Installing The Total Control PC Attendant On The Impact FX Digital Communications System

Introducing The Total Control PC Attendant

The *Total Control* PC Attendant consists of a personal computer, an interface board (factory installed in the PC), a customized keyboard, a program disk, and all necessary connection cables.

The Impact FX systems support up to four PC Attendants. Each PC Attendant requires the following ports:

- one station port (no wiring connections required),
- two loop-start line ports that it uses for a 4-wire audio connection with the system,
- one serial data port that it uses for data communications with the system.

NOTE: You may need to install a communications card or a FXINT_MAUX card in the system to provide a serial data port for the PC Attendant. This installation instruction assumes the communications card is in place. If you have not yet done so, install the card using the procedures explained in the Impact FX Publication Library.

Each *Total Control* PC Attendant requires one station port to communicate with the system and replaces a telephone from the system.

Default Locations

The default locations for the PC Attendants are detailed below; however, you can reassign the locations through programming.

	Station	Line 1	Line 2	Line Group	Serial Port
PC Attendant 1	1	1	2	16	1
PC Attendant 2	2	3	4	16	1
PC Attendant 3	3	5	6	16	1
PC Attendant 4	4	7	8	16	1

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Checking The Contents Of Your Equipment

Before you begin any installation, you should check to make sure that all of you equipment is in order. Check for all of the following items:

- Pentium-class PC.
- *Total Control* System Operating Disk,
- customized keyboard (with handset cradle),
- telephone handset,
- handset coil cord,
- 4-conductor modular line cord,
- modular-to-EIA adapter,
- 6-conductor modular line cord with installed ferrite collar.

