

**Motorola
MCS-2000 Radios to
223 Series Adapter Panels**



Table of Contents

1.0 General	3
2.0 Interconnect Cable Assembly	3
3.0 223 Series Adapter Panels	4
3.1 TRA-223 Setup	4
3.1.1 TRA-223 Dip Switch Settings	4
3.2 DSP-223 Setup	4
3.2.1 DSP-223 Jumper Settings	4
3.3 IP-223 Setup	5
3.3.1 IP-223 Jumper Settings	5

Motorola MCS-2000 Radios to 223 Series Adaptor Panels

1.0 General

This application note is intended to show how to assemble a cable and set up the hardware of the different 223 series adapter panels (TRA-223, DSP-223, and IP-223) to a Motorola MCS-2000 Series mobile radio.

2.0 Interconnect Cable Assembly

A cable assembly is required to connect to the 25-pin accessory connector of the MCS to the various 223 Series adapter panels.

Use the following chart to make this interconnect cable assembly.

TABLE 1. Interconnect Cable Assembly Pin Out

TRA-223 DB-25 Pin	DSP-223 DB-25 Pin	IP-223 Series DB-25 Pin	MCS-2000 DB-25 Pin	Signal
25	25	25	23	MIC +
24	24	24	11	RX+
14	14	14	21	PTT
7	7	7	10	GND
10	10	20	22	COR

3.0 223 Series Adapter Panels

3.1 TRA-223 Setup

3.1.1 TRA-223 Dip Switch Settings

Set the TRA-223 dip switches as shown in Table 2.

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

TABLE 2. Front Panel Dip Switch - TRA-223

Switch	Setting	Signal
1	As appropriate	2-Wire = On 4-Wire = Off
2	As appropriate	4-Wire = On 2-Wire = Off
3	As appropriate	Full-Duplex = On Half-Duplex = Off
4	On	Squelch
5	Off	Radio Rx Level On = Speaker Off = High impedance
6	On	Radio Tx Level On = Low Level Off = High Level
7	On	Ground on PTT Relay Common
8	Off	Ground on Monitor Relay Common

3.2 DSP-223 Setup

No software programming is required.

3.2.1 DSP-223 Jumper Settings

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

1. Set the following jumpers to the **A position**:
 - J14, J15, J22, J23, J24, J25 and J27.
2. Set the following jumpers to **B position**:
 - J12 and J13.
3. Solder close **JP2**.
4. For **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 Connection section.

3.3 IP-223 Setup

Set the IP-223 jumpers as shown in Table 3.

3.3.1 IP-223 Jumper Settings

TABLE 3. 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 = 10 Ohm	J24
J3, J9, J11	A = Single Ended	J25, J28, J29
J13	B = High	J27
J17, J22	B = 600 Ohms	J10, J15
R377	Solder bridge the pads together	R381

Revision History		
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Suggestions or comments:

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