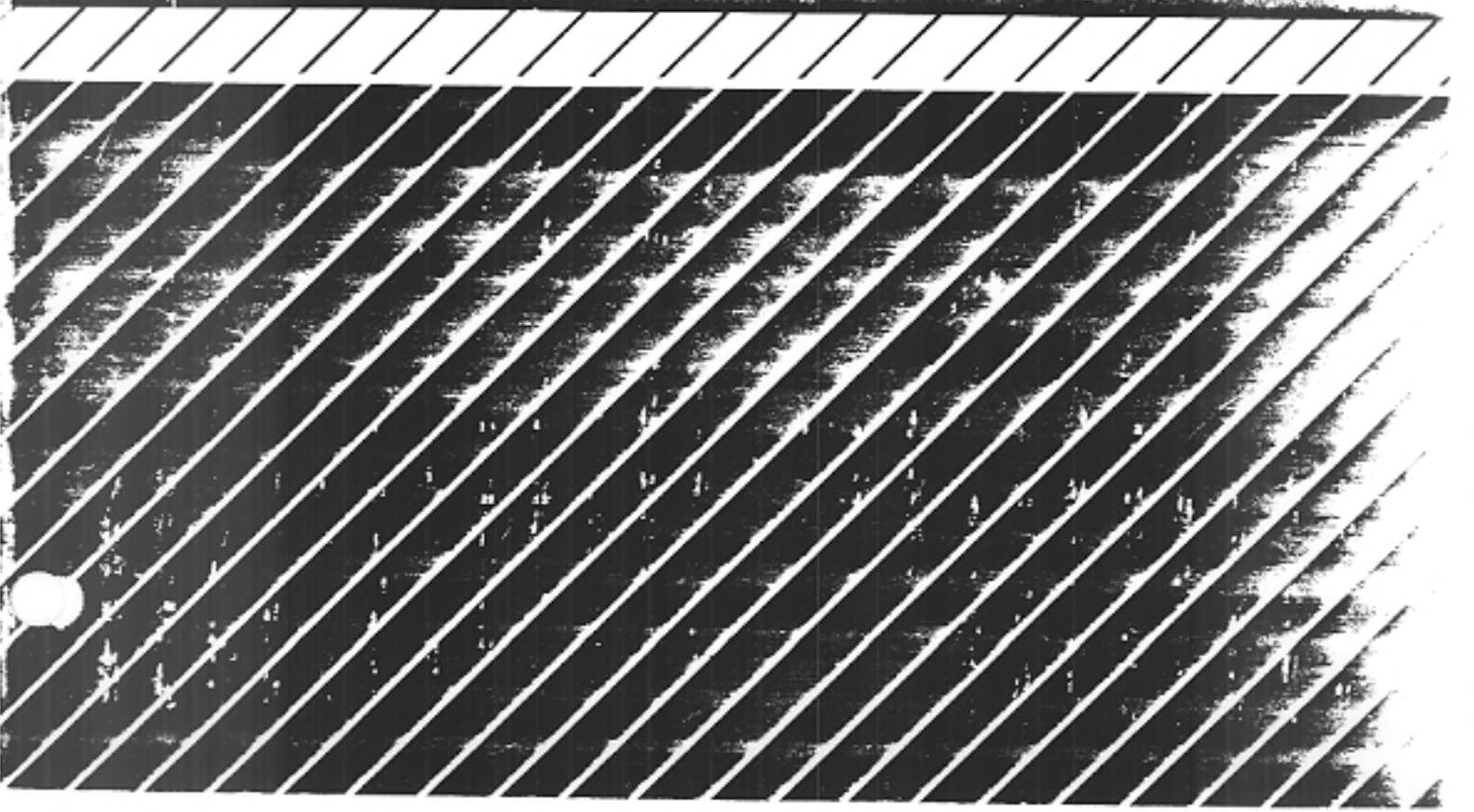




**AT&T**

**INSTALLATION INSTRUCTIONS**  
**PagePac® 20 PowerMate™**  
**MERLIN™ Communication Systems**



INSTALLATION INSTRUCTIONS  
PagePac® 20 PowerMate™  
MERLIN\* Communication Systems

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999-500-2061S  
Issue 2, August 1985

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MusicMate is a protected trademark of Harris Corporation Dracon Division.

## Section 1 - Models 206, 410, 820

### OVERVIEW

These instructions describe the connections between the PagePac 20 PowerMate and the MERLIN communications systems, Models 206, 410 and 820. Instructions for paging from the MERLIN Systems telephones are also provided.

PagePac 20 PowerMate (Figure 1) is a telephone-integrated voice paging system which provides single-zone paging from the host system telephones. A detailed description of the system is provided in: SERVICE MANUAL - INSTALLATION PagePac 20 PowerMate, number 999-500-2001S. Connections not described in this manual are described in the Service Manual.