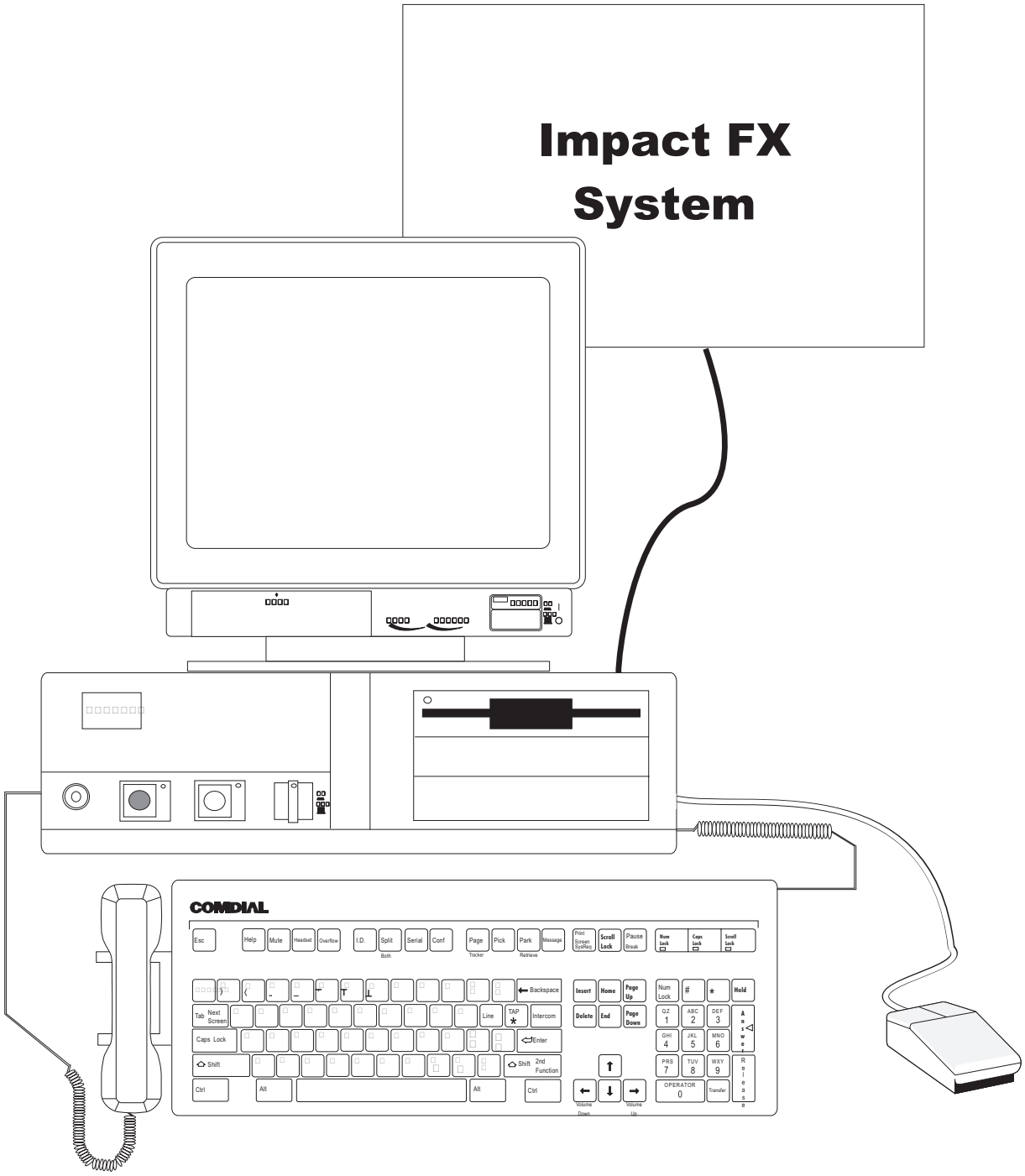
Finding Related Publications

The following is a list of publications that you may find helpful with your PC Attendant installation.

- IMI66–134, *Installing the FXS Main Common Equipment Cabinet.*
- IMI66–141, *Installing the FXT Main Common Equipment Cabinet.*
- GCA70–230, *Total Control PC Attendant's Console User's Guide*.
- Instruction Manual for the PC

Upgrading PC Attendant Software

Upgrade procedures vary depending on the particular PC. Please call Comdial Technical Services at 1–800–366–8224 for information and assistance with software upgrades.



The Total Control PC Attendant

Installing The System Wiring

Install the PC using the instructions provided with that equipment. For Impact FX installation, refer to the main cabinet installation manual. The following sections of this document detail the procedures for connecting the PC Attendant. This installation instruction assumes the communications card is installed. If you have not yet done so, install the card using the procedures in the Impact FX system documentation.

Making The Data Connections

The maximum distance from a serial data port that you can confidently locate a PC attendant position is dependent upon the baud rate at which you operate the serial data port.

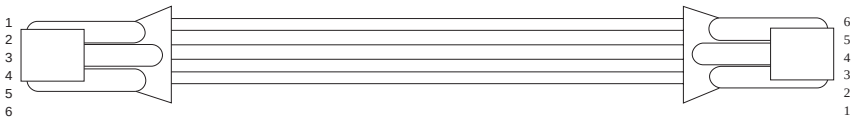
- When operating the port at 9600 baud, your data cable run must be no longer than 500 feet.
- When operating the port at 19,200 baud, your data cable run must be no longer than 50 feet.

Typically, you will make the direct-wired data connections using customer-supplied modular jacks (type 625A2-6), the equipment-supplied 6-conductor modular line cord, and a customer-provided standard 6-conductor line cord.

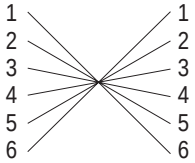
1. Install the industry-standard modular jacks at the system location (Data Jack A on the next page's illustration) and at the PC attendant position location (Data Jack B on the illustration). Route the wiring between these jacks using twisted-pair wire.

   Remember, in a noisy electrical environment use shielded cable for the data communications. Also, keep in mind that It is a good practice to keep the data communications wiring separate and as far away as possible from the voice-pair wiring. As an added precaution against induced interference, route the data cable as far away from any fluorescent lighting as you can reach, and make every effort to route the data cable perpendicular to other wiring.

NOTE: The wiring from the system's serial data port to the modular-to-EIA adapter connected to the PC Attendant must be mirrored just as they are in a standard 6-conductor line cord. This means that if you use modular jacks and house wiring to make the data connection, you MUST maintain the signal polarity reversal, or roll-over, found in a standard 6-conductor line cord.



