



*5055 Data Collection PC*

# **USER'S GUIDE**



**P/N: 961-054-017**  
*Revision B*  
*April 2002*

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# Section 1

## Introduction



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### **About this Publication**

This user's guide contains a product introduction and general information, operating instructions, system features, and connector pinouts. Software instructions are *not* included in this manual.

This publication consists of the following sections that make up the User's Guide:

#### **Section 1 — Introduction**

The General Information section is most useful to the end user. It describes the ON/OFF switch, cable connections, the display, and other features of the computer.

#### **Section 2 — Operation**

This section provides basic information for using the computer, and the accessories and options available for it.

#### **Section 3 — System Setup**

The System Setup section is intended primarily for the system programmer; this section describes details of your computer and methods for customizing it to your specific needs. CMOS setup instructions are included here.

#### **Section 4 — Connector Pinouts**

This section provides connector pinout information.

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## **Related Publications**

To order printed versions of the Intermec manuals, contact your local Intermec representative or distributor. Following are related INTERMEC manuals and part numbers (P/N):

- ▶ *Vehicle Power Supply Installation Instructions*  
(P/N: 962-054-004)
- ▶ *5055 Data Collection PC Technical Reference*  
(P/N: 978-054-002)

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## **General Information**

The Intermec 5055 Data Collection PC is a powerful real-time computer designed for warehouse and automated material handling environments. Although the computer is intended for data collection, it contains a modern high-speed Pentium processor and has full PC capabilities. Depending upon your requirements, this computer may be equipped with an integrated radio for total mobility. The standard Ethernet *on board* allows hardwire connection to a local area network (LAN).

All computer electronics, the radio module, and the large display are housed within a single metal container. A dc-dc power converter can be remotely mounted on a vehicle to ensure a stable power source in mobile applications. Fixed-mount computers (i.e., those connected to a local area network) have a separate ac-dc power supply.

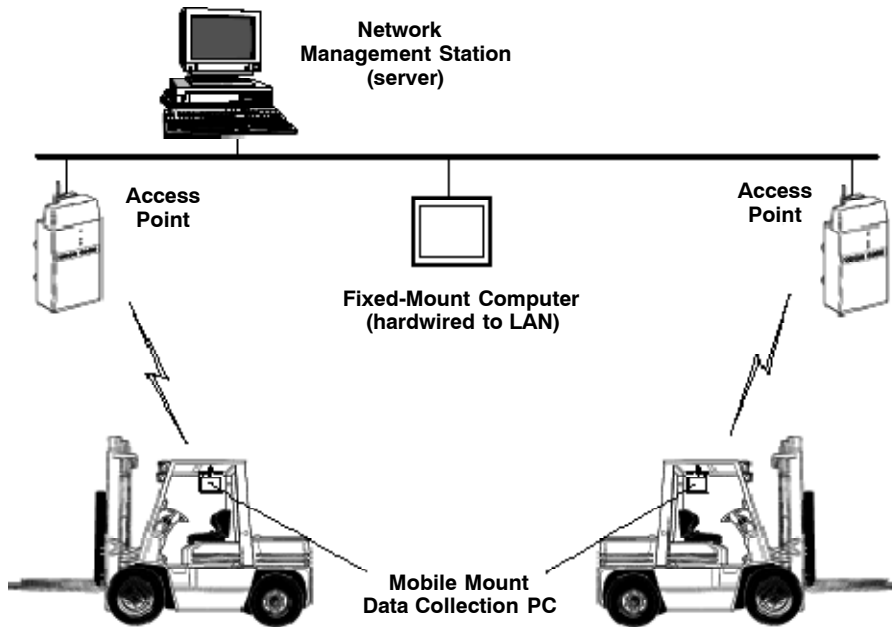
## **Installation**

The Intermec 5055 Data Collection PC installs easily on vertical or horizontal surfaces using one of several adjustable mounting brackets.



## Mobile Computer: How it Works

Wireless data collection PCs are “real-time” devices because the computer tracks inventory movement on the go. When you enter data into the unit, the integrated radio module transmits that information to a base unit or *access point*. From there, information goes to a host computer. If the entry was a request for information, the host transmits the response to the computer that made the request. These *real-time* data transactions ensure that the most current information is available to the host computer and to all mobile units. Figure 1-1 shows a basic LAN system to aid your understanding of the local area network concept.



*Figure 1-1*  
**The Data Collection PC Network**

---

## The Computer

The illustrations in this section will familiarize you with external features of the Intermec 5055 Data Collection PC. Figure 1-5 shows the *AC Power Supply* used with fixed-mount units, while Figure 1-6 shows the *DC-DC Power Converter* used in mobile mount installations.

All connectors that are part of the computer system are described in detail in Section 4 of this manual.

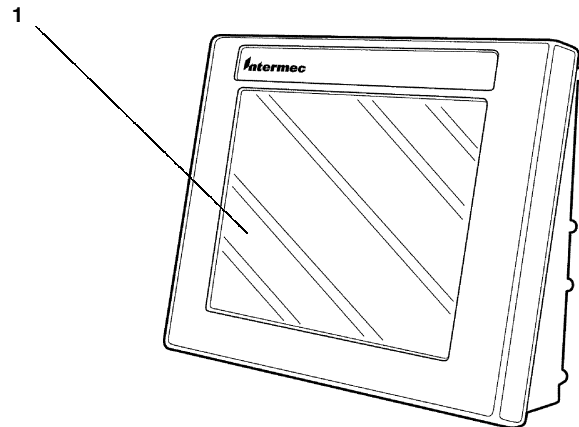
The list below is presented here so that you will notice these items as they are shown in the following pages. This list is repeated in Section 2 because many of the problems you are likely to encounter may result from overlooking one or more of these items.

Each work day make sure that:

- ▶ Mounting knobs are tight.
- ▶ The DC power input cable is secure.
- ▶ The DC power output cable is secure.
- ▶ The AC power supply (fixed-mount) is plugged into the wall.
- ▶ The On/Off switch is ON (press the 1 side of the switch to enable power).
- ▶ The antenna connector(s) (if so equipped) is secure.
- ▶ The LAN connector (if so equipped) is secure.
- ▶ The scanner cable (if so equipped) is secure.
- ▶ LPT1, the printer cable (if so equipped) is secure.

## The Display

The display can be both an input and an output device, because you can touch it to make entries (input) and it displays (outputs) information. The touchscreen requires direct pressure to detect your entries or menu selections.

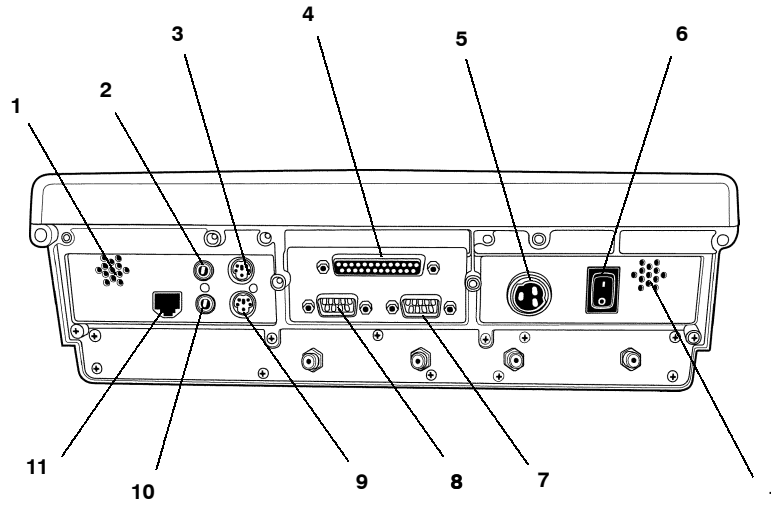


1. Display

*Figure 1-2*  
**Intermec 5055 Data Collection PC**  
**(front view)**

## Connectors

The On/Off switch and all connectors are located on the bottom of the unit. These include a power connector, antenna connectors, LPT1 parallel input-output (I/O) connector, two standard serial I/O connectors (COM1 and COM2), a keyboard (KYBD) connector, a network (NET) connector, and dual PCMCIA (PC Card) slots (see Figure 1-4).



- 1. **Speakers**
- 2. **Microphone jack** (audio IN)
- 3. **6-pin mini DIN** (PS/2 mouse)
- 4. **LPT1** (printer)
- 5. **DC power input**
- 6. **On/Off switch**
- 7. **COM2** (RS-232 w/5 V dc)
- 8. **COM1** (RS-232 w/5 V dc)
- 9. **6-pin mini DIN** (PS/2 keyboard)
- 10. **Headphone jack** (audio OUT)
- 11. **Network**

*Figure 1-3*  
**Connectors**

## **Speakers**

Speakers are provided to allow standard PC/AT sounds, as well as business audio to play and record.

## **Microphone**

This 3.5 mm connector accepts an external microphone.

## **Keyboard/Mouse**

Locking 6-pin mini-DIN connectors accommodate an external PS/2 standard mouse (3) and keyboard (9). Only PS/2 devices with locking connectors should be used on mobile mounted terminals to ensure against unwanted disconnection. PS/2 devices with non-locking connectors can be used with fixed-mount terminals.

