Model MCE325
Programmable User Station

2 Channel, 4 Wire ADAM Interconnect

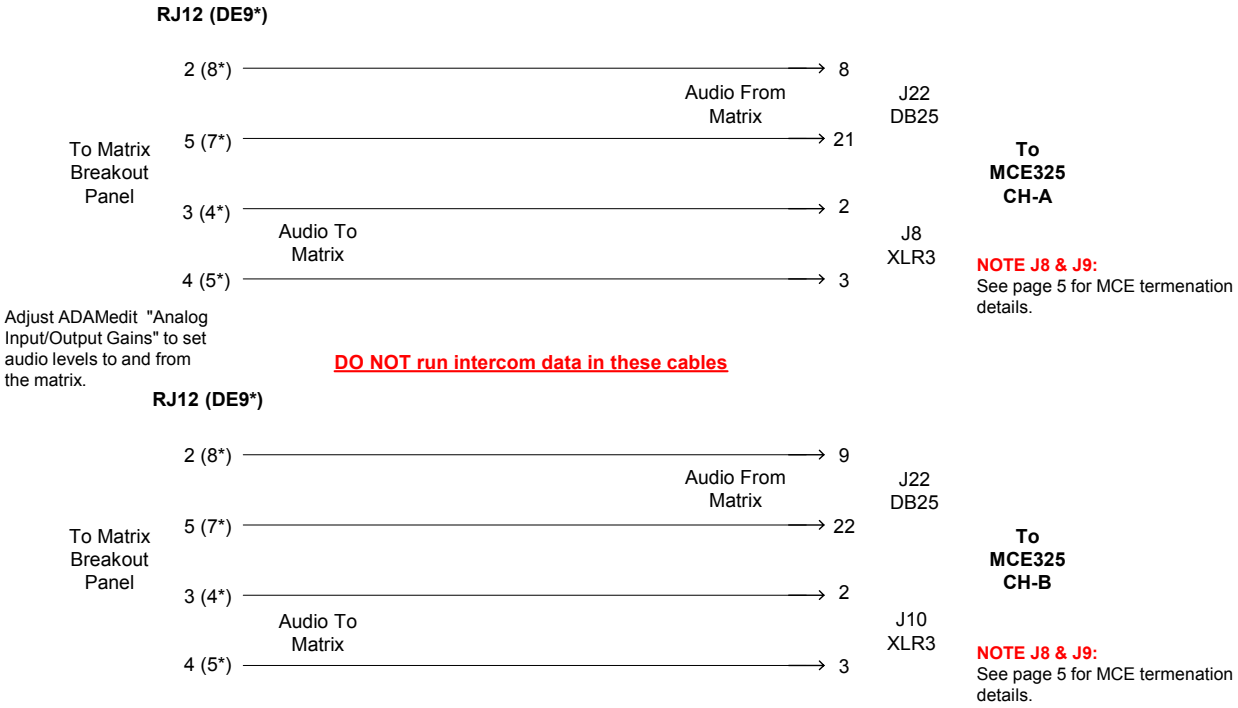
TW INTERCOM SYSTEM

Telex Communications, Inc.

Rev 5-27-04

MCE 4 Wire.DOC

ADAM Cable Interconnect Diagram



NOTE:
See Figure 1.6 below for panel button layout layout and page 3 for DIP switch reference.

Also refer to Table 2.3, on page 4, Configuration 6 for 4 wire DIP switch and jumper settings. See page 6 for locations.

* Denotes 9 pin male sub-D connector

Figure 1.6 Standard two-channel, four wire configuration.