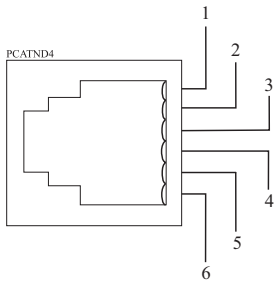
PCATND2



Standard 6-Conductor Line Cord

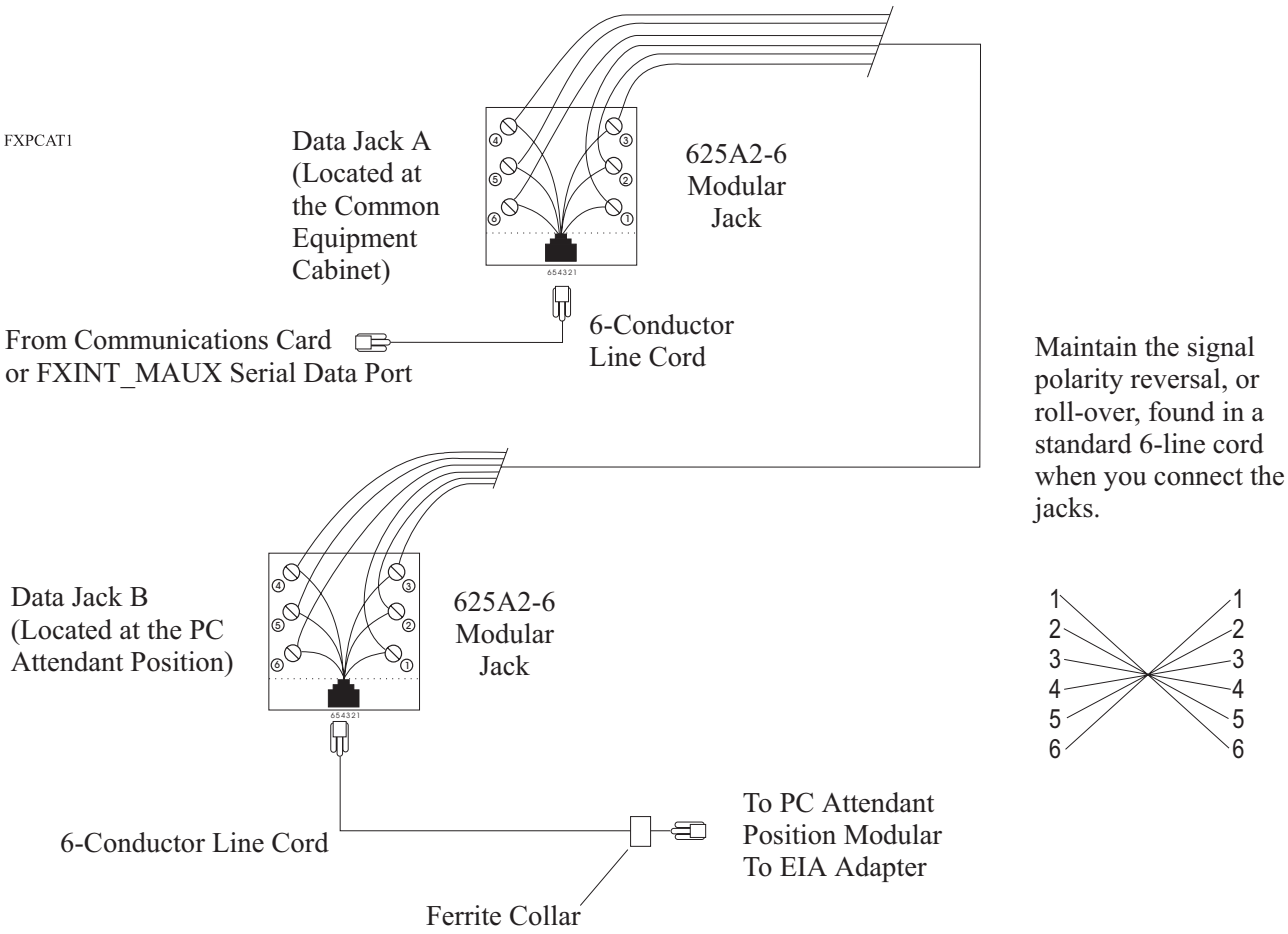
2. Connect a 6-conductor line cord between the serial data port on the Impact FX system's communications card and the modular jack located near the Impact FX system (Data Jack A).