## **LPT1 — (Printer Port)**

This is an enhanced parallel port with a 25-pin (DB-25) female, D-subminiature connector for parallel devices.

## **DC Power Input**

This is a 3-pin circular connector which is threaded to receive a power cable connector that has a locking collar. A regulated +12 volt power supply/converter is required.

## **On/Off Switch**

► **NOTE:**

*ALWAYS perform a proper system (or Windows) shut-down before shutting the computer OFF.*

This switch is located on the bottom of the unit next to the DC power input connector. Always disable (press the “0” side of the switch to disable) power when connecting or disconnecting cables and accessories.

## **COM1, COM2 (Serial Ports)**

Each port has its own address and a 9-pin male connector to attach RS-232 serial devices. COM ports can provide 5 volts dc to support a decoding type tethered scanner.

## Headphone

This 3.5 mm connector accepts an external headphone.

## Network Connection (NET)

The Intermec 5055 Data Collection PC has Ethernet (10BASE-T, RJ-45 jack) on board.

▼ **CAUTION:** Use spinning-media PC Cards for fixed-mount applications only.



**WARNING:** Both edges of PC cards must be in the correct grooves in the drive to avoid damage to the card or to the computer.



**WARNING:** To prevent damaged pins, do NOT force PC cards or the IDE drive into their respective slots.

## Card/Drive Slots

Remove the antenna connector panel to access the card/drive slots. When reinstalling the panel, carefully dress antenna cables into the slots to guard against damage.

## IDE Drive Bay

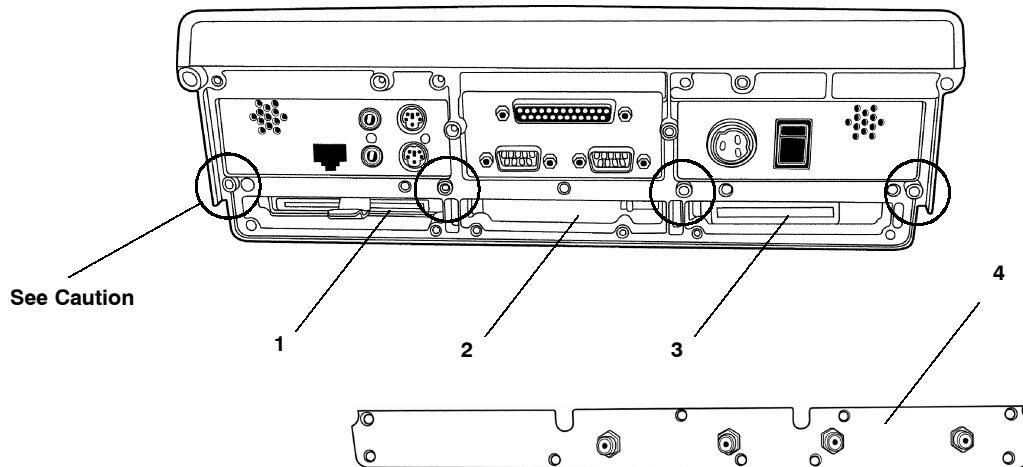
A special metal carrier adapts most currently available miniature (2.5 inch) IDE type drives to this bay. The metal carrier has a tab that securely holds the drive in place.

## PC Card Slots (PCMCIA)

These user-accessible slots (0 and 1) are for PC Card devices. Each 68-pin slot can accommodate a Type I, II, or III device.

## Radio Antenna Connectors (RF)

All connector locations are shown, however one or more of them may be plugged depending upon the radio(s) in your computer. The computer has an antenna mounting bracket at the top of the unit.



1. IDE drive bay
2. PC card slot 0
3. PC card slot 1
4. Antenna connector panel

*Figure 1-4*  
**Drives and Antenna Connectors**

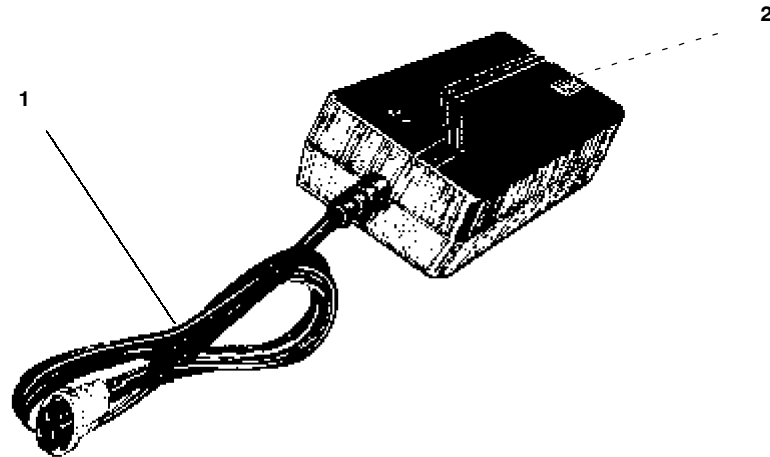
**CAUTION**  
To avoid damaging the unit  
Do NOT remove the four screws shown in circles.

## AC-DC Power Supply

► **NOTE:**

*ALWAYS perform a proper system(or Windows) shut-down before shutting the computer OFF.*

The ac power supply shown below *does NOT have* an On/Off switch: to disable power to a fixed-mount 5055 Computer, use the On/Off switch on the computer itself or unplug the AC power cable from the wall outlet.



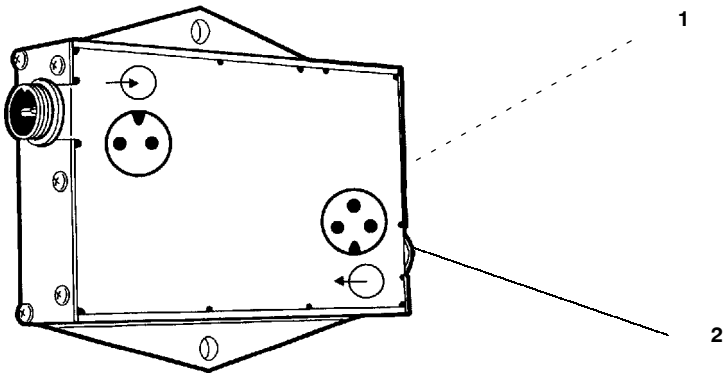
1. DC power cord
2. AC power cord connector (not visible)

*Figure 1-5*  
**AC-DC Power Supply**

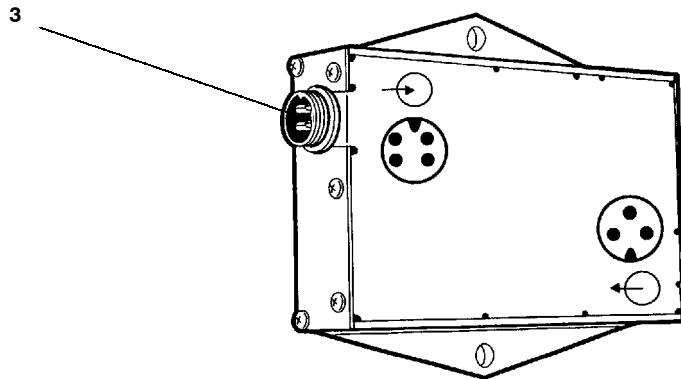




**WARNING:** Make sure you have the correct power converter for your application. See Specifications for input voltage ranges.



Model: 851-041-001 P/N: 066777-01  
15-96 V; 5.5 A



Model: 851-040-001 P/N: 066776-01  
10-96 V; 10 A

- 1. Green LED (power output indicator)
- 2. Output Connector
- 3. Input Connector

*Figure 1-6*  
**DC-DC Power Supply**

---

## Maintenance

Your terminal requires very little maintenance. Clean the terminal and the display periodically, and perform the daily checks listed below. If a failure message appears on the display, the computer may need to be sent to an authorized service facility for repair or adjustment.

### Cleaning

A recommended cleaner for the exterior of the Mobile Mount Radio Data Computer is *MICRO-CLEAN II Cleaner*, made by Foresight International, Inc., 4887 F Street, Omaha, Nebraska 68127-0205 (phone: 1-800-637-1344).

- ▼ **CAUTION:** Do not pour any cleaner directly on the display.
- ▼ **CAUTION:** Do NOT use a water-based cleaner on the display.
- ▼ **CAUTION:** Use ethanol-based cleaners **ONLY** on the display.
- ▶ **NOTE:** *Keep the display area clean and free of dust, dirt, grime or smudges. Failure to do so can result in unreliable touch entries.*

Use a soft, lint-free cloth dampened with ethanol alcohol to remove dirt or finger smudges from the display area.

### Daily Checks

Each work day you should check to make sure that:

- ▶ All antenna connectors are secure.
- ▶ All mounting knobs are tight.
- ▶ The power cable is secure.
- ▶ The scanner cable is secure.

## **Factory Service**

If the unit is faulty, you can ship it to your nearest authorized Service Center for factory-quality repair service. Their address and telephone number can be found on the Product Service Information Card.

When products must be shipped for repair:

- ▶ Make sure that all antennas are removed.
- ▶ Package in original shipping carton if possible.
- ▶ Fill out a Product Service Information Card and include this card with the product.