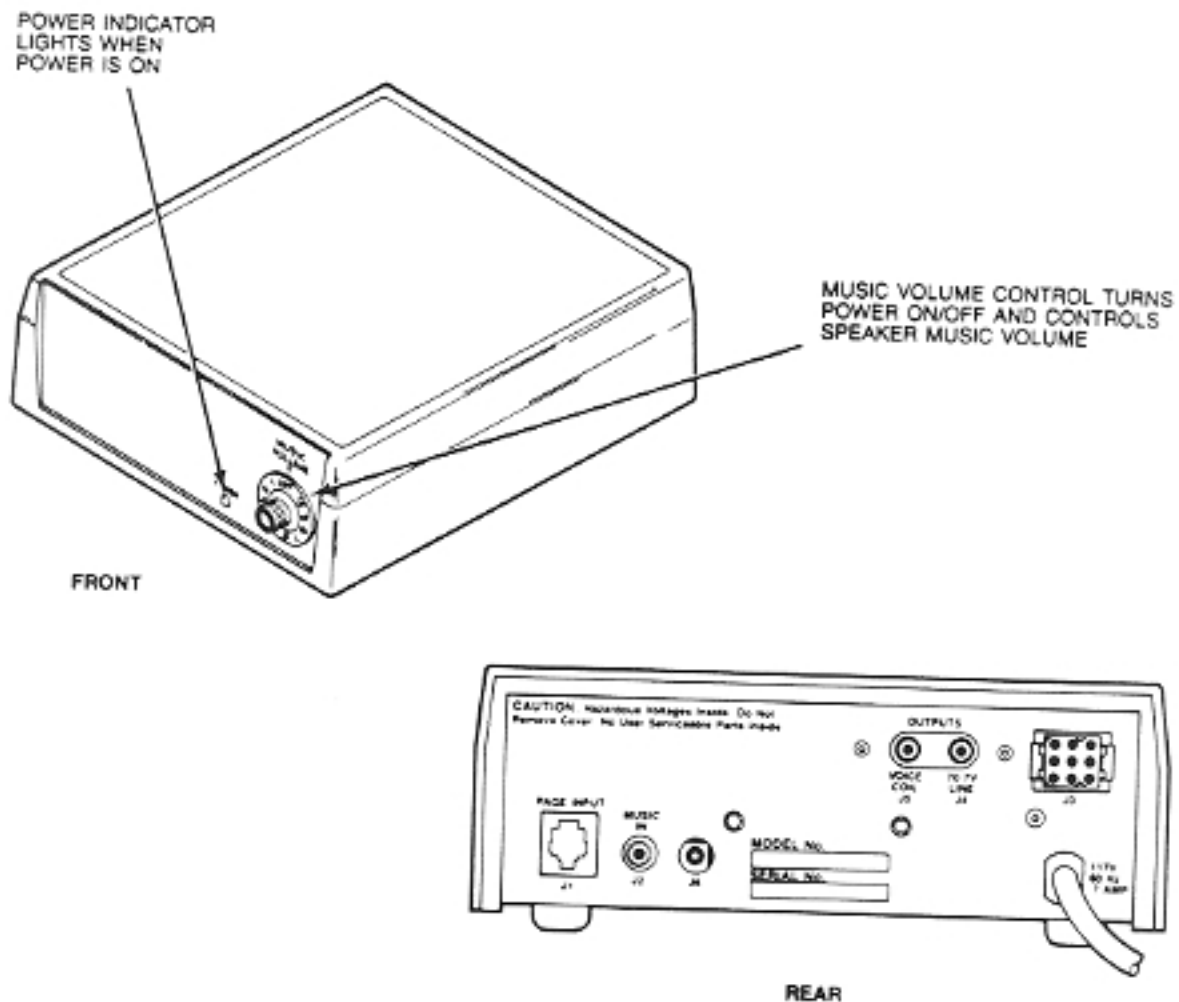


Figure 1. PagePac 20 PowerMate

## CONNECTIONS

### Materials and Tools Required:

- Half-modular cord (supplied with these instructions)
- MERLIN Music-On-Hold/Paging Cartridge (151A)
- 4-wire connecting block with installation hardware (Required if PowerMate is located more than 5 feet away from the MERLIN control unit.)
- Standard Screwdriver

Note: All items except the half-modular cord must be supplied by the installer.

The connection between PowerMate and the MERLIN communications system is made with a 4-conductor, half-modular cord. One end of the cord is plugged into PAGE INPUT jack J1 on the rear of the PowerMate (Figure 2). The spade-tips on the other end of the cord are connected to the MERLIN Music-On-Hold/Paging Cartridge 151A. (The cartridge must be installed in the CARTRIDGE TYPE II slot of the MERLIN control unit before making PowerMate connections. Installation instructions are packed with the cartridge.) See Figure 2 and Table A.

