interconnect as many as three additional terminals to your computer so that a common hard disk may be used by all terminals. Refer to the TRS-XENIX Operator's Manual for operating instructions for the system.

Software Requirements

The only current operating system offered by Radio Shack which supports this board is TRS-XENIX, Version 01.03.00. You must upgrade your system to version 01.03.00.

If you already have the TRS-XENIX Operating System, it is necessary to modify it using a software update diskette (Catalog No. 700-2066) which modifies a 01.01.00 or 01.02.00 system to an 01.03.00 System.

If you do not have the TRS-XENIX Operating System, it will be necessary to order the TRS-XENIX Version 01.03.00 Core System (Catalog No. 700-2052).

Installation

The following instructions are given to allow proper installation of the Multiterminal Interface Board, check out its function to ensure proper operation, and perform modifications required to the Main Terminal to allow communication between it and the remote terminal(s).

The Multiterminal Interface Board is installed in an upgraded Model 12 or 16B in the card cage assembly. It is accessible when the rear cover is removed from the Case Assembly.

XENIX - © Microsoft Corporation

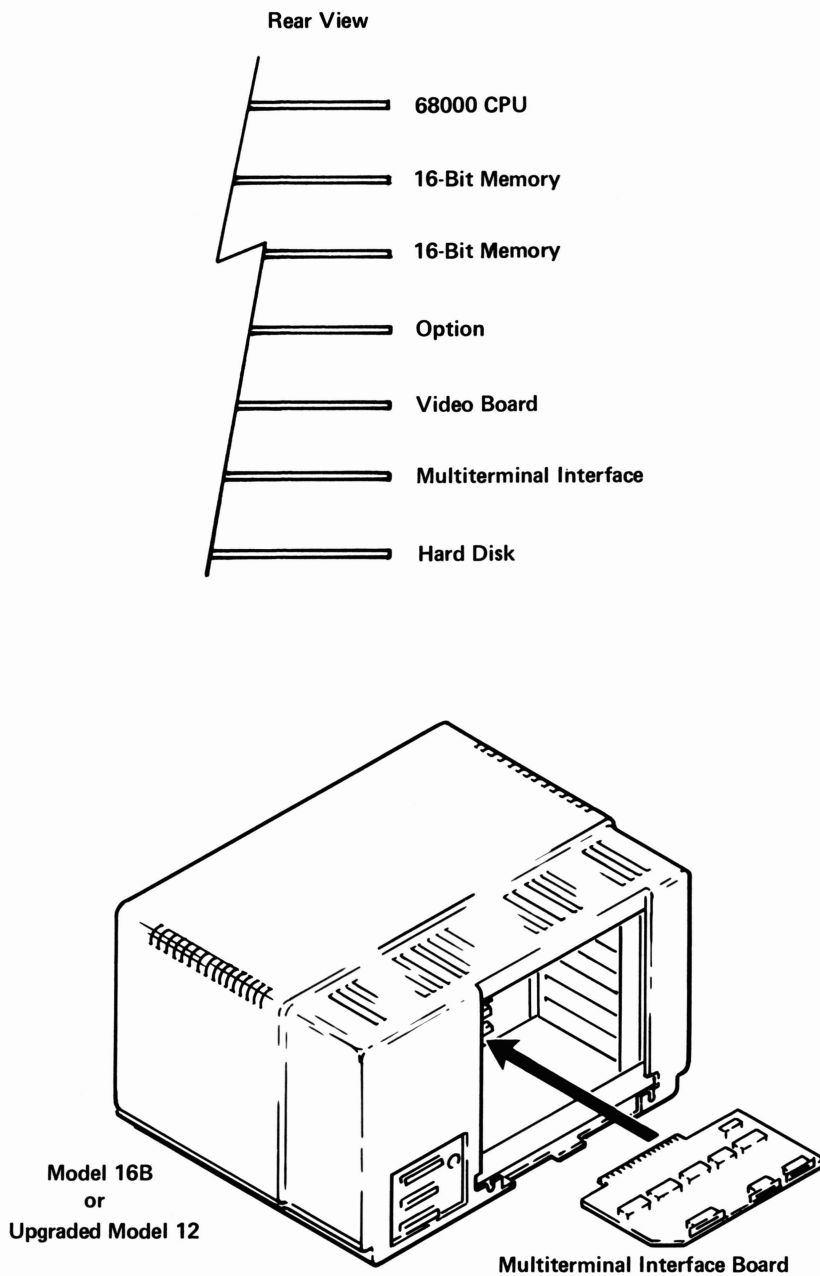


Figure 1. Multiterminal Interface Board Installation

Card Installation (see Figure 1)

1. Turn the computer so that the rear is facing you to allow access to the rear cover. Remove the two mounting screws at the lower part of the rear cover. Lift out on the bottom of the cover plate and pull down.
2. Remove the card holding brackets from either side of the card cage to allow the Multiterminal Interface board to be installed. The DIP switch S1 must be set for the proper operation as noted in Figure 2. Slide the board into the connector slot as shown in Figure 1.
3. Loosen the screws which mount the Strain Relief Bracket to the Rear Door. Feed the cable(s) from the remote unit(s) between the Strain Relief Bracket and the Rear Door and tighten the screws mounting the Bracket. Allow enough cable to the inside of the bracket to provide an internal loop.