If the original shipping container is not available, appropriate packaging materials can be substituted. If in doubt, contact your regional Customer Support Specialist for instructions.

If repairs are necessary, fill out the Product Service Information Card and send it in with the unit. Be sure to include a brief description of the problem(s) when you return the product for repair. A new card is included when the repaired product is returned to you.

## ***Global Services and Support Center***

Select any of the following services available from Intermecc Technologies Corporation:

### **Factory Repair and On-site Repair**

To request a return authorization number for one of our authorized service centers, or to request an on-site repair technician,

call 1-800-755-5505, then select option 1.

### **Technical Support**

For technical support on your Intermecc product,

call 1-800-755-5505, then select option 2.

### **Service Contract Status**

To inquire about an existing contract, or to renew a contract,

call 1-800-755-5505, then select option 3.

### **Schedule Site Surveys or Installations**

To schedule a site survey, or to request a product or system installation,

call 1-800-755-5505, then select option 4.

---

## ***Web Support***

Visit our Web site at <http://www.intermec.com> to download many of our current manuals in PDF format.

Visit our technical knowledge base (Knowledge Central) at <http://intermec.custhelp.com> to review technical information or to request technical help for all Intermecc products.

# Specifications

## Physical

**Size** 12" x 9.35" x 2.125" top/3.775" bottom (w/hd)  
**Weight** 7–9 lbs (*approximate, depending on configuration*)

## Environmental

**Operating temp.** EL display: –22 to +122 °F (–30 to +50 °C)  
 all displays: –4 to +122 °F (–20 to +50 °C)  
**Storage temp.** –40 to +185 °F (–40 to +85 °C)  
**Humidity** 0 to 95% noncondensing

## Electrical

**Power Sources** external, dc-dc converter (vehicle installations)  
*auto-ranging input*  
*12 V dc regulated output*  
*two models: 10.0 – 36 V dc input /54watts max., or*  
*15 – 96 V dc input/54 watts max.*  
*120 V ac, 60 Hz, 0.8 amp input, 12 V dc output, 3.0 amps*

**Communication** 6-pin mini-DIN (*PS/2 keyboard and mouse connectors*)  
*(I/O connections)* 9-pin D-sub (*two RS-232C serial port connectors*)  
 25-pin D-sub (*parallel port for printer, disk drive, etc.*)  
 RJ-45 jack (*local area network Ethernet connection*)  
 audio pin jacks (*earphone and microphone*)

**Standards** FCC Class B, TUV RFI mark, DOC, SCyTm, UL1950,  
 CUL C22.2950, various CE marks

**Processor** Pentium, 133 MHz (*standard*)

**L-2 Cache** 512K (*standard*)

**Standard Memory** 64-bit SDRAM (*standard*), options from 8–64 MB

**Flash Memory** 256K (*standard*)

**PC Card options** two v2.0 PCMCIA type III slots  
 one internal type III IDE drive slot available

**Displays** 640 x 480 color TFT (*standard*)  
 640 x 480 wide-temperature monochrome EL (*optional*)  
 800 x 600 color TFT (*optional*)

**Touchscreen** Resistive  
*(supports menu and mouse-driven applications)*

**Compatibility**

**Software** fully PC-compatible, industry standard environment

**Operating Systems** MS-DOS or Windows options



# Section 2

## Operation



This section tells you how to prepare the computer for first-time operation and includes instructions for attaching or installing certain options or peripheral equipment. Once the computer has successfully booted to the operating system you may need to load an application program or data.

---

### **Startup Requirements**

Before powering up the computer for the first time, be sure it is securely mounted, that all cable connections are secure, and that the DC power input cable is firmly attached. The computer begins its startup (“boot”) sequence when power is supplied to the DC power input connector and the On/Off switch is **ON** (press the 1 side of the switch). In the case of an AC-powered (fixed-mount) computer, the power supply must be connected to the computer and plugged into a wall outlet. Vehicle mounts require that the dc-dc power converter be properly connected to the vehicle batteries and to the computer.

---

## **Startup Sequence**

Your computer should start up after all connections have been made to the unit, power has been applied, and the On/Off switch has been moved to the **ON** position (press the 1 side of the switch). During startup, the computer (1) performs a power-on self-test, (2) runs the hardware initialization program, and (3) boots the operating system.

Once the computer starts up (“boots”) successfully, you may load additional application software if this has not already been done for you. If you install a radio or other optional device, you may have to install driver software or make new system setups for the device(s) to work properly.

---

## **Options**

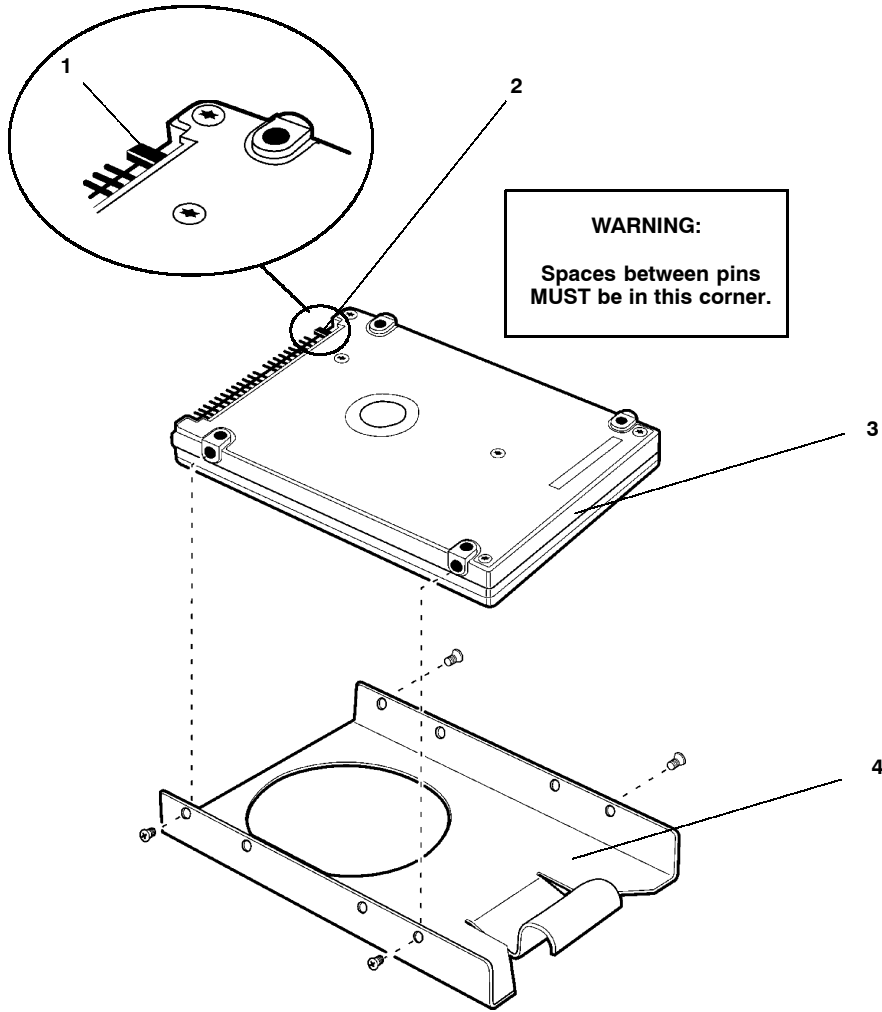
This computer can accommodate a 2.5 inch hard drive (or a SanDisk drive) plus two PC cards. The instructions and illustrations that follow will help you perform these installations if they have not already been done.

### **Hard Drive Installation**

An adapter is required to install a spinning media hard drive. Refer to the accompanying illustrations and the following instructions to attach the adapter to your drive.

1. Install the jumper exactly as shown.
2. Place the drive in the adapter as shown.
3. Align the connector-end of the drive and the adapter.
4. Use four screws to secure the drive.
5. Slide this assembly gently into the computer (Figure 2-4) until the latch snaps into place.





- 1. Jumper
- 2. Note pin spacing
- 3. Drive
- 4. Adapter

*Figure 2-1*  
**Hard Drive Adapter**

## SanDisk Drive Installation

An adapter is also required to install a SanDisk drive. Refer to accompanying illustrations and the instructions below to attach the adapter to your drive. If your computer is set up so that C: = Removable, this means the SanDisk drive will be the boot disk and *does not require a jumper*. If your computer will boot from some other source, the SanDisk drive *must be jumpered*.

1. IF the SanDisk is not the boot drive, install the jumper exactly as shown.
2. Place the SanDisk drive in the adapter as shown.
3. Align the connector-end of the drive and the adapter.
4. Use four screws to secure the drive.
5. Slide this assembly gently into the computer (Figure 2-4) until the latch snaps in place.