The half-modular cord supplied with these instructions is 6 feet long. If necessary, the distance between the PowerMate and the MERLIN communications system may be increased by using a connecting block as shown in Figure 2.

The optional MusicMate shown in Figure 2 may be used to provide both background music to the paging system and music-on-hold to the MERLIN system. For more information on the MusicMate, see the instructions supplied with it.

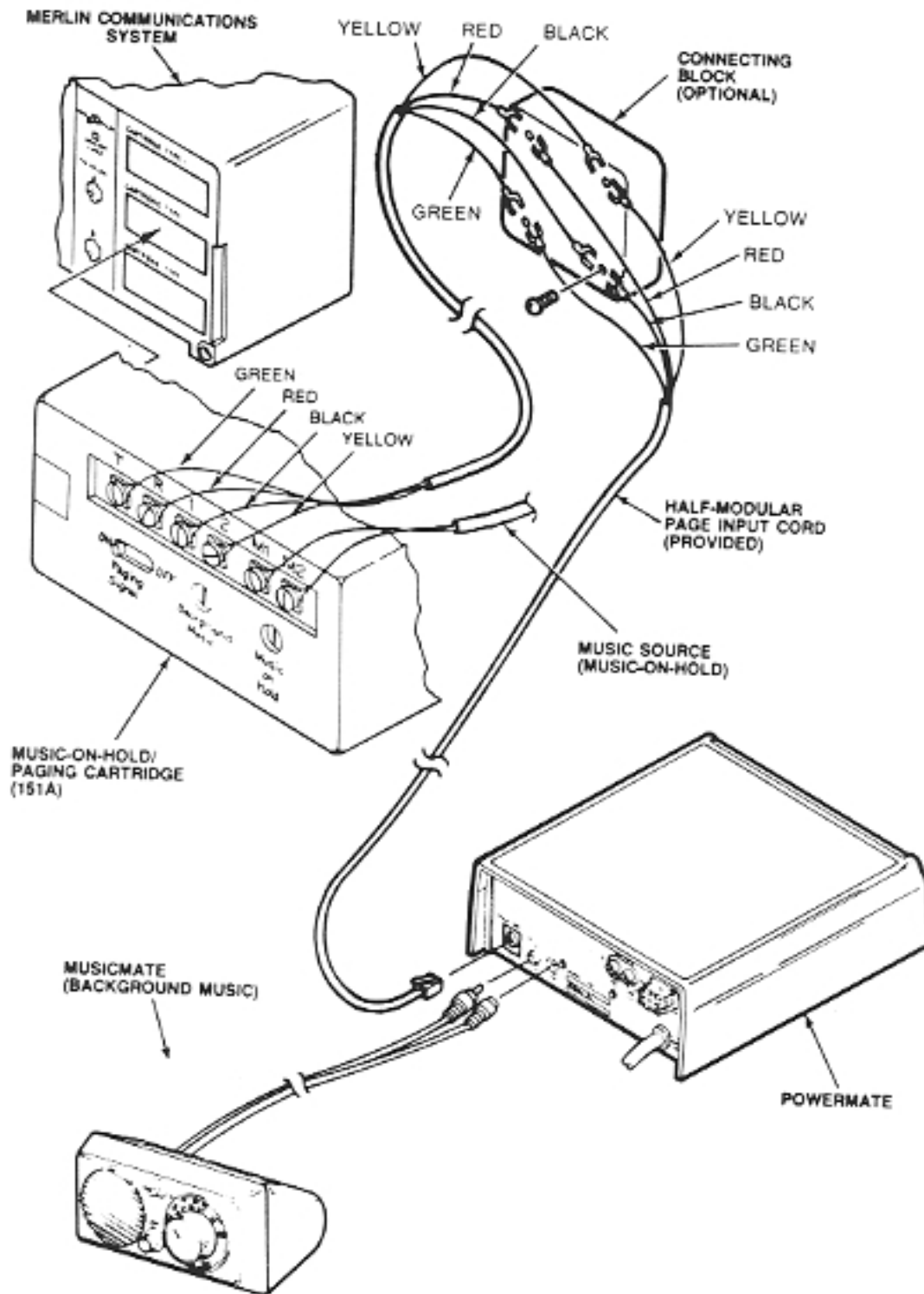


Figure 2. PowerMate to Music-On-Hold/Paging Cartridge Connection



Table A. PowerMate to MERLIN CS Connections

FROM POWERMATE PAGE INPUT JACK J1	TO MERLIN PAGING CARTRIDGE TERMINALS
Half-Modular Cord Wire Color	Connect to Terminal
Green	T
Red	R
Black	1
Yellow	2

- Note 1: Set paging cartridge PAGING SIGNAL switch to ON to activate a tone that is heard before each page.
- Note 2: The following method can be used, but is not recommended for providing music. Terminals M1 and M2 on the 151A cartridge may be used as inputs for both background music and music-on-hold. Music must be provided from a suitable (8-ohm) music source. When this method is used, connect the black and yellow leads to terminal 1, as shown in Figure 3. Music volume is then adjusted with the BACKGROUND MUSIC and MUSIC HOLD (music-on-hold) controls on the 151A cartridge.

