

**M/A COM
ORION, J725M and M7100 Mobile Radios to
223 Series Adapter Panels**

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M/A-COM

ORION, 725M and M7100 Mobile Radios to 223 Series Adapter Panels

1.0 General

This application note is intended to assist technical staff with cable assembly and setup the hardware of different 223 series adaptor panels (TRA-223, DSP-223 and IP-223) to an M/A-COM ORION series mobile radio.

NOTE: This application note only supports control on a dedicated radio channel.

2.0 Interconnect Cable assembly

A cable assembly is required to connect to the 37-pin accessory connector of the ORION to the various 223 Series adaptor panels. Use the following chart to manufacture this cable assembly.

TABLE 1. Interconnect Cable Assembly

TRA-223 DB-25 Pin	DSP-223 DB-25 Pin	IP-223 DB-25 Pin	ORION 37-Pin	Signal
25	25	25	11	MIC+
24	24	24	13	RX+
14	14	14	23	PTT
7	7	7	7	GND
10	10	20	22	COR

3.0 223 Series panels

3.1 TRA-223 Setup

If **COR** (Carrier Operated Relay) control is used, pin 10 must be configured to support this feature.

REFERENCE: For more information, see the TRA-223 Technical Manual (P/N 803570), for pin 10 configuration.

3.1.1 TRA-223 Dip Switch settings

Set the front panel dip switch for the following settings:

Positions 4, 6 and 7 on,

Positions 1, 2 and 3 are for selecting 2- or 4-Wire operation.

REFERENCE: For more information, see the TRA-223 technical manual for configuration details.

3.2 DSP-223 Setup

The Dig4 Input COR Setup window, shown in Figure 1, is used to enable the Dig4 as COR Input.

To **enable Dig4 as COR Input**, do the following:

1. Open the **DSP-223 Configuration Application**.
The DSP-223 Configuration Application window appears.
2. Click **Dig4 Setup**.
The Dig4 Input COR Setup window appears.
3. Select the **Enable Dig4 COR Input** check box.

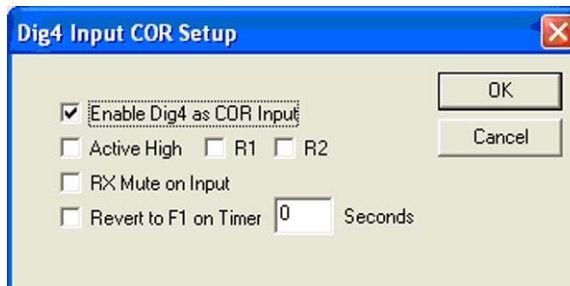


FIGURE 1. DSP-223 COR Setup

3.2.1 DSP-223 Jumper Settings

To set the **DSP-223 Jumpers**, do the following:

1. Set to the **A position**:
 - J14, J15, J22, J23, J24, J25, J27.
2. Set to the **B position**:
 - J12 and J13.
3. Solder close **JP2**.
4. For selecting **2- or 4- wire operation**:
 - J19, J20 and J21.

REFERENCE: For more information, see the DSP-223 Technical Manual (P/N 803274), DSP to Console Line Connection section. This document is available for download at www.telex.com/Downloads/.

3.3 IP-223 Setup

The IP-223 configuration is accomplished in the Telex System Manager application. Set up the desired IP-223 lines for local radio control, enable COR and set the jumpers.

REFERENCE: For more information, see the Telex System Manager Technical Manual (P/N LIT000259000). This document is available for download at www.telex.com/Downloads/.

3.3.1 IP-223 Software Setup

Navigation: Open Telex System Manager.

To **configure the IP-223 for Local control**, do the following:

1. In the Processed Devices pane, select the **IP-223** to configure.
2. Click the **Multicast** tab.
The Multicast page appears.
3. Select the **Enable** check box for the line to configure.
4. From the Type drop down menu, select **Local**.
5. In the Line Name field, enter **a name** for the line.
6. In the Rx Multicast Address field, enter the **Rx Multicast Address**.
7. In the Port field, enter the **port number** for receive audio.
8. In the Tx Multicast Address field, enter the **Tx Multicast Address**.
9. In the Port field, enter the **port number** to transmit audio.