Typical Serial Data Port



Pin 1 = (RTS) Request to Send
Pin 2 = (CTS) Clear to Send
Pin 3 = (RD) Receive Data
Pin 4 = (TD) Transmit Data
Pin 5 = (SG) Signal Ground
Pin 6 = (GND) Chasis Ground

Serial Data Port Connection



Making the Data Connections

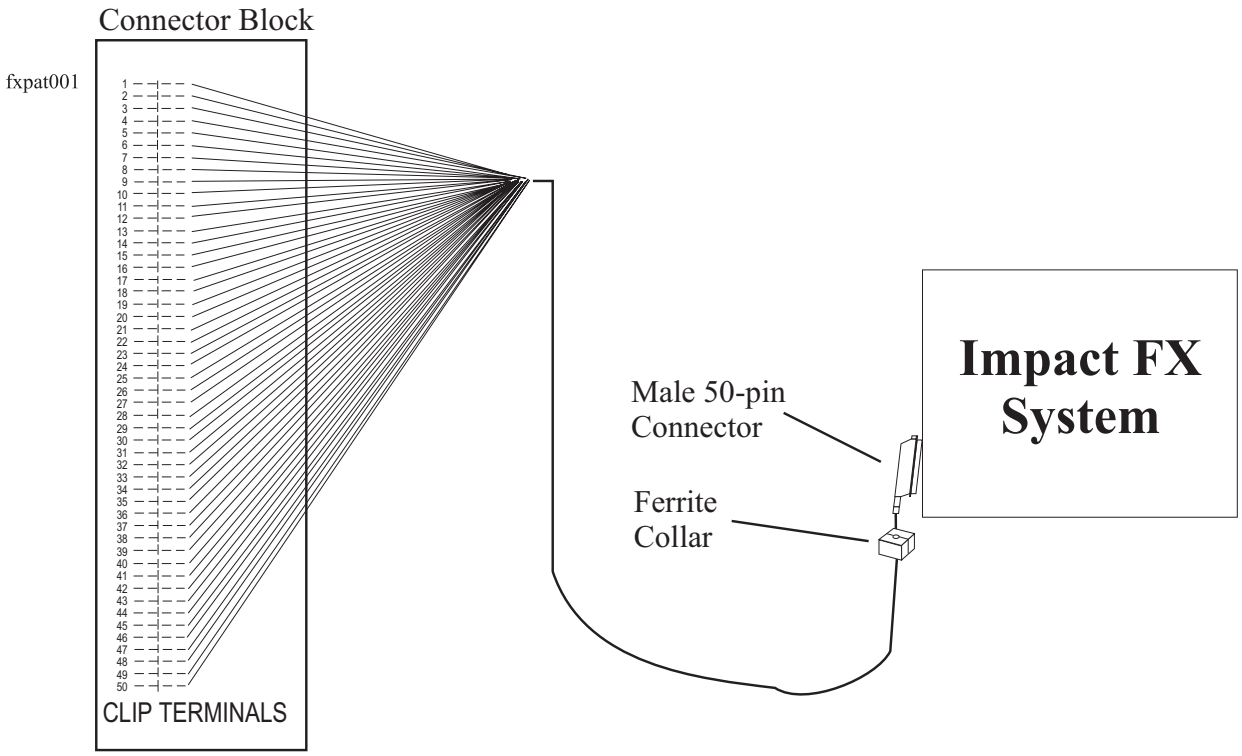
Making The Line Connections

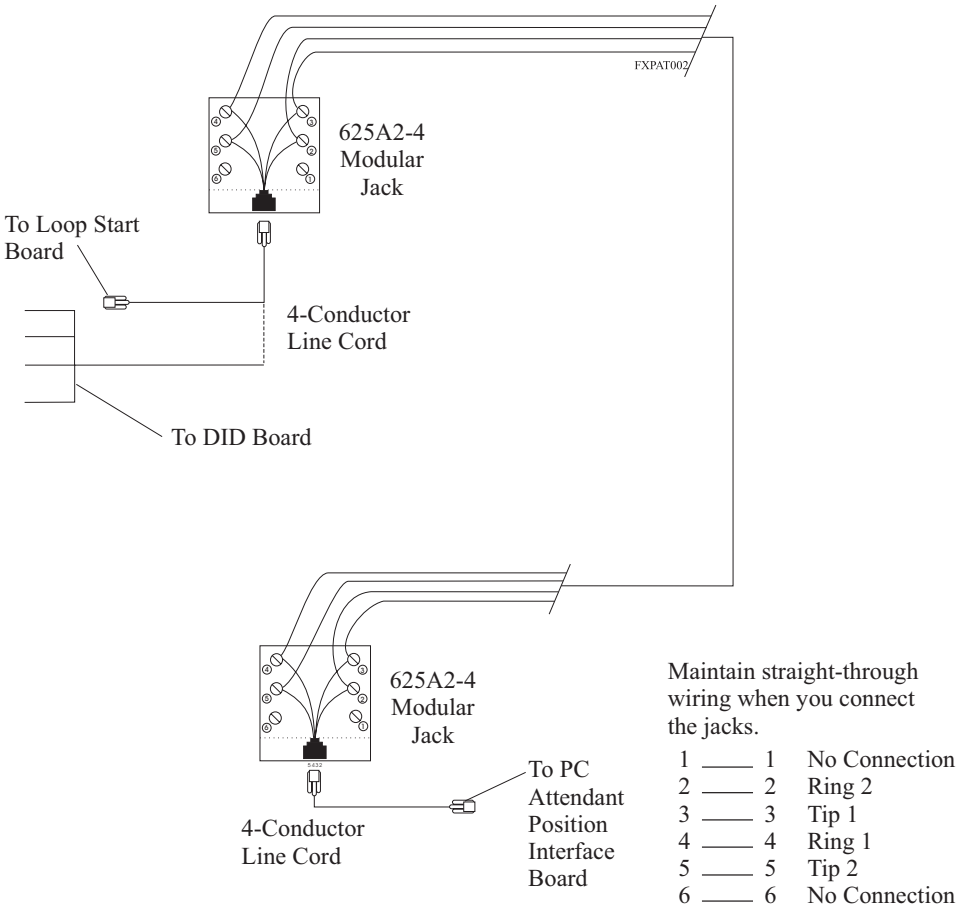
When you are connecting to a loop start line board, make the line connections using customer-supplied modular jacks (type 625A2-6), a customer-provided standard 4–conductor line cord and an equipment-provided 4–conductor line cord.

1. Install the industry-standard modular jacks at the system location (Line Jack A) and at the PC Attendant location (Line Jack B).
2. Wire the jacks straight through (that is; wire T1 to T1, T2 to T2, R1 to R1, and R2 to R2) using twisted-pair house wiring.

When you are connecting to a DID board, note that these boards provide line connections through a 50-pin connector instead of an industry-standard modular jack. Make line connections to these boards using a customer-supplied 50-pin connector block (66-type), a standard 25-pair cable, a customer-supplied modular jack (type 625A2-6), and an equipment-provided 4–conductor line cord.

1. Install the 66-type 50-pin connector block at the Impact FX location.