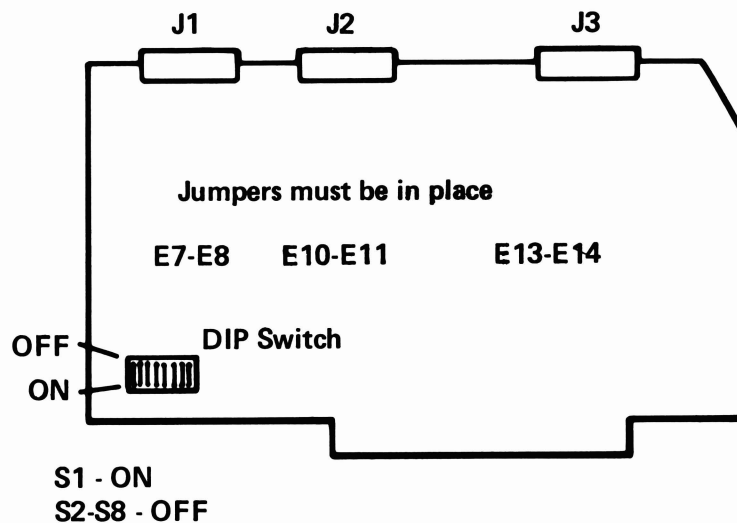


Figure 2. DIP Switch Settings

Setting Up Multiple Terminals

Your TRS-XENIX system is programmed to accommodate a wide range of terminal types -- but the system has to know what kind of terminals you're connecting to it so that it can calibrate itself to the terminal's particular characteristics and capabilities.

Your console is automatically set to accommodate two DT-1 terminals. TRS-XENIX calls them the "Adds25" terminal type, and expects the terminals you connect to be set to the DT-1's Adds25 emulation mode. That information is stored in a TRS-XENIX file called /etc/ttytype. If you're connecting a DT-1 to your console, just follow connection instructions and proceed directly to enabling your terminal (see following). If, however, you're connecting a terminal other than a DT-1, you have to let TRS-XENIX know.

A file called /etc/termcap stores the characteristics of all commonly used terminals. The following list gives the names and codes for the terminals pre-configured in /etc/termcap:

| NAME | CODE |
|---------------|--------|
| VT 100 | vt100 |
| VT 52 | vt52 |
| ADM 3a | adm3a |
| ADM 5 | adm5 |
| Televideo 910 | tvi910 |
| ADDS 25 | adds25 |

To let TRS-XENIX know what kind of terminal you'll be using, edit the /etc/ttytype file to include one of the above names. At that point, TRS-XENIX can work with your terminal -- just as soon as you've enabled it.

Connecting A Terminal To Your Computer (see Figure 3)

First, check which connector you're using for the terminal. If it is either Serial Channel A or B, you will need a RS-232 cable (Cat. No. 26-4403) and a null modem adapter (Cat. No. 26-1496) for each terminal.

1. Connect one end of the RS-232 cable to the terminal's RS-232 jack (serial output).
2. Connect the other end of the cable to the female plug of the null modem adapter.
3. Connect the adapter's male plug to either Serial Channel A or B of your computer.

If the terminal connects to one of the three connectors on the Multiterminal Interface PCB, you will need only the RS-232 cable assembly.

NOTE: A null modem adapter is NOT needed for ports 4, 5, and 6.

Checking Installation

Correct installation of the Multiterminal Interface is ensured when the following commands typed into the computer running TRS-XENIX produce the noted responses.

Type in the following command (from root):

```
disable tty0X (enter)
```

NOTE: 0X = one of the tty terminals, either 4, 5, or 6. For example, tty04.

Response

There will be no response or the following message will appear:

```
disable: tty0X is already disabled
disable: /etc/ttys not updated      (which is OK)
```

