

TRS-80[®]

Modem IB

OPERATION MANUAL

Catalog Number 26-1175



Radio Shack

TRS-80

**COMPUTER
PRODUCTS**

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TRS-80® Modem IB Operation Manual

Important Note

Before connecting your Modem IB to the phone lines, you must notify your local telephone company of the:

Manufacturer: Radio Shack
Model: Modem IB, #26-1175
ISOC Number: RJ11C
FCC Number: AA088U-68645-DI-E
Ringer Equivalence Number (REN): 0.0B

This information also appears on the bottom of the modem.

The Modem IB must not be connected to:

- ☒ Coin-operated phones
- ☒ Party-line phones
- ☒ Multiple-line phones

TRS-80® Modem IB Operation Manual

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Introduction

Congratulations for selecting the TRS-80® Modem IB. This purchase will give you the opportunity to enter the world of computer telecommunications. The Modem IB is designed to let you originate and answer calls at 300 baud. The Modem IB lets you use your computer, communications software, your telephone, and the telephone lines to send or receive programs or contact information services.

The Modem IB is designed to be used with any TRS-80 computer or data terminal that has RS232-C interface capabilities.

This manual will:

- Describe the Modem IB.
- Show you how to connect the modem to a power source and your TRS-80.
- Show you how to use the modem.

Connector Code CA11A

1/ Description of the Modem IB

The Modem IB is a self-contained, FSK (Frequency Shift Keying) telephone interface. With the Modem connected, your phones are available for conversational use only when the MODE switch is OFF. So be sure that the MODE switch is set to OFF when you are not using the Modem.

The following illustrates the details of the Modem IB:

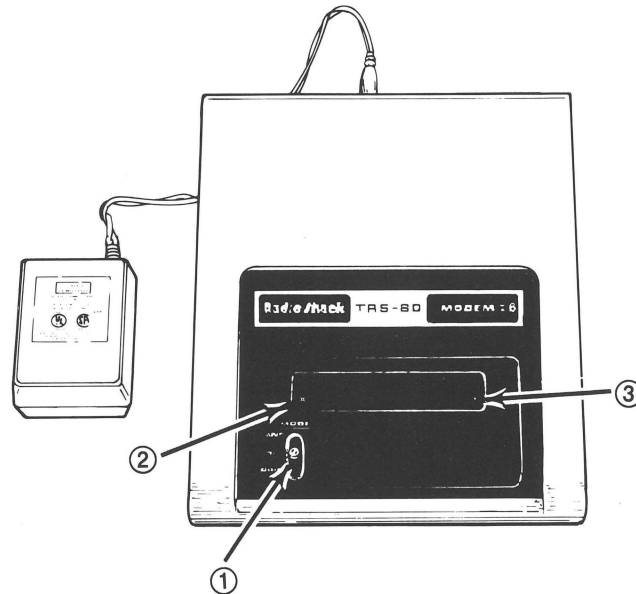


Figure 1. Modem IB (Top View)

- ① **Power/Mode Switch.** Selects either **ORIG**inate or **ANS**wer mode.
- ② **Power On Indicator.** This indicator illuminates when the Modem is **ON**.
- ③ **CARRIER Signal Indicator.** This indicator lights up when a carrier tone is detected.

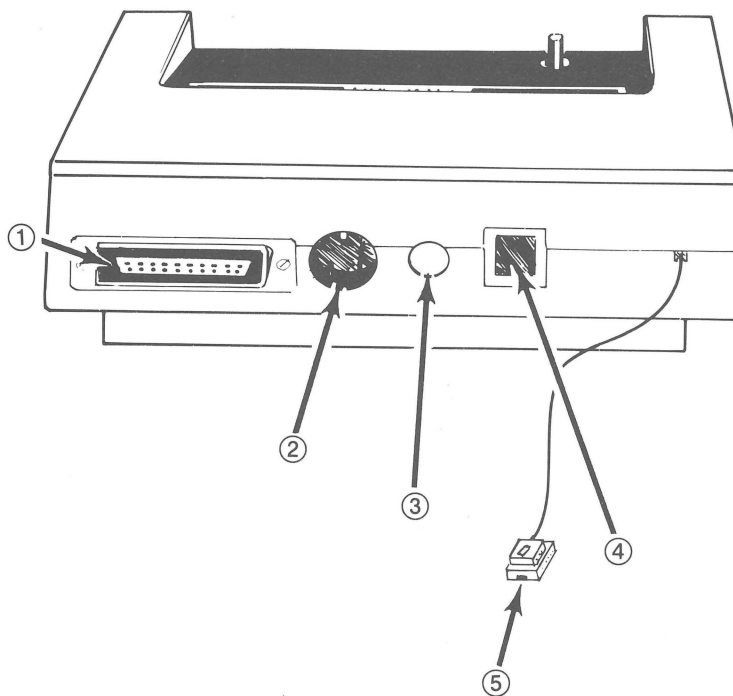


Figure 2. Modem IB (Rear View)

