

Maintenance Manual

MDX RDI Data Interface

Option PMCE7G

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INTRODUCTION

The Radio Data Interface (RDI) option PMCE7G consists of RDI Cable 19A705884P4. This option connects the RDI option DE1A to the EDACS® MDX mobile radio for use with RS-232C devices such as a mobile data terminal. A Data Interface Cable PMCD7Z (19C851585P18) is also required to be installed before the RDI option can be used. The Data Interface Cable attaches to the MDX mobile radio and the RDI Cable interconnects the RDI unit to the Data Interface Cable.

The RDI interfaces an RS-232C device to the EDACS MDX mobile radio by providing serial (TTL-to-RS-232C levels) and protocol translation between the radio and the RS-232C device. Refer to LBI-38335 for a complete description of the RDI unit.

In addition to providing the serial data signals used with the RDI, the Data Interface Cable also brings all option connections from the System Board (connector J905) through the back of the MDX mobile radio. An empty 16-pin dual-row connector housing which plugs into P2 of the Data Interface Cable is supplied with the Data Interface Cable.

INSTALLATION

**DATA INTERFACE CABLE
INSTALLATION**

1. Remove the four (4) screws on the bottom cover of the radio. Do not misplace the washers used with the screws; they seal the screw holes so the radio will meet the weatherproof specifications.
2. Lift and remove the bottom cover
3. Remove the rubber plug in the slotted option access opening at the rear of radio. This opening is adjacent to the power cable "pigtail". See Figures 1 and 2.
4. Connect the Data Interface Cable to the System Board by plugging 16-pin single-in-line connector P1 to J905 on the System Board. See Figure 1. Connector J905 is a 16-pin connector and pin 14 is the keying pin. Verify P1 pin 1 connects to J905 pin 1.
5. Push the Data Interface Cable strain relief into the slotted option access opening at the back of radio.
6. Replace the radiobottom cover and then re-installed and tighten the four screws (with washers).

Table 1 - 16-Pin Dual-Row Connector Lead Installation

16-PIN DUAL-ROW CONNECTOR* PIN	RDI INTERFACE CABLE LEAD COLOR	MDX SIGNAL NAME	RDI SIGNAL NAME
1	BLACK	A-	GND
5	BROWN	SW A+	A+
6	RED	SERIAL RQST	FSERQT
15	WHITE	DISPLAY SERIAL	FSERRX
16	GREEN	KEYPAD SERIAL	FSERTX

* Plugs to P2 of the Data Interface Cable. Also see Table 2.

RDI INTERFACE CABLE INSTALLATION

1. Insert the RDI Cable's five (5) loose leads (terminated with Molex 39-00-0038 female contacts) into the appropriate holes in the empty 16-pin dual-row connector housing. This connector housing is supplied with the Data Interface Cable. Insert the leads in accordance with Table 1.
2. Any existing options that were wired to the standard Option Cable must now be transferred (rewired) to connect to the Data Interface Cable. Note the wire-to-pin numbers (mark wires if necessary) and then carefully remove each wire from the 14-pin dual-row connector which plugged to P2 on the standard Option Cable. Use extractor tool option ST3712. Alternately, the wires can be cut at the 14-pin dual-row connector and new contacts supplied with the Data Interface Cable can be installed.
3. Install the wires from/to the external options in the same pin-numbered locations on the 16-pin dual-row connector which plugs into P2 of the Data Interface Cable. See Table 2 for details.
4. The MDX mobile radio may need to be PC programmed to handle data calls using the RDI option. If necessary, reprogram the radio. See the MDX maintenance manual and the PC Programming manual and software for details.
5. Plug the 16-pin dual-row connector to P2 of the Data Interface Cable.
6. Attach the RDI Cable DB-9 connector to the RDI radio port connector P3. See the RDI maintenance manual LBI-38335 for specific details. The MDX mobile radio is now ready to communicate with the RDI.
7. Connect the RS-232C device to the RDI serial connector P2. Complete the RS-232C devices installation in accordance with the manufactures instructions. Also see LBI-38335.