NOTE: Port 3 is not used

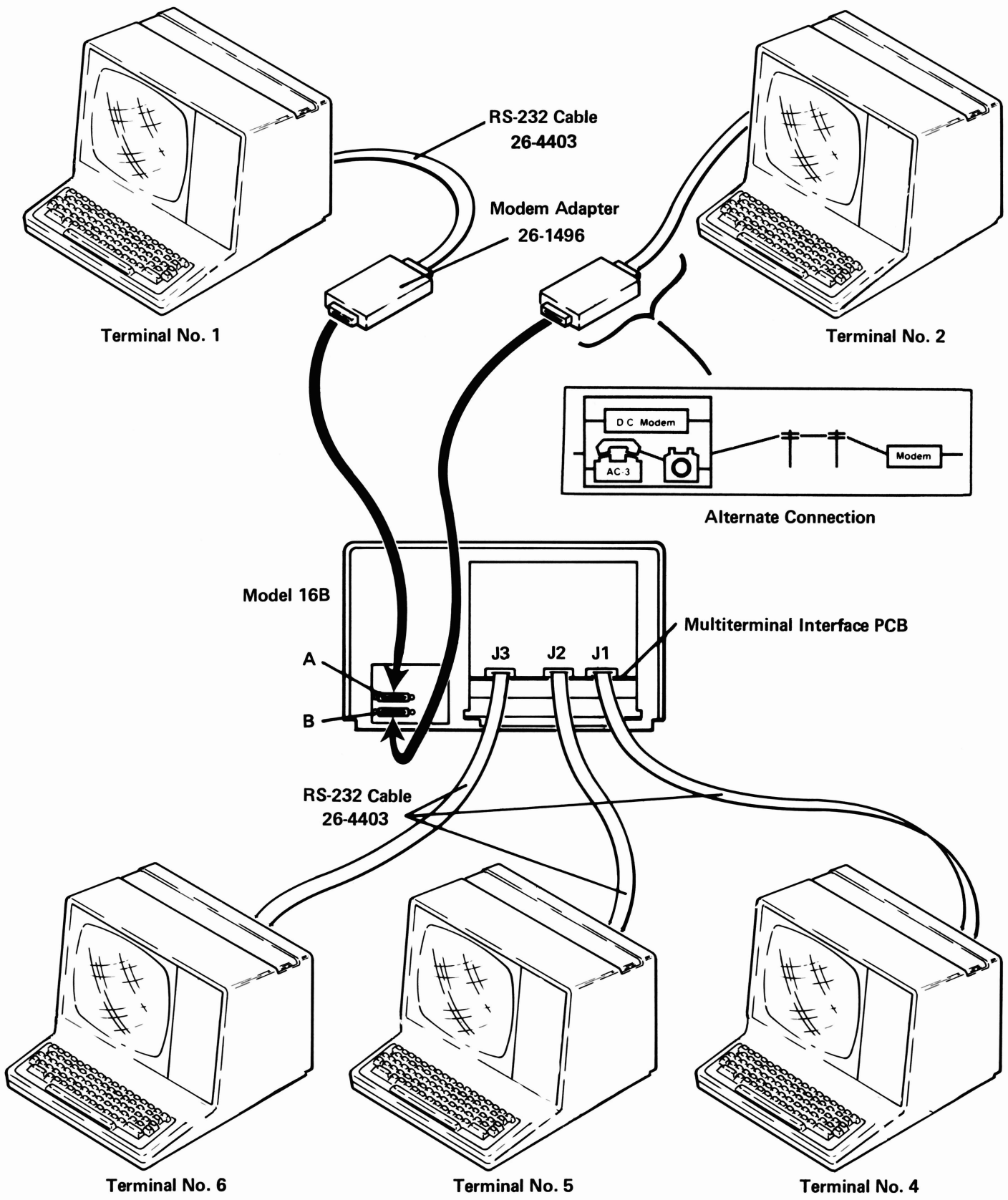


Figure 3. Typical Installation, Multiterminal Interface Board

Type in the following command (at the console):

```
cat /etc/ttys > /dev/tty0X (enter)
```

Response (on terminal 0X)

```
lhconsole
09tty01
09tty02
09tty04
09tty05
09tty06
```

(or something similar -- it should look the same as if "cat /etc/ttys" was typed without any output redirection)

Enabling A Terminal

Before you can use a terminal, you have to enable it. To enable a terminal connected at Serial Channel A, type:

```
enable tty01 <ENTER>
```

To enable a terminal connected at Serial Channel B, type:

```
enable tty02 <ENTER>
```

For any terminals connected to the Multiterminal Interface PCB, type:

```
enable tty04 <ENTER>      (for terminal connected
                           to J1)
```

or

```
enable tty05 <ENTER>      (for terminal connected
                           to J2)
```

or

```
enable tty06 <ENTER>      (for terminal connected
                           to J3)
```

Then you're ready to use your terminal with TRS-XENIX.

Disabling A Terminal

If you have to disconnect a terminal from the main computer for any reason, be sure the terminal is not logged in, then disable it. Again, check the connector the terminal is using, and at the main terminal type:

| | |
|---------------|--------------------------------|
| disable tty01 | (for Serial Channel A) |
| disable tty02 | (for Serial Channel B) |
| disable tty04 | (for terminal connected to J1) |
| disable tty05 | (for terminal connected to J2) |
| disable tty06 | (for terminal connected to J3) |

and proceed to disconnect the remote terminal connector from the main computer connector.

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