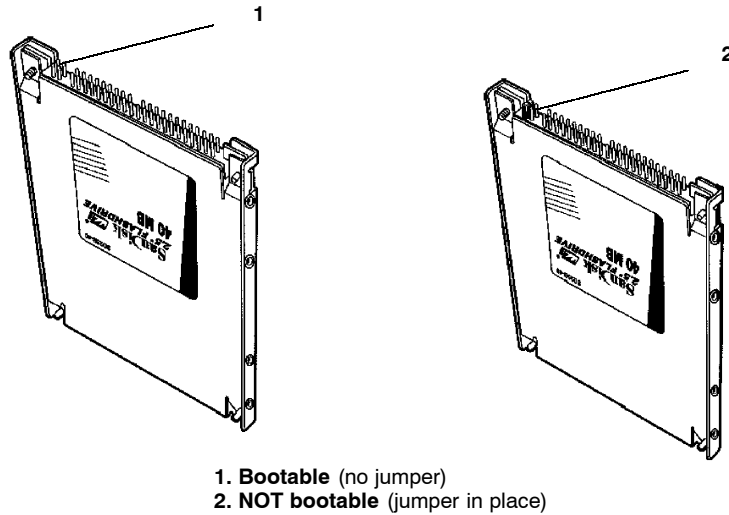


Figure 2-2  
**SanDisk Jumper**

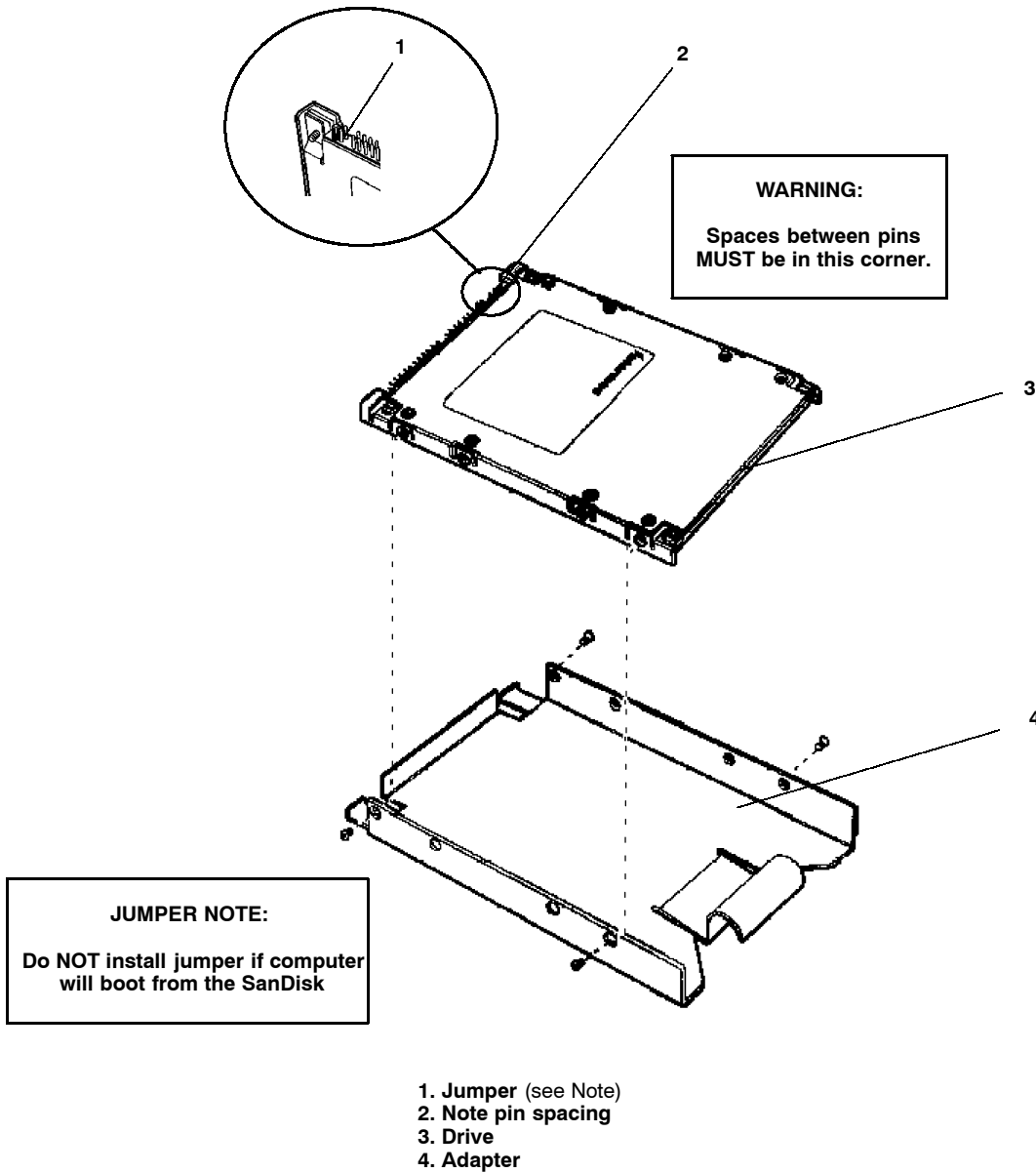


Figure 2-3  
SanDisk Drive Adapter

## PC Card Installation

The hard drive bay and PC Card drives (“slots”) are located on the bottom of the computer. Use a Phillips screwdriver to remove the antenna connector panel to access the drive bays. If your PC card is a radio module, follow these instructions to install the module (PC card) itself, then see Radio Installation (*following Figure 2-4*) to complete the procedure.

► **NOTE:** *Follow these same instructions to install a hard drive (with adapter attached). See for the hard drive bay location. Disregard steps 3 and 4 below when installing a hard drive.*

To install a PC Card, follow these steps:

▼ **CAUTION:** **Take care to remove ONLY those screws that retain the cover.**

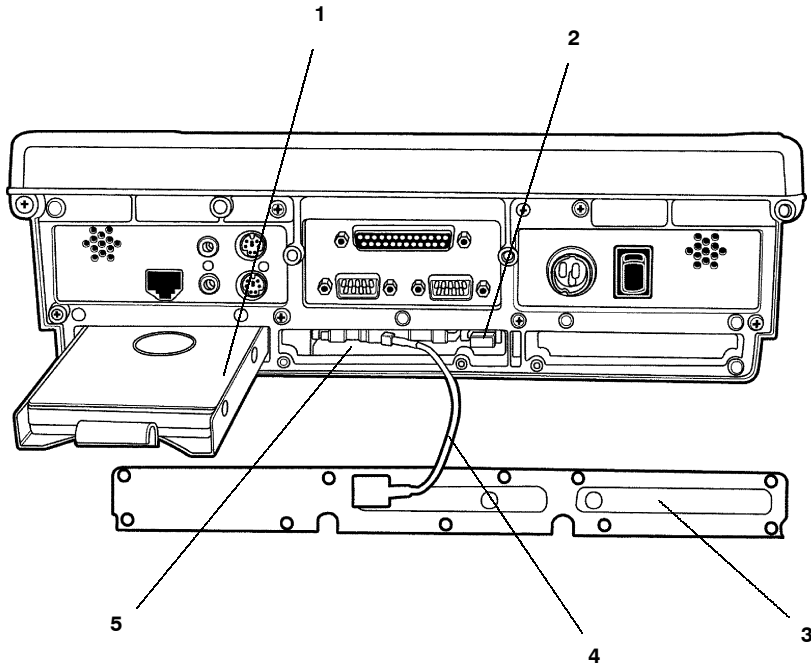
1. Remove the antenna connector panel.
2. Hold the PC Card (or hard drive) with the connector facing into the computer.

▼ **CAUTION:** **Do NOT force PC cards or drives into their slots.**

3. Slide the PC Card into either slot.
4. If you encounter excess resistance, you may need to flip the card over and repeat Step 3. The card is fully seated when the card ejector is extended.
5. Use Program Manager to check the Card View icon. It will identify which slot contains a PC Card and which slot is empty. PC Cards are identified as drive D:\ and E:\.

▼ **CAUTION:** **Reinstall the antenna connector panel to maintain unit integrity.**

6. Reinstall the drive bay cover.



1. Hard drive
2. PC Card ejector
3. Antenna connector panel (*inside shown*)
4. Internal antenna cable
5. PC card (*radio module shown*)

*Figure 2-4*  
**Drive Bays**

## **Radio Installation**

When installing a PC card radio module, you must install the following items before the radio can operate properly:

- ▶ The *internal* antenna cable and connector.
- ▶ The *external* antenna cable and connector.
- ▶ The cover for the external antenna cable channel.
- ▶ The antenna adapter bracket.
- ▶ The antennas.

The following pages provide illustrated installation instructions for each of those components. Install each component in the order these instructions are presented.