## SYSTEM TEST PROCEDURE

Test paging system operation as follows:

1. Set PowerMate MUSIC VOLUME control (Figure 1) to OFF.
2. Plug PowerMate power cord into an AC outlet.
3. Turn the MUSIC VOLUME control clockwise to position 3 or
4. (Optional) If you have MusicMate or another music source, turn it on and tune to a radio station according to the directions supplied with the unit.
5. Set the background music level with the PowerMate MUSIC VOLUME control.

Note: The PowerMate MUSIC VOLUME control affects only the music volume. Page volume must be set at each individual loudspeaker as described in the PowerMate Service Manual.

6. Lift the handset of any MERLIN telephone.
7. Press the INTERCOM button and listen for dial tone.
8. Dial 6 (the paging access code). If you have background music it will stop.  
  
Note: If the PAGING SIGNAL switch on the MERLIN paging cartridge is set to ON, a tone will precede each page announcement.
9. Speak into the handset in a normal manner. Your voice will be heard in all speakers connected to the PowerMate.
10. Replace the handset. Music, if provided, will return to the loudspeakers.

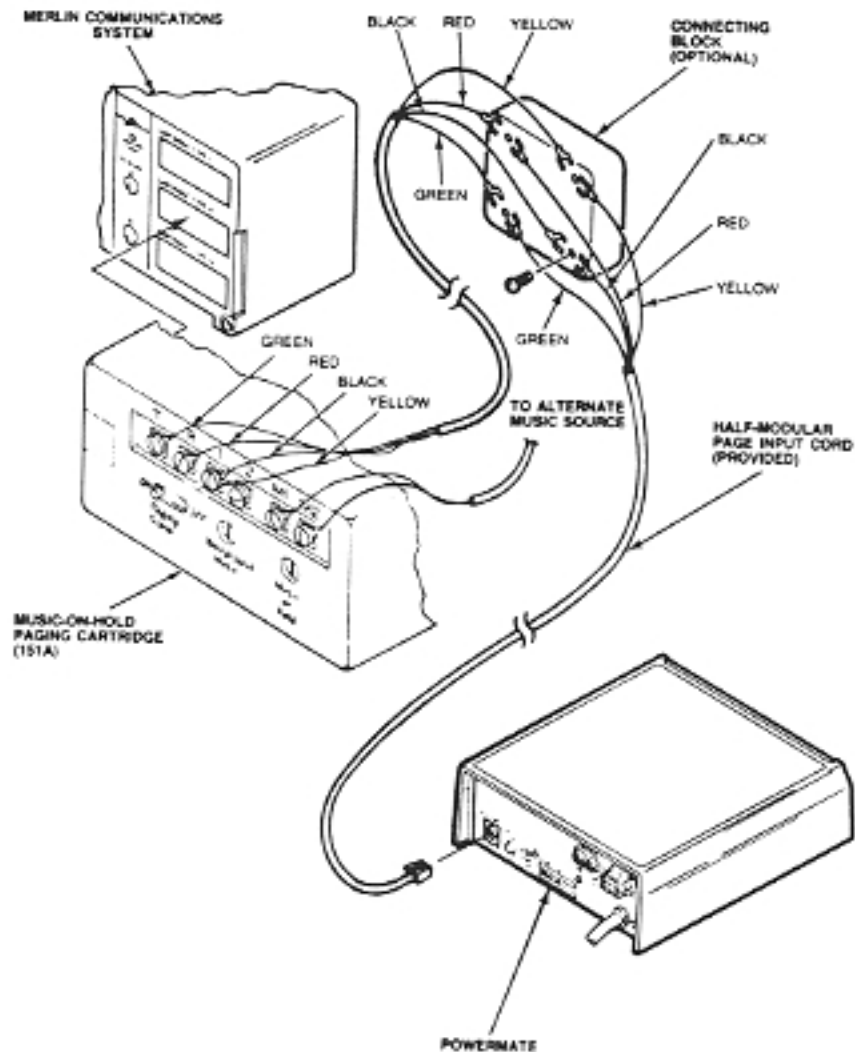


Figure 3. Using Alternative Music Source for both Background Music and Music-On-Hold

## **Section 2 - Models 1030, 3070**

### **OVERVIEW**

#### **PowerMate**

These instructions describe the connections between the PagePac 20 PowerMate and the MERLIN communications system, Models 1030 and 3070. Instructions for paging from the MERLIN System telephones are also provided.