To **configure COR setup**, do the following:

1. While in TSM, click the **Options** tab.
The Options page appears.
2. Select the **COR Enabled** check box.
3. Clear the **LAM Enabled** check box.
4. Clear the **COR Active High** check box.

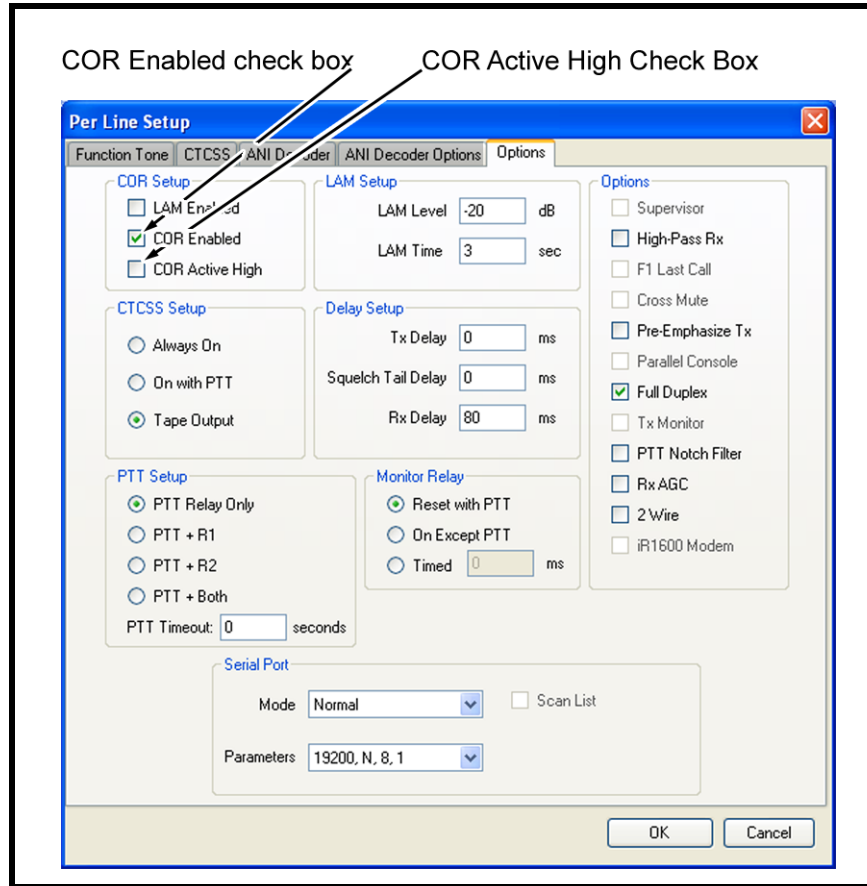


FIGURE 2. Per Line Setup—Options Page

3.3.2 IP-223 Jumper Settings

TABLE 2. IP-223 Jumper Settings

Line 1	Jumper Setting	Line 2
J33, J34	B = 4-Wire	J5, J6
J16, J21	A = Single Ended	J19, J20
J14	Hanging on center pin = 10K Ohm	J24
J3., J9, J11	A = Single Ended	J25, J28, J29
J13	A = Low	J27
J17, J22	B = 600 Ohms	J10, J15
R377	Solder Bridge pads together	R381

3.4 ORION Radio Setup

To program the Orion radio's AUX and COR, do the following:

1. Open the **Orion radio configuration software**.
2. Click the **Options** tab.
The Options page appears.
3. Select **External I/O Options**.
The External I/O window appears.
4. From the Auxiliary Input 2 Keycode drop down menu, select **PTT**.
5. Select the **External Mute** check box.
The external mute is enabled.
6. From the External Mute Output drop down menu, select **1**.
7. From the External Mute Active drop down menu, select **Low**.

Revision History		
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Document Number: AN-DISPATCH-032		
Revision	Change Description	Date
A	Update brand, format and new document number (From rev A).	01-OCT-2009

Suggestions or comments:

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