### **Internal Antenna Cable Installation**

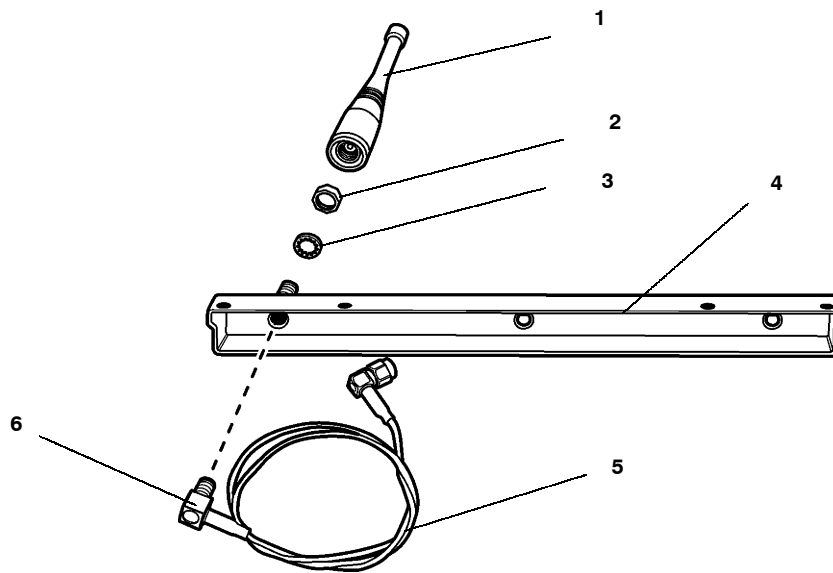
Typically, the radio PC card module comes with the internal antenna cable attached to it. The free end is a threaded connector which must be installed in the antenna connector panel. Refer to Figure 2-2, item #4 for an example of how this cable is routed and installed. Follow the instructions below to install connectors in the drive bay cover. It is assumed that the PC card radio module has just been installed in the computer and the drive bay cover has not been reinstalled.

1. Choose a mounting hole in the antenna connector panel that allows you to dress the cable to its full length.
2. Remove the plug from that hole in the antenna connector panel.
3. Slip the threaded connector through the hole.
4. Place a shaker type washer onto the connector.
5. Thread a nut onto the connector. Tighten securely. Take care NOT to overtighten the nut to prevent breaking the connector.
6. Reinstall the antenna connector panel.

## Antenna Installation

The antenna mounts on a bracket on the top of the computer. Refer to Figure 2-3 and follow the instructions below to install an antenna on the mounting bracket.

1. Slip the threaded connector thru the mounting hole.
2. Slide a shaker washer onto the connector.
3. Secure the antenna with the nut provided.
4. Screw the antenna onto the connector.



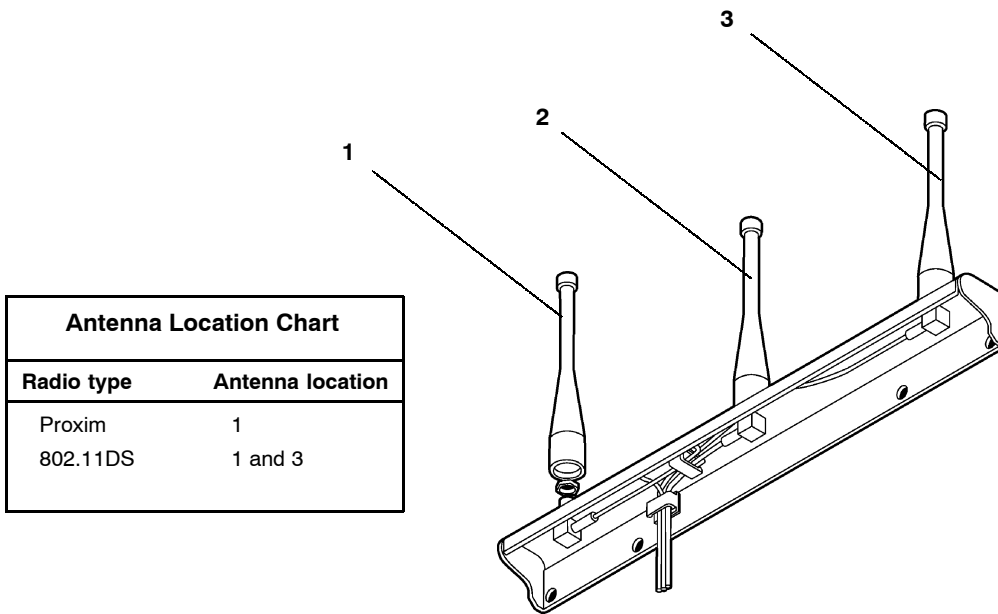
1. Antenna
2. Nut
3. Shaker washer
4. Mounting bracket
5. Internal antenna cable
6. Threaded connector

*Figure 2-5*  
**Antenna Installation**

### Multiple Antennas

Certain radio types may use two antennas to enhance the performance of that particular radio. This is evident when a PC card radio has two antenna cables attached to it. If two antennas serve a single radio, locate them at opposite ends of the antenna mounting bracket. A third antenna can be installed in the remaining center hole.

See the preceding page for general antenna installation instructions. The illustration below is a guideline for installing multiple antennas (*cables NOT shown*).



- 1. **Antenna** (connected to same radio as #3)
- 2. **Antenna** (independent from 1 and 3)
- 3. **Antenna** (connected to same radio as #1)

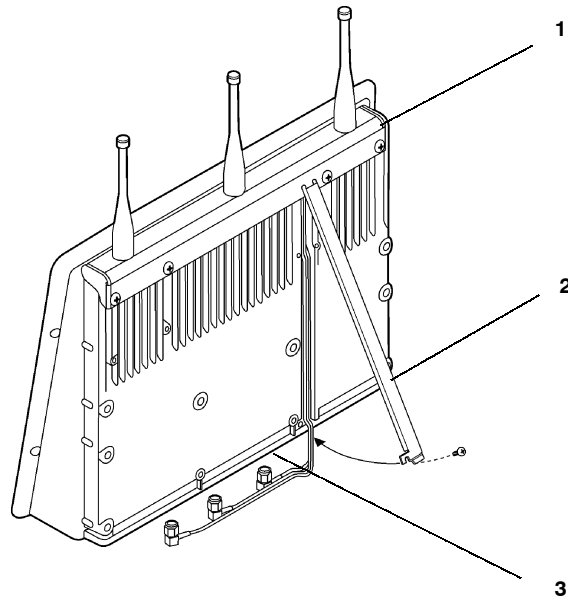
Figure 2-6  
Multiple Antennas



### **External Antenna Cable**

After the antenna mounting bracket is assembled, cables must be dressed into the channel and the cover installed *before* the antenna bracket is attached to the computer.

1. Dress the cable into the channel on the computer.
2. Connect the cable to the radio output connector.
3. Install the antenna cable channel cover as shown.
4. Secure the channel cover with the screws provided.



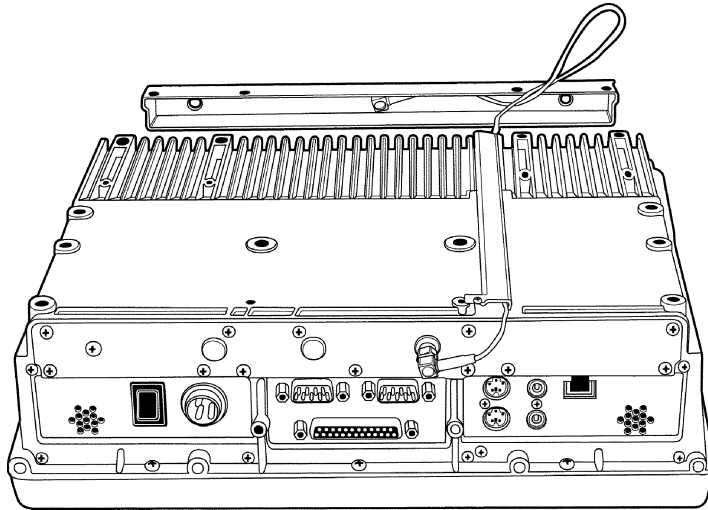
1. Antenna and bracket assembly
2. Channel cover
3. Radio output connector

*Figure 2-7*  
**Antenna Cable Channel Cover**

### **Antenna Bracket Installation**

Position the antenna and bracket assembly as shown below. Install this assembly using the Phillips screws provided with the mounting bracket kit. Make sure all screws are tightened securely.

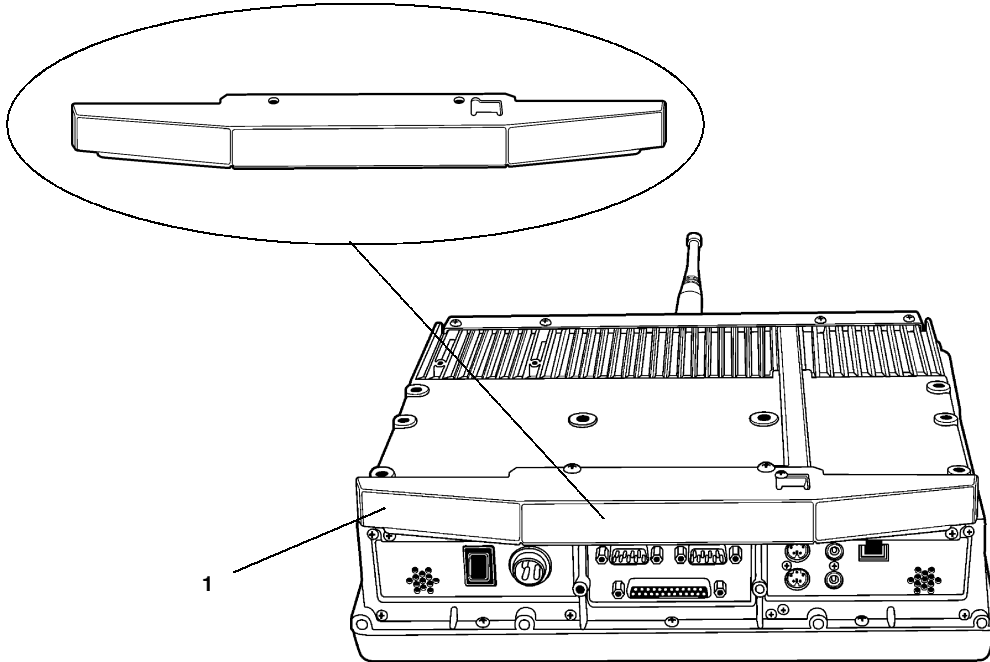
- ▼ **CAUTION:** Dress antenna cables within the channel and the antenna mounting bracket with care to guard against pinching or damaging the cables. Damaged or pinched cables can diminish or prevent radio transmission and reception performance.