PagePac 20 PowerMate (Figure 1) is a telephone-integrated voice paging system which provides single-zone paging from the host system telephones. A detailed description of the system is provided in: SERVICE MANUAL PagePac 20 PowerMate INSTALLATION, number 999-500-200IS. Connections not described in this manual are described in the Service Manual.

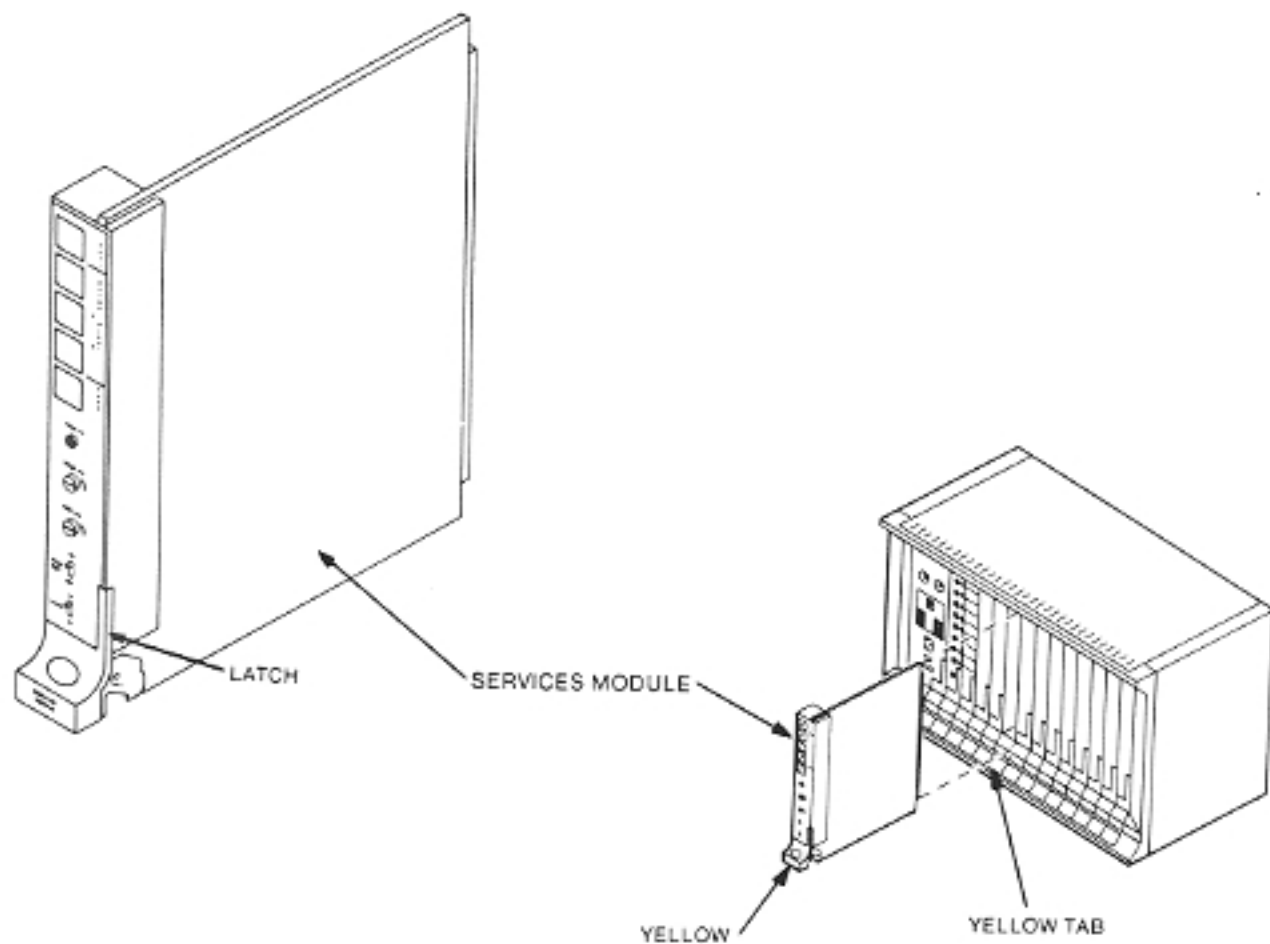
#### **Optional Zone Paging**

Zone paging, featuring 3 paging zones, is provided by the addition of the optional ZoneMate 3. Connections for ZoneMate 3 are not described in this document; see the ZoneMate 3 Service Manual, 999-500-203IS.