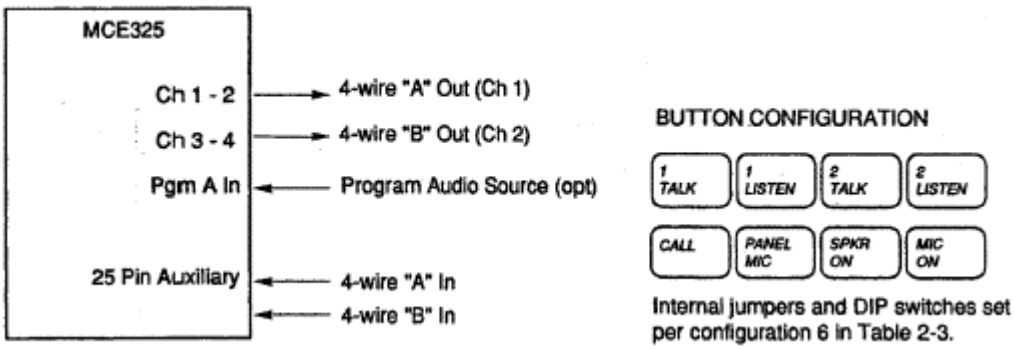
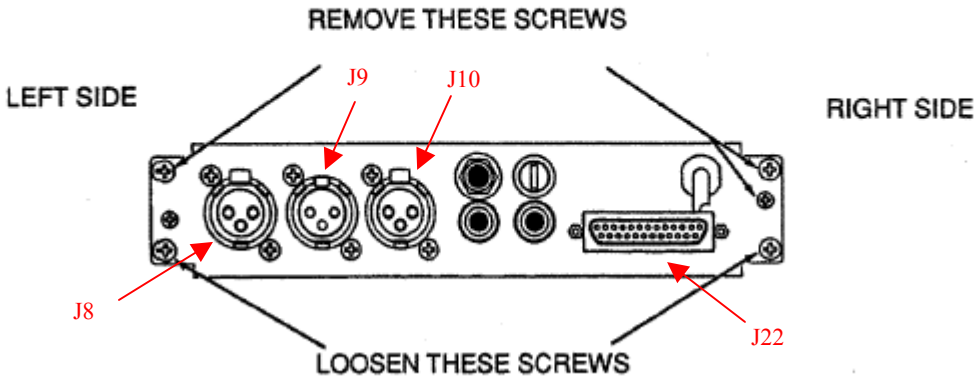


Figure 2.1 Top cover removal.

WARNING: DISCONNECT AC POWER BEFORE OPENING UNIT.



Intercom Line-Channel Configurations (DS1-DS3, J6, J7, J19 & J20)

The four channels of the MCE325 may be assigned to intercom lines in a variety of ways. Channel assignment is determined by the settings of DIP switches DS1 through DS3 and jumpers J6, J7, J19, and J20. There are six possible intercom line configurations. These are listed in Table 2.3 together with the proper DIP switch and jumper settings for each.

Table 2.1 DIP switch functions and default settings.

Switch Number	Switch Function	Default Setting	
DS1	four-wire CH A output not installed (off), four-wire CH A output installed (on)	Off	On
DS2	four-wire CH B output not installed (off), four-wire CH B output installed (on)	Off	On
DS3	two-channel mode (off)*, four-channel mode (on)	Off	On
DS4	Front panel setup lock-out disabled (off), Front panel setup lock-out enabled (on)	Off	
DS5	Listen and talk muted during ISO (off), Talk only muted during ISO (on)	Off	
DS6	Not used	Off	
DS7	Talk-off transmit disabled (off), Talk-off transmit enabled (on)	On	
DS8	VOX disabled (off), VOX enabled (on)	Off	

4 Wire

NOTE The terms "two-channel mode" and "four-channel mode" apply only to two-wire lines. In two-channel mode, each two-wire line uses two channel selector buttons: one for talk and one for listen. In four-channel mode, each two-wire line uses one channel selector button for both talk and listen.

The two-channel mode should be selected under only two circumstances.

1. When one or two two-wire lines are connected to channels one and two only.
2. When a two-wire line is connected to channel one and a four-wire line is connected to channel B.

For all other intercom line configurations that use two-wire lines, DS3 must be set to the "on" position for four-channel operation.

Table 2.3 Internal programming for the various intercom line configurations.