*Figure 2-8*  
**Antenna and Bracket Assembly (installed)**

## Connector Cover

A protective cover guards the antenna connectors and the exposed portion of the external antenna cable against physical damage. If you have this option, install the protective cover as shown below. Tighten all installation screws securely.

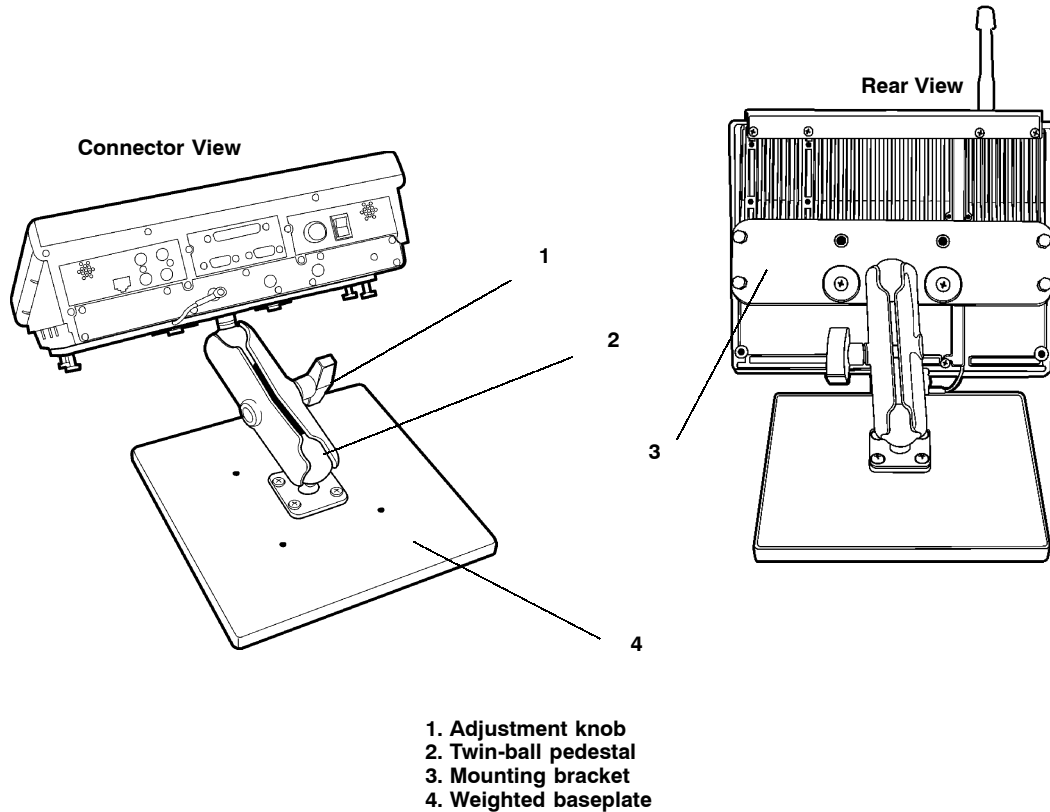


1. Connection cover (installed)

Figure 2-9  
Connection Cover

### Desktop Mount Option

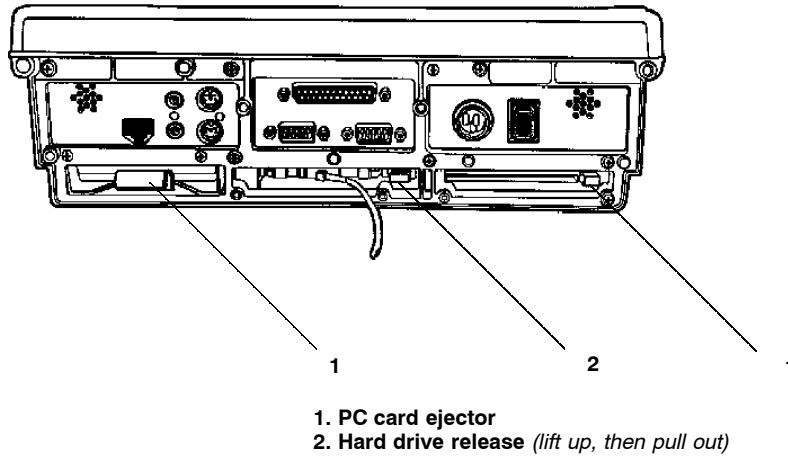
This computer can be used as a stationary computer on a desktop or other work surface. An optional heavily-weighted baseplate and adjustable twin-ball pedestal are available, as shown in Figure 2-10. An ac-dc power converter is required to power the computer for desktop use.



*Figure 2-10*  
**Desktop Mount Options**

## PC (PCMCIA) Cards

This computer allows the use of PCMCIA Type II and Type III PC Cards. Instructions for installing PC cards are provided earlier in this section.



*Figure 2-11*  
**Drive and PC Card Removal**

## Removing PC Cards

To remove a PC Card, follow these steps:

1. Remove the antenna connector panel.
2. Determine which PC Card you want to remove.
3. Press *inward* on the ejector to release the PC Card.
4. Grasp the edge of the card to remove it.
5. Reinstall the panel that you removed in Step 1.

---

## Patch Antenna

The 2.4 GHz “patch” antenna can be mounted on a wall using either screws or small patches of adhesive-backed hook-and-loop fastener material. Since system performance and antenna polarization is site-dependent, a permanent mounting location and orientation may require some experimentation. In most fixed installations the antenna should initially be mounted in a vertically polarized position: e.g., with the cable from the antenna parallel to the floor/ceiling.

In mobile installations, best performance will be achieved by mounting the antenna flat, *on top* of the operator safety cage. Use at least two screws to hold the antenna in place.



*Figure 2-12*  
**Antenna Polarization**

---

## **Start-up**

All options and accessories must be connected or installed, and the power supply connected to the computer. It will start up (“boot”) to a factory-configured operating system when you move the On/Off switch to the ON position. If the computer does not, it may be necessary to install an operating system or application software.

Factory-configured operating systems currently available:

- ▶ MS DOS
- ▶ Windows 95
- ▶ Windows NT
- ▶ Windows 2000

---

## **Installing Software**

### **External Drive**

An external CD-ROM drive is offered as an optional accessory for the Intermec 5055 Data Collection PC. The correct device driver for this factory-offered accessory is already loaded on your computer to simply software installation and upgrades.

### **Downloading from a Network**

Where individual computers (“clients”) are connected to a network (“server”) it is often more efficient to download application software directly from the server to each client.

---

## Restart (or, “Reboot”)

► **NOTE:** *Make sure that a keyboard is attached to the computer BEFORE attempting to perform a warm restart.*

If the system locks up during normal operations, you can reset it by performing either a “warm” or a “cold” restart. Use the warm restart to clear the system memory to run another program but not perform a self-test. When a warm restart does not restore operation, perform a cold restart.

### Warm Restart

If your operating system is MS-DOS, exit the current application, then do the following to perform a warm restart:

1. Press **Ctrl+Alt+Del** on the keyboard or displayed keyboard simulator to reprocess the AUTOEXEC.BAT and CONFIG.SYS files.
2. Load, or reload, the desired software application.
3. Resume normal operation.

If your operating system is Windows 95, NT, or 2000, select **Start** → **Shut Down** from the Windows desktop, then select **Restart** to perform a restart.