#### **183 Services Module**

A 183 Services Module must be installed in the MERLIN control unit before the PowerMate can be connected (Figure 4).

The Services Module provides an 8-pin modular jack that interconnects with the PAGE INPUT jack, J1, on the PowerMate, using the full-modular 6-conductor cord shipped with the order.



See the manual supplied with the Services Module for complete installation instructions.

Figure 4. 183 Services Module

## CONNECTIONS

### Materials and Tools Required:

- Six-conductor Modular cord (shipped with the order)
- Modular to Modular connecting block with additional modular cord (required if PowerMate is more than 6 feet from MERLIN CS control unit).
- MERLIN 183 Services Module

The pin-to-pin connections between the PowerMate and MERLIN CS are shown in Figure 5 and listed in Table B and Table C.

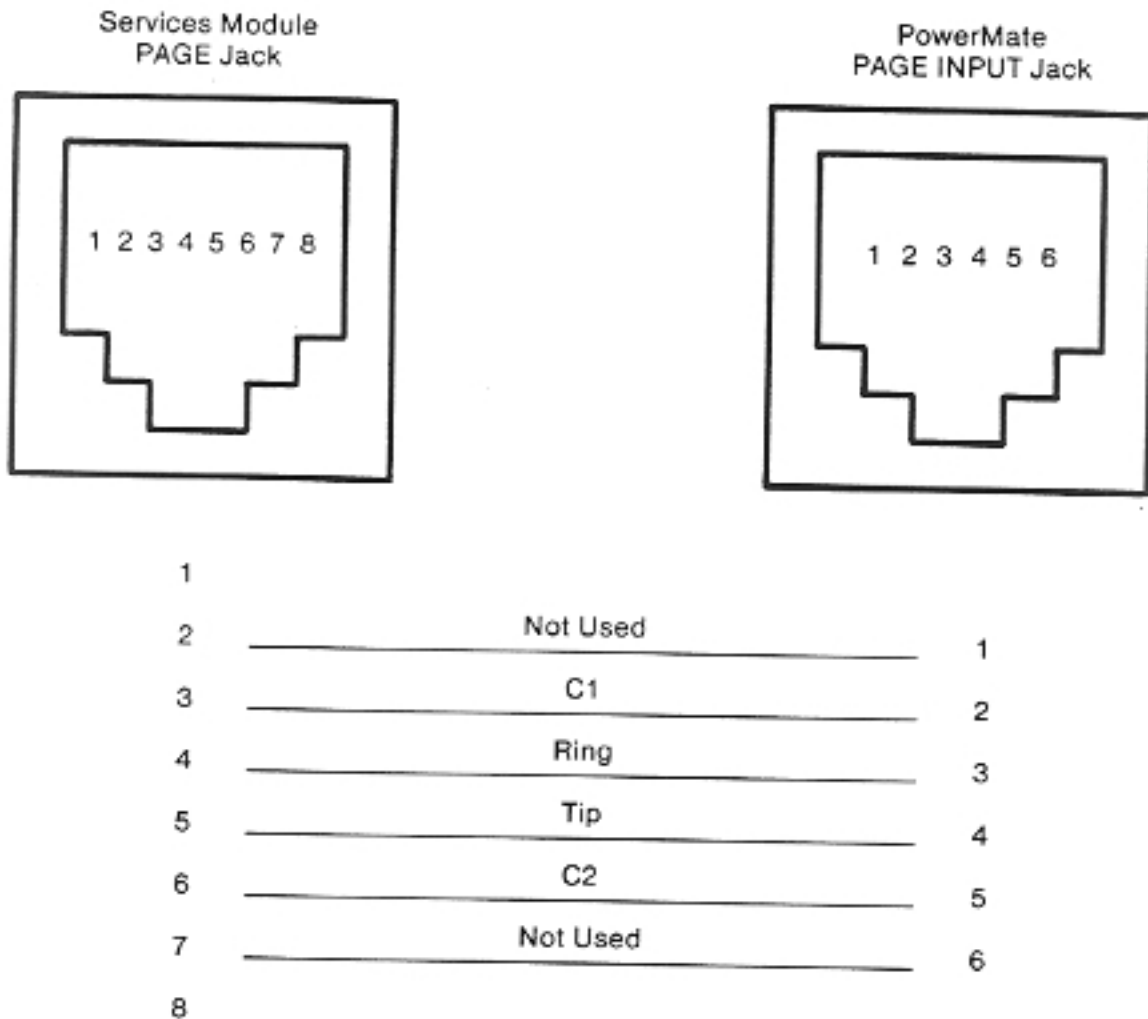


Figure 5. Services Module and PowerMate Connector Pinouts

Table B - 183 Services Module PAGE Jack Pin Descriptions

183 SERVICES MODULE PAGE JACK PIN NUMBER	FUNCTION
1	Not Used
2	Not Used
3	C1 Zone 1
4	RING
5	TIP
6	C2 Zone 1
7	Not Used
8	Not Used

Note: Paging is accessed in each zone by shorting leads C1 and C2.