DIP SWITCHES			JUMPERS			
DS1	DS2	DS3	J6	J7	J19	J20
Configuration 1: Two 2-wire lines (CH 1& CH 2). (Default configuration.)						
Off	Off	Off	Pins 2 & 3 shorted	Pins 2 & 3 shorted	Pins 2 & 3 shorted	Pins 2 & 3 shorted
Configuration 2: Three or four 2-wire lines (CH 1, CH 2, CH 3, CH 4).						
Off	Off	On	Pins 2 & 3 shorted	Pins 2 & 3 shorted	Pins 2 & 3 shorted	Pins 2 & 3 shorted
Configuration 3: One 2-wire line (CH 1); One 4-wire line (CH B).						
Off	On	Off	Pins 2 & 3 shorted	Pins 1 & 2 shorted	Pins 2 & 3 shorted	Pins 1 & 2 shorted
Configuration 4: Two 2-wire lines (CH1 & CH2); One 4-wire line (CH B).						
Off	On	On	Pins 2 & 3 shorted	Pins 1 & 2 shorted	Pins 2 & 3 shorted	Pins 1 & 2 shorted
Configuration 5: Two 2-wire lines (CH 3 & CH4); One 4-wire line (CH A).						
On	Off	On	Pins 1 & 2 shorted	Pins 2 & 3 shorted	Pins 1 & 2 shorted	Pins 2 & 3 shorted
Configuration 6: Two 4-wire lines (CH A & CH B).						
On	On	On	Pins 1 & 2 shorted	Pins 1 & 2 shorted	Pins 1 & 2 shorted	Pins 1 & 2 shorted

6

NOTE See Table 3.1for a summary of how the channel selector buttons work for the various configurations. The MCE325 is typically supplied with a termination plug inserted into J10. This plug terminates CH 3 and CH 4 with 200 ohms to prevent oscillation when these channels are not used. When the channels are used, this termination plug should be removed.

Intercom Lines J8, J9, and J10

General

Intercom line connectors J8 and J9 are parallel-wired for loop-through connection to other intercom stations. These connectors are used for connection of two-wire lines to channels one and two (full-duplex operation), or for connection of four-wire channel A output (channel A input is connected at the auxiliary connector).

Intercom line connector J10 is used for connection of two-wire lines to channels three and four (full-duplex operation), or for connection of four-wire channel B output (channel B input is connected at the auxiliary connector).

When four-wire outputs are used, termination resistors must be installed for proper operation. The output amplifiers are current sources, and the output level is determined by the terminating

resistor values. These resistors would normally be installed in the cable connector, but may be placed at any point in the signal path. Recommended values are shown in X.

Connector Pin-outs

Table 2.4 Connectors J8 and J9.

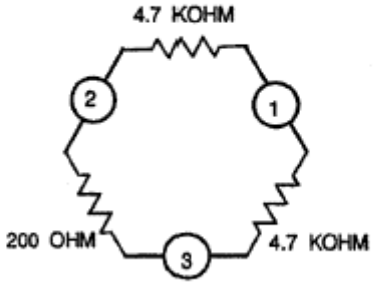
PIN #	FUNCTION
1	Common (low side of line)
2	Two-wire CH 1 or four-wire CH A high output
3	Two-wire CH 2 or four-wire CH A low output

Table 2.5 Connection J10

PIN #	FUNCTION
1	Common (low side of line)
2	Two-wire CH 3 or four-wire CH B high output
3	Two-wire CH 4 or four-wire CH B low output