- ① **RS-232C Connector.** Standard DB-25 jack for connection to the RS-232C interface of most TRS-80 computers.
- ② **Color Computer RS-232C Connector.** Connect a 4-Pin DIN plug to this connector. Connect the other end of the cable to the RS-232C interface of the TRS-80 Color Computer.
- ③ **Power Jack.** Connect the appropriate end of the AC Adapter Cable to this Jack.
- ④ **Phone Jack.** Connect the telephone's modular plug to this connector.
- ⑤ **Modem-to-Telephone Line Connector.** Connect the modem's modular plug into the telephone wall jack.

2/ Setting Up the Modem IB

Be sure the Modem IB is properly connected to the power supply source and your TRS-80 before you try to use it. This section will describe how to make these connections.

Connecting the Modem IB to a Power Source

The Modem IB comes with an AC Adapter. Connect the appropriate end of the the AC Adapter to the modem. Connect the two-prong plug to a 120V wall-outlet or approved power strip, such as Radio Shack's Automatic Control Power Strip (26-1429).

Connecting the Modem IB to a TRS-80

When connecting the Modem IB to a TRS-80 computer or data terminal, *be sure to use* the correct cable. The cable you use will depend on the TRS-80 you have. Table 1 will describe the appropriate cables; Table 2 will provide quick instructions on the TRS-80 connection locations. See your TRS-80 owner's manual for more details.

Modem to TRS-80 RS-232C Cables	
26-1408	Model I/II/III/4/12/16/DT-1
26-3014	Color Computer (4-Pin DIN)

Table 1

TRS-80 RS-232C Connection Points	
TRS-80	Location
Model I	Left Side of Expansion Interface
Model II/12/16	Rear Panel
Model III/4	Underneath Panel
Color Computer/MC-10	Rear Panel

Table 2

To connect the Modem IB and your TRS-80 . . .

1. Connect one end of the appropriate cable to the Modem IB's RS-232C Connector.
2. Connect the other end of the cable to the TRS-80's RS-232C Interface Connector.

Connecting the Modem IB to a Telephone . . .

The way you connect the Modem IB to a telephone depends on how your telephone is connected to the wall. The following three figures illustrate these conditions.

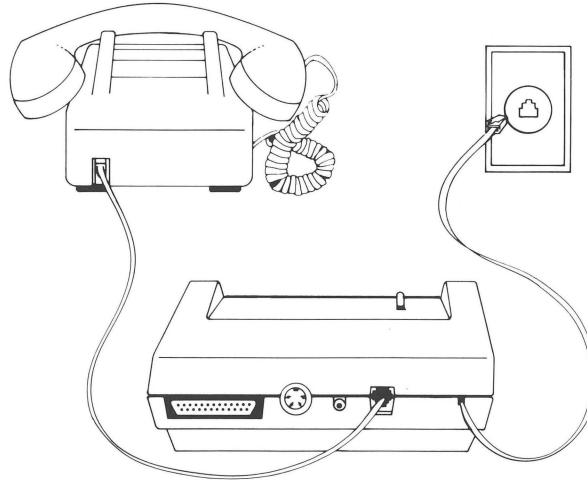


Figure 3. The Modem IB/Telephone Connection

If your telephone has this type of connection, attach the Modem IB as shown.

If you're using your Modem IB outside the USA, you may need a *Modular-to-Modular Cable* (279-374) and a *Duplex Modular Jack*.