2. Install the industry-standard modular jack at the PC Attendant location (Line Jack B).
3. Use twisted-pair house wiring to connect the desired line pairs from the 50-pin connector block to the customer-supplied modular jack at the PC Attendant location (Line Jack B).





Making The Line Connections

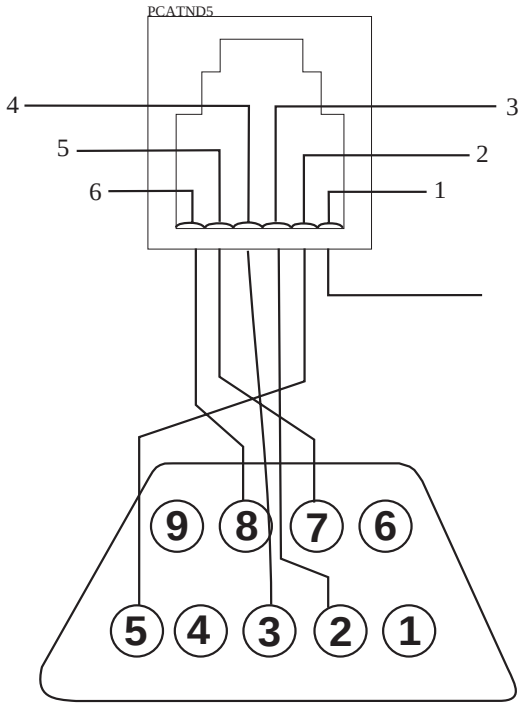
Making The PC Attendant Position Connections

1. Connect the supplied modular-to-EIA adapter to the COM1 serial data connector on the PC Attendant.
2. Connect the supplied 6-conductor (with ferrite collar) line cord between the modular-to-EIA adapter and the modular jack that is wired to the system's serial data port. Keep the ferrite collar near the PC Attendant.
3. Connect the supplied 4-conductor line cord between the LINE jack on the proprietary interface board and the modular jack wired to the system's line board.
4. Connect the handset coil-cord to the HANDSET jack on the proprietary interface board. Note that the interface also provides a HEADSET jack if the user requires headset operation.
5. Disconnect the telephone that the PC Attendant replaces. ***Record its physical board slot location and its logical station number*** for use when programming the system to accept the PC Attendant.