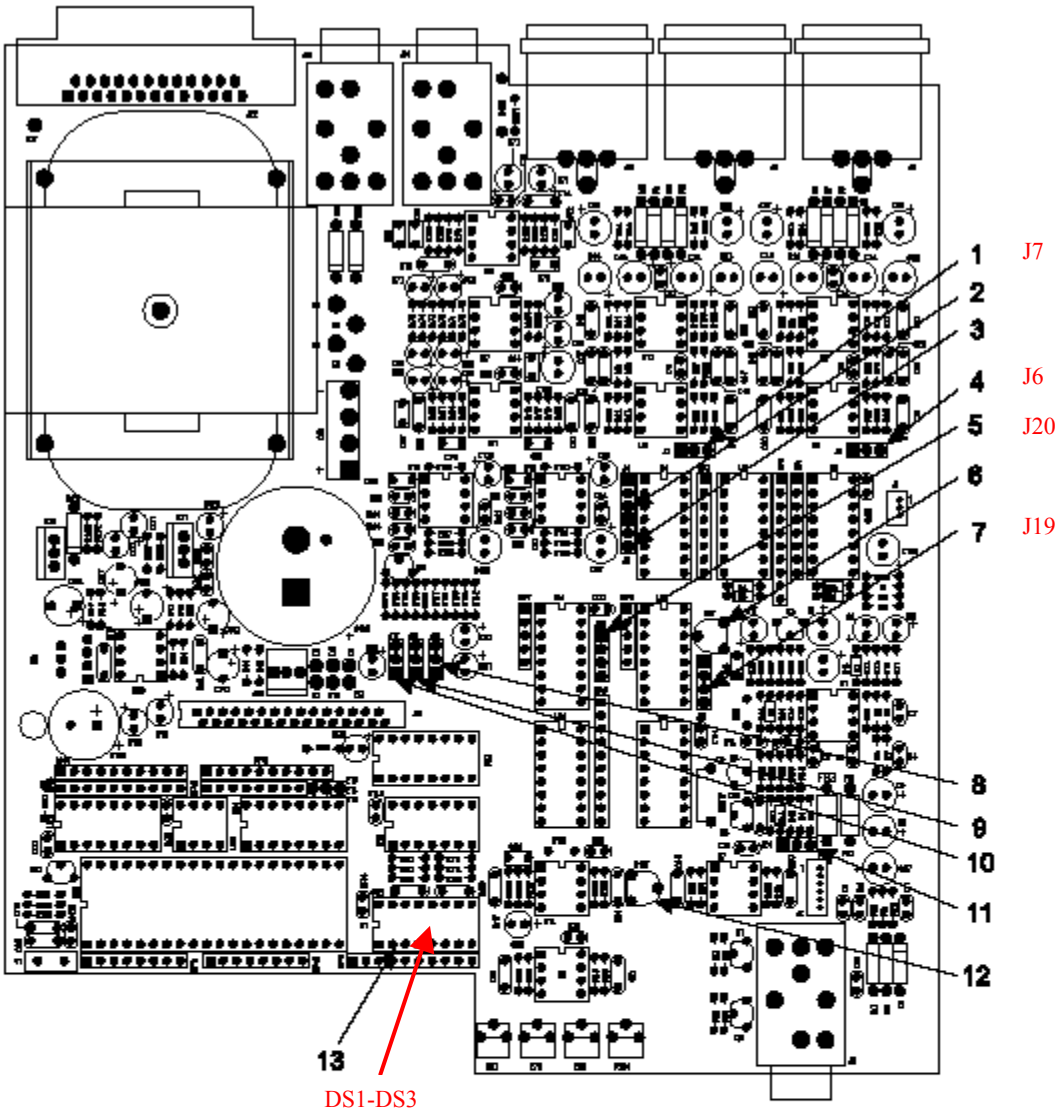
Four-wire Output Termination

Figure 2.4 4-wire output terminations.



XLR Male Connectors for MCE-325 J8 & J10

Figure 2.2 Internal DIP switches, jumpers and level trimmers.



1. J7, Intercom Line-Channel Configurations
2. J4, Program Assignment - IFB Option
3. J5, Program Assignment - IFB Option
4. J6, Intercom Line-Channel Configurations
5. J20, Intercom Line-Channel Configurations
6. R37, Headphone Sidetone Trimmer Adjustment
7. J19, Intercom Line-Channel Configurations
8. J16, Program Assignment - IFB Option
9. J18, Program Assignment - IFB Option
10. J17, Program Assignment - IFB Option
11. J24, Balanced/Unbalanced Dynamic Microphone Selection
12. R157, Speaker Dim Adjustment
13. DS1 Through DS3, Intercom Line-Channel Configurations
13. DS4, Front Panel Setup Mode Lock-out
13. DS5, ISO
13. DS7, Remote Talk-Off
13. DS8, VOX