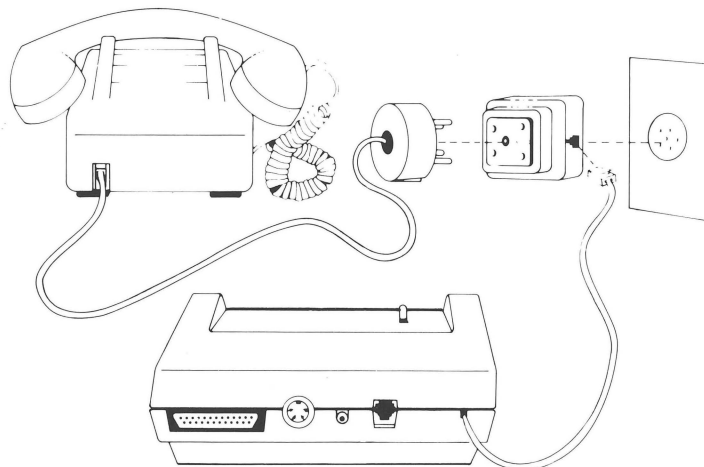


Figure 4. Connection to Four-Prong Jacks

If your telephone has the older style, four-prong connection, use an adapter (279-360) to connect it to your Modem IB as shown.

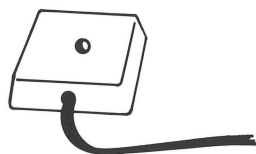


Figure 5. Wall Connector

If your telephone is wired directly to the wall, contact your telephone company.

3/ Using the Modem IB

Once the Modem IB is properly connected to a power source and a TRS-80, you'll find the modem extremely easy to use.

You can use the Modem IB in two ways:

- To call a Host computer or information service (i.e., you originate the call).
- To have a Host computer call you (i.e., you answer the call).

Originate Mode

When you want to place a call to a Host computer or information service, you will "originate" the call.

1. Dial the number on the phone to contact the remote computer and listen for a high-pitched tone. Set the Power/Mode Switch to **ORIG**. When the tone changes, hang up the phone.
2. When the Carrier LED illuminates (CD), the Modem is ready to handle data communications.
3. To terminate the call, set the Power/Mode Switch to **OFF**. This will automatically hang up the phone.

Answer Mode

When you are contacted by a Host computer, use the following steps to "answer" a call and establish communications.

1. Make sure the Host's baud rate is 300.
2. Answer the telephone (call from remote terminal). Make sure that the phone connection is a clear, noise-free one.
3. Set the Power/Mode Switch to **ANS**. When the tone changes, hang up the phone.
4. When the Carrier LED illuminates, proceed with data exchange.
5. To terminate a call, set the Power/Mode Switch to **OFF**.

4/ Using the Modem IB with Videotex Software

A modem that is connected to a TRS-80 running a videotex software package constitutes one of the most common (and exciting!) ways to use your Modem. This section will describe how to use the Modem IB with VIDTEX (the videotex program) on most TRS-80 Computers.

Follow this procedure:

1. Connect the system as described earlier in this manual.
2. Load and run your version of VIDTEX.
3. Dial an information service's telephone number and listen for a high-pitched tone. Set the Power/Mode Switch to **ORIG**. When the tone changes, hang up the phone.
4. When the Carrier LED illuminates (CD), you are ready for communication.
5. Complete the log-on sequence for your information service and follow the procedure described in your videotex package and information service user's guide.

5/ Care and Maintenance

The most common cause of problems is a bad telephone connection. Noise on the line or a weak signal can result in lost or invalid data. Try to re-dial the call to insure that the connection is free of noise and interference.

The only maintenance your Modem IB should require is a periodic checking of cables and connections. If you are experiencing problems during data transfer, always check the cable connections. If you still experience problems, check with your Radio Shack Computer Center.

6/ Specifications

Receive Frequencies

Answer

Mark 1270 Hz;
Space 1070 Hz

Originate

Mark 2225 Hz;
Space 2025 Hz

Transmit Frequencies

Answer

Mark 2225 Hz;
Space 2025 Hz

Originate

Mark 1270 Hz;
Space 1070 Hz

Transmit Power

- 13 dBm, +/- 1dB

Receive Sensitivity

- 40 dBm

Baud Rate

300

Operating Temperature

55°F-85°F (12.8°C-29.4°C)

Electrical Requirements

15 VAC at 300 mA supplied by
UL listed AC adapter

Dimensions

6.5" × 7.5" × 2" (16.5 × 19.1
× 5.1 cm)

Weight

3.304 lbs (1.49 kg)

Humidity

Operating environment:

90% relative humidity
(no condensation)

Storage:

90% (no condensation)

RADIO SHACK, A DIVISION OF TANDY CORPORATION

U.S.A.: FORT WORTH, TEXAS 76102
CANADA: BARRIE, ONTARIO L4M 4W5

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