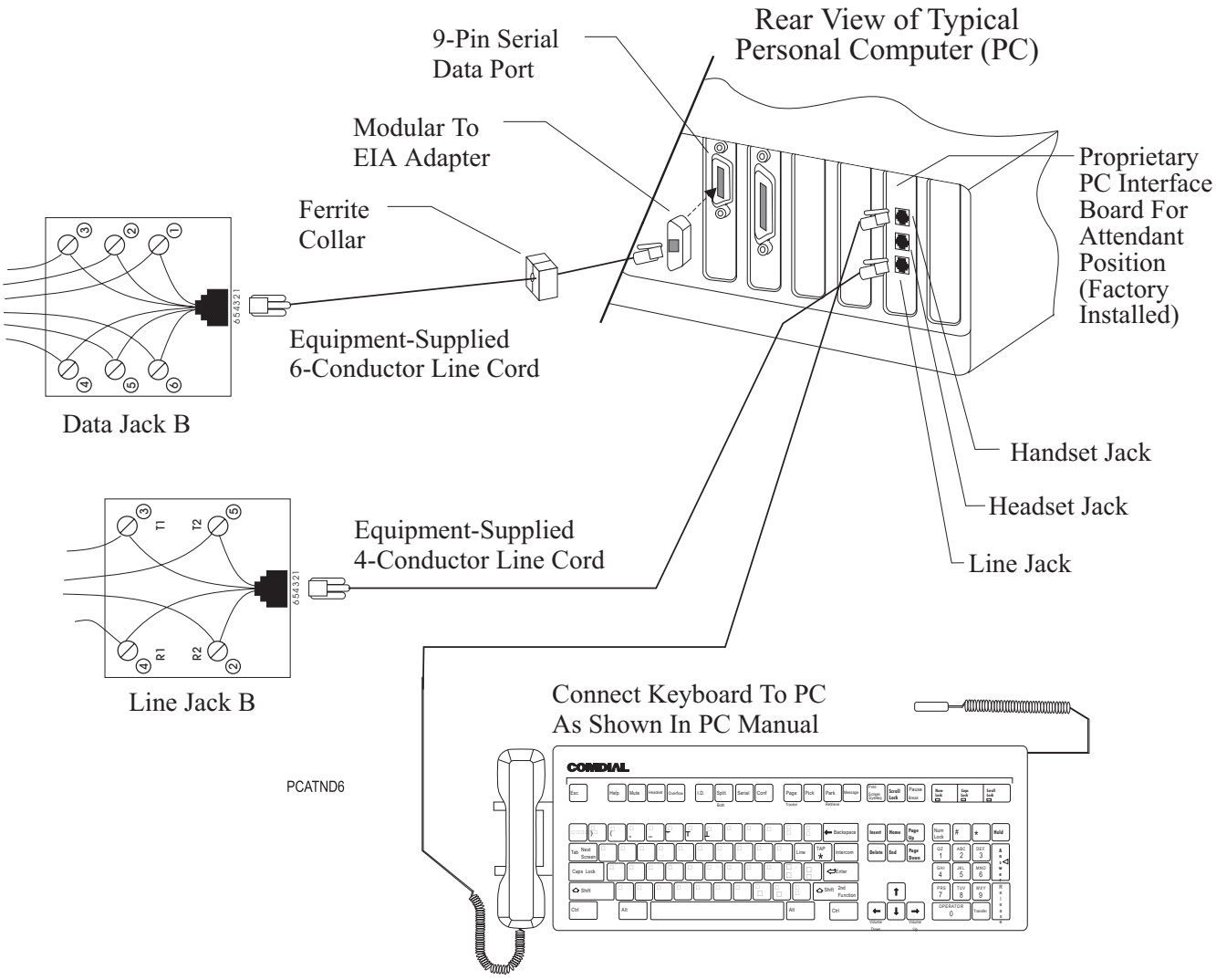
Modular Jack
Pin 1 = No Connection
Pin 2 = (SG) Signal Ground
Pin 3 = (TD) Transmit Data
Pin 4 = (RD) Receive Data
Pin 5 = (CTS) Clear to Send
Pin 6 = (RTS) Request to Send