Table C - PowerMate PAGE INPUT Jack, J1, Pin Descriptions

POWERMATE PAGE INPUT JACK PIN NUMBER	FUNCTION
1 -	Not Used
2 (BLK)	C1
3 (RED)	RING
4 (GRN)	TIP
5 (YEL)	C2
6 -	Not Used

Note: Paging is accessed by shorting leads C1 and C2.

### 183 Services Module Page Jack

This jack is a 8-pin modular jack for connecting an external paging system. Pin assignments are shown in Table B. Pins 5(T) and 4(R) make up a balanced 600-ohm bidirectional voice pair. The remaining pins are paired and provide 3 sets of relay contact closures for paging zone selection as shown in Table B.

The PowerMate uses only four of the eight pins. These are 2, 3, 4 and 5 (Table C). The connection is illustrated in Figure 5.

The connection between PowerMate and the MERLIN communications system is made with a 4-conductor full-modular cord. One end of the cord is plugged into PAGE INPUT jack J1 on the rear of the PowerMate (Figure 6). The other end of the cord is connected to the MERLIN 183 Services Module PAGE jack. (The module must be installed in the MERLIN control unit before making PowerMate connections. Installation instructions are packed with the module).

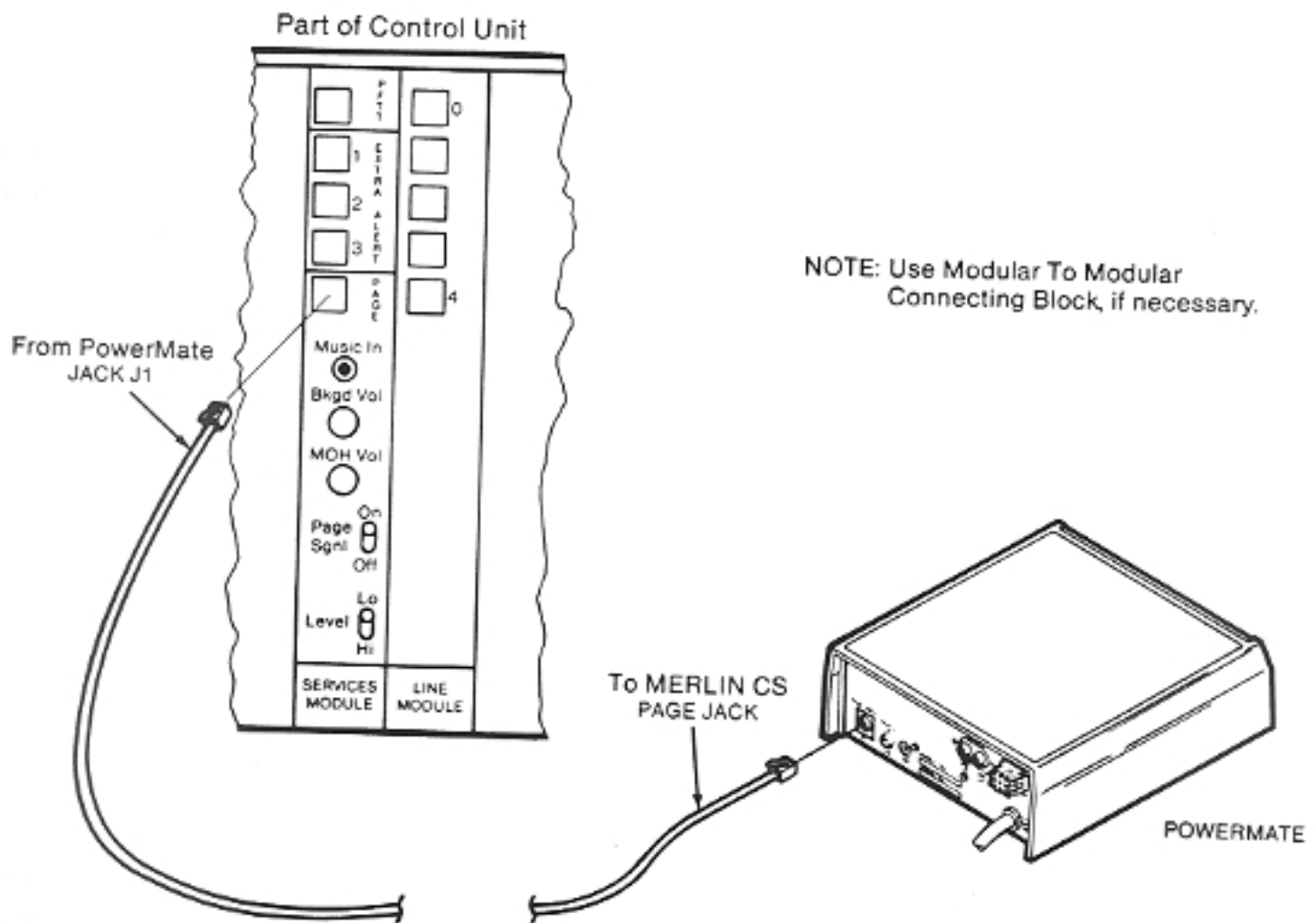


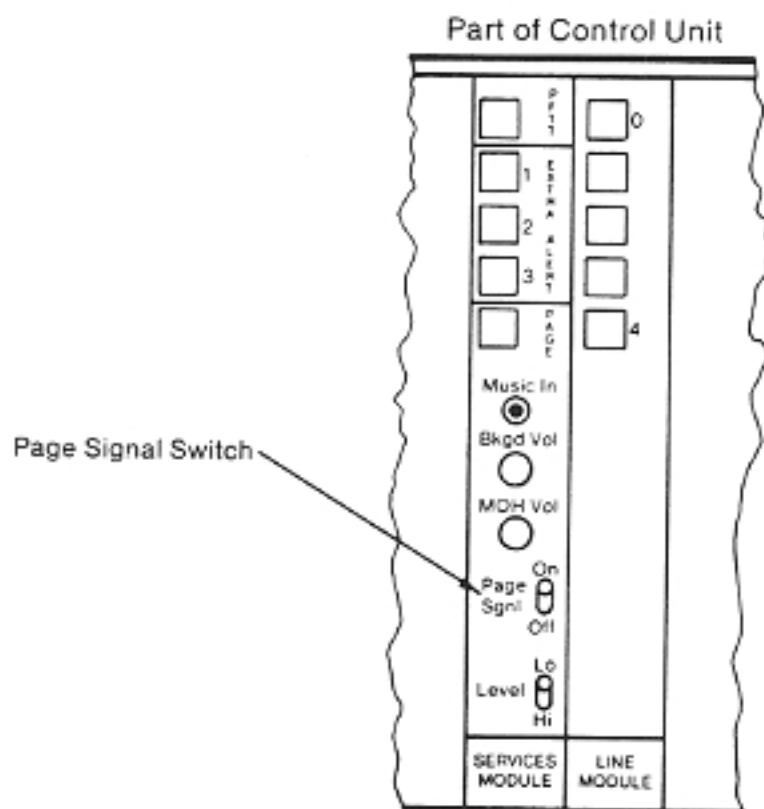
Figure 6. PowerMate to Services Module Connection

The modular cord supplied with these instructions is 6 feet long. If necessary, the distance between the PowerMate and the MERLIN communications system may be increased by using a modular connecting block and modular cord, length as required.

The optional MusicMate, shown in Figure 2, may be used to provide both background music to the paging system and music-on-hold to the MERLIN system. For more information on the MusicMate, see the instructions supplied with each unit.