### Cold Restart

Perform a proper system shutdown, then toggle the **On/Off** switch on the bottom of the computer to the Off position. Wait one second, then toggle the switch back to the On position. If the **On/Off** switch is inaccessible, then do one of the following:

*For fixed-mount units, unplug the AC power supply from the wall outlet for a few seconds. Be sure to plug it back in.*

*For vehicle-mount units, interrupt power to the DC-DC power converter for a few seconds.*



---

## **Available Tethered Scanners**

The tethered bar code scanner normally attaches to your computer at the 9-pin D-sub connector COM1. When the scanning application is installed, the computer provides the power (5 volts dc) to operate the scanner. Your computer supports specific Intermec scanners, plus the following Symbol and PSC scanners, which are available under the Part Numbers shown:

### **Symbol Scanners**

- ▶ Straight screw-on connector serial cable 321-518-001
- ▶ LS-3203ER-I200A, Extended Range part number 858-042-800
- ▶ LS-3603-I200A Fuzzy Logic part number 858-079-901

### **PSC Scanners**

- ▶ Straight screw-on connector serial cable 321-476-082
- ▶ PSC5300 IP Series Standard Range part number 858-065-012
- ▶ PSC5300 IP Series VIN part number 858-065-022
- ▶ PSC5300 IP Series Long Range part number 858-065-052
- ▶ PSC5300 IP Series Extra Long Range part number 858-065-072
- ▶ PSC5300 IP Series Ultra Long Range part number 858-065-092
- ▶ PSC5300 IP Series Long Range High Power part number 858-065-152
- ▶ PSC5300 IP Series Extra Long Range High Power part number 858-065-172

---

## **Installed Scanner Software**

Tethered scanning is supported for any external device that sends its serial data at 9600 baud, 8 data bits, no parity, 1 stop bit with an ASCII STX (hex 02) before the data and an ASCII ETX (hex 03) after the data. No protocols, such as ACK/NAK, RTS/CTS, or XON/XOFF, are supported. All 8-bit characters between the STX and ETX will be stuffed in the PC BIOS key buffer.

### **Setting Terminal Emulation**

1. In AUTOEXEC.BAT, make sure the scanner driver is loaded with 65SCN7B.
2. Select the Terminal Emulation Main Menu from the Terminal Emulation Mode.
3. Select **1) Set-up Parm.s**.
4. Enter "CR52401" for the password.
5. Select **2) Barcode Parm.s** → **3) Laser**, then press ENT five times.
6. At Main Menu, select **4) Tests** → **1) Peripherals** → **5) Scanner Test**.

If you experience problems when using your laser scanner with terminal emulation, try these steps:

1. Reboot to the DOS prompt by performing a reset [press the RESET button or CTRL + ALT + DEL]. Press 0 at pause.
2. Type DEL CONFIG.DAT, then press ENT.
3. Press CTRL + ALT + DEL to reboot.

## Setting DOS Applications

In AUTOEXEC.BAT, make sure the scanner driver is loaded in the PS/DOS section with 65SCN7B-E-W.

► **NOTE:** *PCS scanners do NOT require RS-232 setup.*

## Setting RS-232 Parameters

### *(for Symbol LS3203 or LS3603 Scanners)*

Tethered laser power is always on, so a tethered laser can scan, decode, and send the data as soon as it is connected, even when it is not properly configured. Therefore, proper operation of the tethered laser is no indication that the laser is correctly configured for the scanner driver 65SCN7B.

Scan the following bar codes to set up your LS3203ER-I200A or LS3603-I200A scanner so it will work with your computer. Scan all the bar codes (except for the Host Transmit Code ID Character and Host Decode Options) to enable your scanner to use the 65SCN7B scanner driver.

### **Set All Defaults**

Scan the Set All Defaults bar code to set up your scanner for RS-232 serial communication.



### **Data Transmission Format**

1. Scan the <PREFIX><DATA><SUFFIX> bar code.

<PREFIX><DATA><SUFFIX>



2. Scan the PREFIX bar code.
3. Scan the PREFIX values 1,0,0,2 bar codes from page 2-23; to change your selection, scan CANCEL.

PREFIX



4. Scan the SUFFIX bar code.
5. Scan the SUFFIX values 1,0,0,3 bar codes from page 2-23; to change your selection, scan CANCEL.

SUFFIX



### RS-232 Host Prefix/Suffix Values

0



6



1



7



2



8



3



9



4



CANCEL



5



### ***RS-232 Host Parity***

NONE



### ***RS-232 Host Stop Bit Select***

1 STOP BIT



### ***RS-232 Host ASCII Format***

8-BIT



### **RS-232 Host Transmit Code ID Character (Optional)**

Select to enable or disable this setting. The default is Transmit Code ID Character. The Transmit Code ID Character must be enabled if you are using FWP640H0 or FWP640H4 terminal emulation software in your computer.

TRANSMIT CODE ID CHARACTER



DO NOT TRANSMIT  
CODE ID CHARACTER



### **RS-232 Host Decode Options**

Scan one of these bar codes to enable or disable the audible beep after a good scan.

DO NOT BEEP AFTER  
GOOD DECODE



BEEP AFTER  
GOOD DECODE



## **Scanner Problems**

If you have problems with your scanner:

1. Refer to the user guide for your scanner.
2. Call the 24-hour Customer Support Center at 1-800-755-5505.



## Section 3

# System Setup



The System Configuration Utility (SCU, or “system setup”) is identical with standard personal computers in most respects. You will find a complete description of the SCU in the *5055 Data Collection PC Technical Reference*, P/N: 978-054-002.

Unique features found in the Intermec<sup>®</sup> 5055 Data Collection PC setup may be especially important to you. These unique features are described in this section. Among them are:

- ▶ Designating the startup device.
- ▶ The ability to rotate the display 180 degrees (which allows mounting the unit upside down).
- ▶ Disabling the mouse to free up available IRQs.

---

## System Configuration Utility

A PS/2-compatible keyboard is required to configure the Intermecc Technologies System Configuration Utility (SCU). Turn off the 5055 PC before attaching the keyboard, if one is not attached already.

Reboot the 5055 PC. Be ready to press the <Ctrl>, <Alt>, and [S] keys when the following prompt appears just after the system memory tests:

**<CTRL-ALT-S> to enter the System Configuration Utility**

When you see this prompt, you have 2.5 seconds to press all three keys at the same time to enter the SCU, otherwise the computer proceeds to boot up.

► **NOTE:**

*Any changes made to the SCU are not effective until they are saved and the 5055 PC is rebooted. Press <Alt>, [X], [S], then <Enter> to save the changes.*

Press <Esc> to exit any window without changes. Press <Esc> repeatedly to activate the Escape Key Pressed window, then press **OK** to save the current setup parameters to the CMOS RAM and reboot the 5055 PC.

### Disks

This setup option designates the startup device (“drive”) for the 5055 PC. Press <Alt>, [D] for the Disks menu which contains options to enable the Virus Alert, determine from which drive to boot the computer (Removable is C), and dictate which drives are enabled (IDE Settings).

### Virus Alert

Press <Alt>, [D], [V] to add or remove a check mark from the **Virus Alert** option. If checked, this enables a warning if Sector 0 of the bootable disk has been changed. The default is to enable the warning.

## IDE Settings

► **NOTE:**

*“Drive 2” must be enabled if the removable IDE drive is installed in the 5055 PC.*

Press <Alt>, [D], [I] to enable enhanced IDE settings.

1. Press <Tab> twice to move the cursor to the “Drive 1” box which sets the internal drive.
  - Press [D] to add an “X” to drive-enable “Drive 1” or to remove the “X” to disable the **Drive Enabled** option.
  - Press [P] to add or remove an “X” to enable or disable the Programmed I/O (PIO) mode (**PIO Mode**) option.
2. If this 5055 PC is set up to have a removable drive, be sure the internal drive is enabled, via the “Drive 1” box. Press <Tab> to move the cursor into the “Drive 2” box which sets the removable IDE drive.
  - Press [D] to add an “X” to drive-enable “Drive 2” or to remove the “X” to disable **Drive Enabled**.
  - Press [P] to add or remove an “X” to enable or disable **PIO Mode**.
3. Press <Enter> to save changes and exit.

## Removable is C

Press <Alt>, [D], [R] to add or remove a check mark to enable or disable **Removable is C**. If enabled, the removable IDE drive becomes the startup device, otherwise the internal IDE drive is the startup device.

## Components

Press <Alt>, [C] for the **Components** menu to set COM and parallel (LPT) ports, enable scanning, and do settings.

### COM Ports

This option (the serial port power option) sets up the port address and interrupt for two serial (COM) ports. Press <Alt>, [C], [C] for the COM Ports window.

1. Press <Tab> twice to move the cursor to the **COM A Settings** box and select the port address and interrupt for the first internal COM port.

► **NOTE:**

*In steps 2 and 3, a dot appears in the parentheses in front of the selected option: "(•)"*

2. Select one of the following for the first internal COM port (COM A):
  - [N] None
  - [1] COM 1, 3F8, IRQ 4 (*default*)
  - [2] COM 2, 2F8, IRQ 3
  - [3] COM 4, 2E8, IRQ 3
3. Press <Tab> to move the cursor to the **COM B Settings** box, then press one of the following to select the port address and interrupt for the second internal COM port (COM B):
  - [N] None
  - [1] COM 1, 3F8, IRQ 4
  - [2] COM 2, 2F8, IRQ 3 (*default*)
  - [3] COM 4, 2E8, IRQ 3

Press <Enter> to exit the COM Ports window and save your selections.

## Scanner COMx

Press <Alt>, [C], [1] or <Alt>, [C], [2] to add or remove a check mark to enable or disable that COM port. If checked, the enabled COM port powers a peripheral device, such as by outputting a +5 volts CD on the RI line, pin 9.

Be sure the appropriate COM port is enabled before attaching a scanner to the 5055 PC. The factory default has both of these options disabled (no check mark).

## LPT Port

Press <Alt>, [C], [P] to access the LPT Port window and assign the port address and interrupt line for the internal parallel (printer) port.