Table 2 - Data Interface Cable Connector P2 Pin-Out

PIN	NAME/FUNCTION
1	A-
2	SPEAKER LO
3	SPEAKER HI
4	MIC HI
5	SW A+
6	SERIAL REQUEST (GE-STAR)
7	PTT
8	CG DISABLE
9	SW SPEAKER HI
10	AUDIO MUTE
11	VOLUME-SQUELCH HI
12	MIC LO
13	RELAY
14	SPARE
15	DISPLAY SERIAL
16	KEYPAD SERIAL

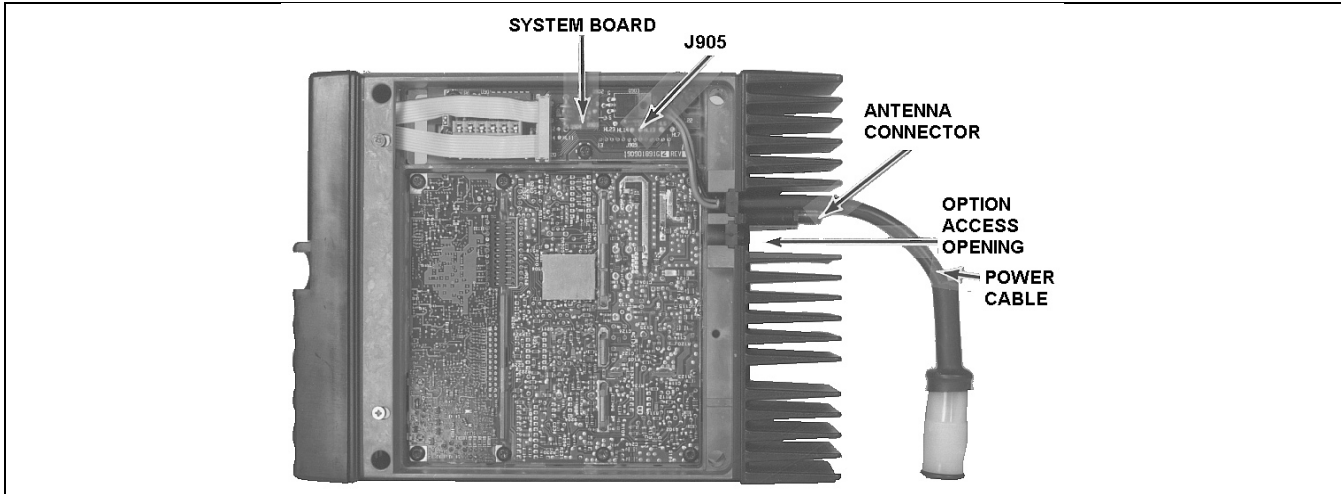


Figure 1 - Bottom View Of MDX With Cover Removed

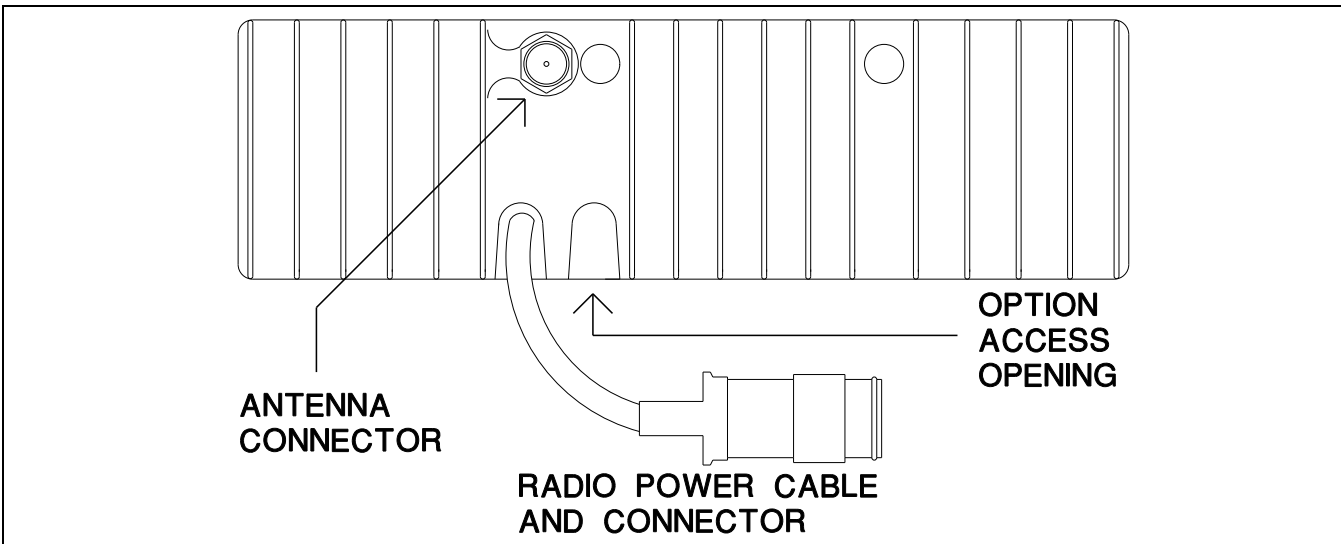


Figure 2 - Back View Of MDX

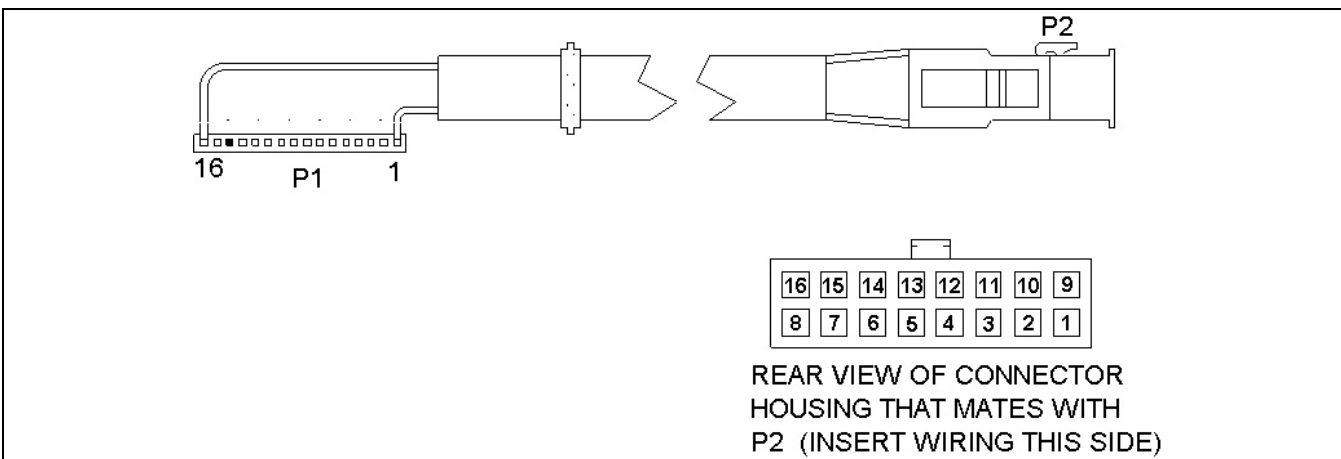
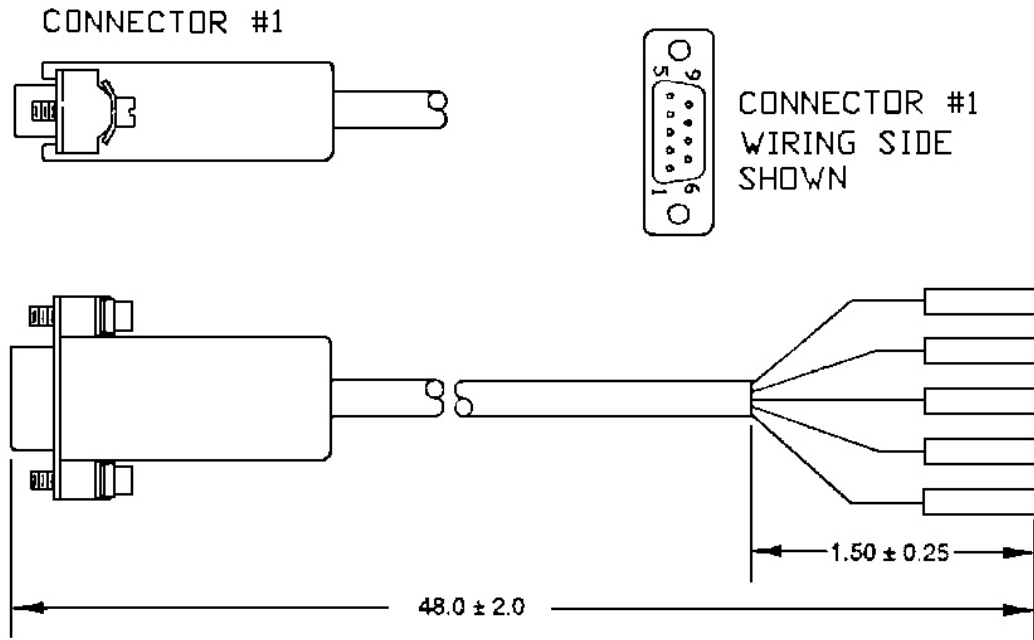
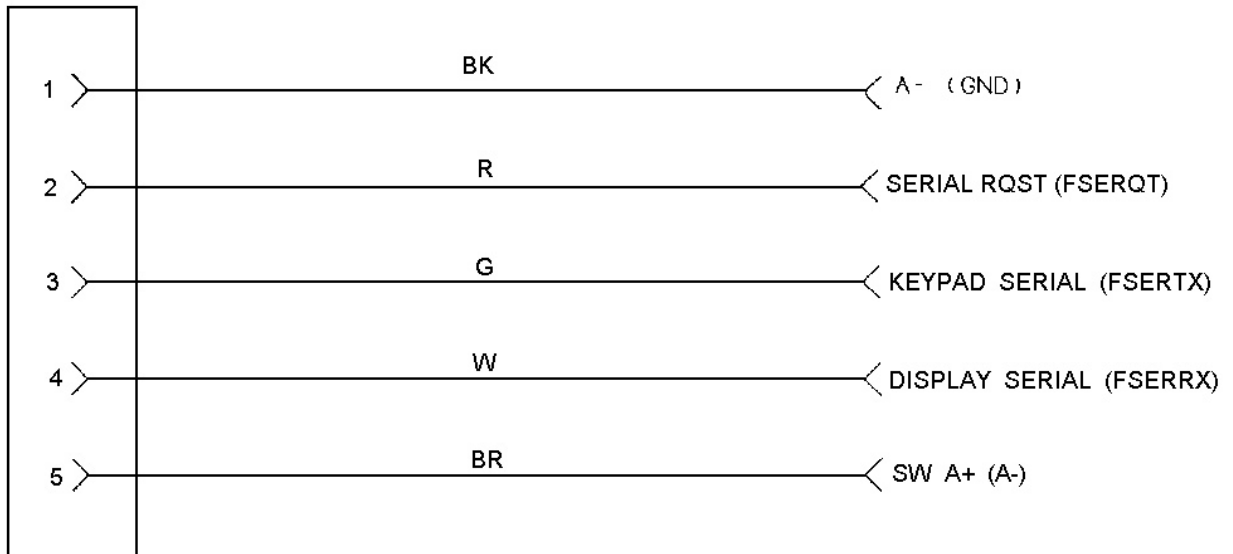


Figure 3 - Data Interface Cable 19C851585P18



(19A705884, Sh. 9, Rev. 7)



(19A705884, Sh. 10, Rev. 7)

Figure 4 - RDI Cable 19A705884P4

Ericsson Inc.
Private Radio Systems
Mountain View Road
Lynchburg, Virginia 24502
1-800-528-7711 (Outside USA, 804-528-7711)

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