### 183 Services Module Controls and Switches

**PAGE SIGNAL ON/OFF Switch:** When set in the ON position, a paging alert tone (warning tone) is generated at the initiation of any paging access. There is a slight delay between paging access activation and beginning of paging tone (Figure 7).



NOTE: The other connections and controls on the Services Module are not used with the PowerMate.

Figure 7. Services Module Page Signal Switch



## SYSTEM TEST PROCEDURE

Test paging system operation as follows:

1. Set PowerMate MUSIC VOLUME control (Figure 1) to OFF.
2. Plug PowerMate power cord into an AC outlet.
3. Turn the MUSIC VOLUME control clockwise to position 3 or 4; the POWER Indicator (Figure 1) will light.
4. (Optional) If you have MusicMate or other music source, turn it on and tune in a radio station in accordance with the instructions provided with the unit, and set the background music level with the PowerMate MUSIC VOLUME control.

Note: The PowerMate MUSIC VOLUME control affects only the music volume. Page volume must be set at each individual loudspeaker as described in the PowerMate Service Manual.

5. Lift the handset of any MERLIN telephone.
6. Press either the Intercom-Voice or the Intercom-Ring button.
7. Dial 80 (the code for single-zone or all-zone paging).

If you have background music, it will stop.

Note: If the PAGE SIGNAL switch on the 183 Services Module is set to ON, a tone will precede each page announcement. It is important to set the switch to ON if talk-back is used. This will notify people in the paging area that the speakers are functioning as microphones. Such notification may be mandatory in some states.

8. Speak into the handset in a normal manner. Your voice will be heard in all speakers connected to the PowerMate.
9. Replace the handset. Music, if provided, will return to the loudspeakers.