DB9 Connector
Pin 1 = No Connection
Pin 2 = (RD) Receive Data
Pin 3 = (TD) Transmit Data
Pin 4 = No Connection
Pin 5 = (SG) Signal Ground
Pin 6 = No Connection
Pin 7 = (RTS) Request to Send

Pin 8 = (CTS) Clear to Send
Pin 9 = No Connection



Detailing The Modular-To-EIA Adapter



PC Attendant Connections

Testing The PC Attendant Position Installation

1. Use VMMI to program the system to accept the PC Attendant.
   Remember, each PC Attendant requires a station port, two line ports, a serial data port, and a line group for operation. You must identify these items through programming for each PC Attendant before the equipment will function properly.
2. Technicians loaded the PC Attendant software on the personal computer's hard drive as an executable file before shipping the equipment. The technicians also configured the computer's autoexec.bat file to automatically load the PC Attendant software when you turn on the computer. When you turn on the computer, it should execute its boot-up procedure and then show the PC Attendant position menu.
3. Use the information detailed in GCA70–230, Total Control PC Attendant's Console User's Guide to test the PC Attendant's operation.
4. If your system does not operate properly, check the wiring for proper connections and verify that you took the proper programming steps.

Radio Frequency Interference

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Subpart J of Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient the television or radio's receiving antenna, and/or relocate the equipment, and the radio or TV with respect to each other. If necessary, the user should consult the manufacturer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the Government Printing Office, Washington D.C. 20402. Stock No. 004-000-00345-4.

This digital apparatus does not exceed the (Class A) limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Programming For The PC Attendant

The following sections explain the VMMI programming steps necessary to make the PC Attendant function properly.

Enabling The PC Attendant

Each PC Attendant requires a station per port, two line ports, a serial data port, and a line group. These items must be identified through VMMI programming for the PC Attendant to function.

Programming the PC Attendant's Serial Data Port

The PC Attendant's baud rate defaults to 9600. To match this parameter, program the serial data port used for the PC Attendant to have the following parameters:

- 9600 baud,
- 8 data bits,
- 1 stop bit,
- CTS/RTS flow control.

If you choose another baud rate for the serial data port, you must change the PC Attendant's baud rate to match. Do this by changing the baud rate in the autoexec.bat file. Procedures for modifying the autoexec.bat file are explained in section 1.2 of the Total Control PC Attendant's Console User's Guide (GCA70–230).

If you program the PC Attendant to transmit and receive data at a higher baud rate, you should use a communications protocol (such as CTS/RTS or XON/XOFF) to prevent buffer overrun and data loss.

Programming a Hunt List for PC Attendant

Under the **Stations/Station Programming/General** screen, assign eight intercom numbers to an intercom hunt list for the PC Attendant. The numbers you assign must include the personal intercom number for the PC Attendant (the number for the station location that the PC Attendant uses) and seven group intercom numbers set aside for the PC Attendant. When you assign group intercom numbers to the hunt list, the system automatically adds them to the group intercom access list for the PC Attendant.

Assigning Lines for PC Attendant

To assign lines for PC Attendant use:

1. Choose several lines the PC Attendant can use for call origination and assign them to line group 16.
2. Assign line group 16 to a class of service.
3. Assign that class of service to the PC Attendant.

NOTE: The line key on the keyboard is fixed to select line group 16. You must assign lines to line group 16 before the Attendant can select a line for use.

Assigning the PC Attendant Text Messaging Buttons

Use VMMI to assign text messaging functions to system telephone buttons. Users can press these buttons to access the text messaging feature provided by the PC Attendant. Program the telephone to provide the following button functions:

- **Text Message** button to step forward through the fields of a message in the telephone's LCD.
- **Print** button to print a displayed message.
- **Next** button to scroll through a group of stored messages.
- **Previous** button to back-up through stored messages.
- **Delete** button to erase a message.
- **Quit** button to end a text messaging session.

Mapping PC Attendant Function Keys

The system adds programmable function keys to the PC Attendant. The programmable features are in addition to the fixed features currently provided by function keys F1 through F12. You can assign a different feature to each function key.

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