1. Press <Tab> twice to access the **Port Address** box.

► **NOTE:**

*In steps 2 and 3, an option is selected when a dot appears in the parentheses in front of that option: "(•)"*

2. Select one of the following port addresses for the parallel port:
  - [N] None
  - [1] LPT1, Addr 3BC
  - [2] LPT2, Addr 378 (*default*)
  - [3] LPT3, Addr 278
3. Press <Tab> to move the cursor to the **Interrupt Line** box, then press either of the following to select the interrupt line for the parallel port.
  - [5] IRQ 5
  - [7] IRQ 7 (*default*)

Press <Enter> to exit the LPT Port window and save your selections.

## LPT Type

Press <Alt>, [C], [T] to access the LPT Type window and select parallel port enhanced capabilities.

1. Press <Tab> twice to access the **Port Definition** box.

► **NOTE:**

*In step 2, a dot appears in the parentheses in front of the selected option: "(•)"*

2. Select one of the following four parallel (printer) port advanced capabilities:

**[S]** *Standard AT (Centronics)*

A standard interface for connecting printers and other parallel devices. *(default)*

**[B]** *Bidirectional (PS/2)*

A standard interface for communicating between the PC and attached devices using the PS/2 mode.

**[E]** *Enhanced Parallel (EPP)*

A parallel port standard for PCs that supports bi-directional communications. EPP is good for links that change directions frequently, such as drives.

**[C]** *Extended Capabilities (ECP)*

A parallel port standard for PCs that is similar to the EPP. ECP is good for transferring large blocks of data quickly, such as to and from printers.

*Note EPP and ECP are about ten times faster than the older Centronics standard.*

Press <Enter> to exit the LPT Type window and save your selections.

## Mouse

Press <Alt>, [C], [M] to add or remove the check mark to enable or disable the mouse port to free IRQ 12 for use with other peripherals. The default enables the mouse port.

## Display

**WARNING:**

**ONLY use the invert mounting and display option in indoor environments. This prevents damage to the computer.**

**Display** only applies to the color VGA display and inverts the display contents 180 degrees. This allows for installing the 5055 PC in different positions such as on a wall.

The default display has the connectors to the bottom of the 5055 PC, thus the **Display** option has no check mark.

To “invert” the display, or rotate the display 180 degrees so that the display has the antenna to the bottom, press **<Alt>, [C], [D]** to enter a check mark.

## Keyboard Numlock

Press **<Alt>, [C], [N]** to add or remove the check mark to start the 5055 PC with the **Num Lock** key enabled (*default*) or disabled.

## Keyboard Repeat

Press **<Alt>, [C], [K]** for the Keyboard Repeat window to set the keyboard auto repeat delay and repeat rate.

1. Press **<Tab>** twice to access the **Key Repeat Rate** box to select the repetition rate to be set for the keyboard when the PC boots up.

**► NOTE:**

*In steps 2 and 4, a dot appears in the parentheses in front of the selected option: “(•)”*

2. Press the up and down arrow keys between the six cps (characters per second) rates (2, 6, 10, 15, 20 or 30 — *default is 10*), then press the space bar to select a rate.
3. Press **<Tab>** to move the cursor to the **Key Delay** box and select a delay time between repetitions.
4. Press the up and down arrow keys between the delay times (1/4, 1/2 (*default*), 3/4, or 1 second), then press the space bar to select that delay time.

Press **<Enter>** to exit the Keyboard Repeat window and save your selections.





## Section 4

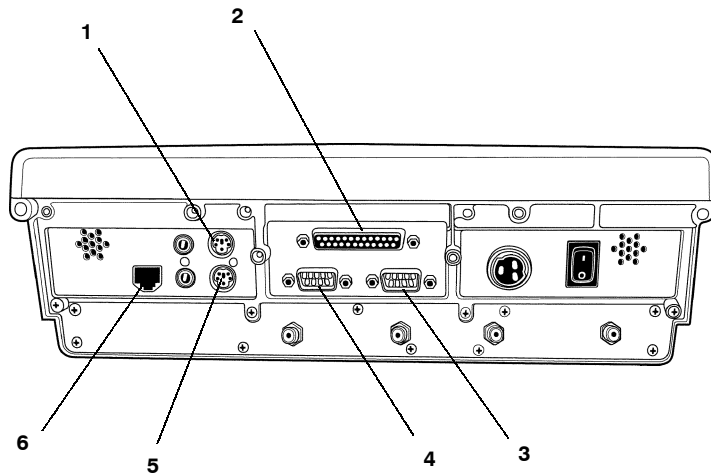
# Connector Pinouts



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## Connectors

Connectors are located on the bottom of the computer and are identified in Figure 4-1 below.



- 1. 6-pin mini DIN (PS/2 mouse)
- 2. LPT1 (printer)
- 3. COM2
- 4. COM1
- 5. 6-pin mini DIN (PS/2 keyboard)
- 6. Network

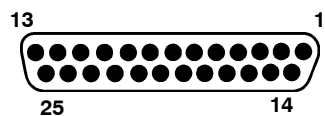
*Figure 4-1*  
**Connectors**

## Parallel Printer Port

The LPT1 printer port is an enhanced parallel port with a 24-pin (DB25) *female* connector. It provides bidirectional data communication for a line printer.

Table 4-1  
**Parallel Port (LPT1) Pinout**

Pin	Signal
1	PSTB; data strobe
2	PLD0; data 0
3	PLD1; data 1
4	PLD2; data 2
5	PLD3; data 3
6	PLD4; data 4
7	PLD5; data 5
8	PLD6; data 6
9	PLD7; data 7
10	PACK; acknowledge
11	PBUSY; busy
12	PPE; paper end
13	PSLCT; printer selected
14	PAFD; auto feed
15	PERR; printer error
16	PINIT; printer initialized
17	PSLIN; printer selected
18–25	Ground



## COM Serial Ports (COM1, COM2)

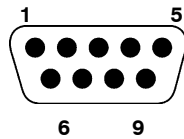
Each COM serial port has its own address and uses a 9-pin *male* connector to attach RS-232 serial devices, such as a printer, a mouse, an external modem, a scanner, or a serial network connection.

Table 4-2  
**Serial Communication Ports (COM1/COM2)**

Port	IRQ	Base I/O
COM1	4	03FS
COM2	3	02F8

Table 4-3  
**Serial Communication Port Pinouts**

Pin	Signal
1	DCD; data carrier detect
2	RXD; receive data
3	TXD; transmit data
4	DTR; data terminal ready
5	GND; ground
6	DSR; data set ready
7	RTS; ready to send
8	CTS; clear to send
9	RI; ring indicator <b>or</b> ( <i>selectable for tethered scanner</i> ) 5 vols dc



## Keyboard and Mouse Ports

These 6-pin mini-DIN, PS/2-standard connectors connect an external keyboard and mouse to the computer.

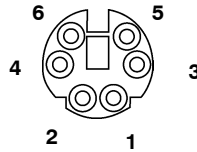
Where an external keyboard is *not connected* to the computer, you may use an emulated keyboard (*if available in your application*) that can be activated on the display.

► **NOTE:**

*You must have the external mouse or keyboard plugged into the correct port. If those are reversed, neither device will work properly.*

Table 4-4  
**Keyboard/Mouse Port Pinouts**

Pin	Signal
1	Keyboard data ( <i>or mouse data</i> )
2	No connection
3	Ground
4	+5 volts dc
5	Keyboard clock ( <i>or mouse clock</i> )
6	No connection

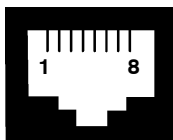


## 10BASE-T Interface

The RJ-45 type 8-pin modular connector shown below provides an interface to an Ethernet local area network. Pinouts are as shown below when the user views the connector straight on from the outside of the computer.

Table 4-5  
**RJ-45 Pinouts**

<b>Pin</b>	<b>Signal</b>
1	TX+ (TOP)
2	TX- (TON)
3	RX+ (TIP)
4	Not Used
5	Not Used
6	RX- (TIN)
7	Not Used
8	Not Used

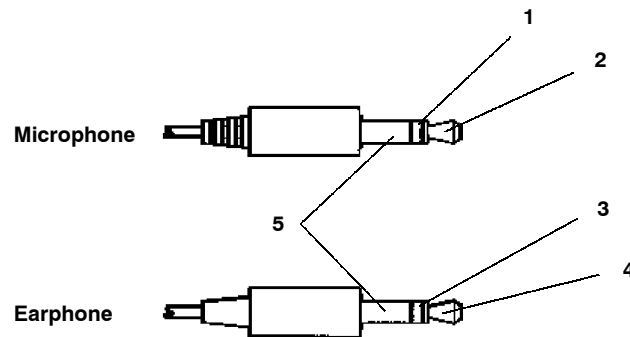


## Audio Connections

The microphone and earphone plug pinouts are shown in Figure 4-2 below. Note that 2.5 volts bias is present on the computer's microphone jack.

► **NOTE:**

*Make sure you plug the audio connectors into the correct output jacks. Failure to do so can result in damage to the earphone.*



1. Bias (2.5 volts)
2. Mic +
3. Right
4. Left
5. Common (ground)

*Figure 4-2*  
**Audio Connectors**





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