508 SERIES MICROPHONE STATIONS

GENERAL DESCRIPTION

The IED 508 Series microphone stations utilize either a two or three layer stacked printed circuit board design in which, with the exception of the desktop stations and the 508I/O boards used with the 508BIO type stations. All connections are made to the rear printed circuit board through plug-in compression type screw terminal connectors. The desktop stations utilize one male and one female rear mounted XLR connector.

The connections can be classified in four groups, control and power, audio output, expansion, and logic.

The control and power connections consist of the +30 VDC power input with the modulated control signal. This connection is accomplished through a 3 position plug-in compression type screw terminal connector.

The +30 V power supply voltage to the microphone station can be checked at the Control terminals of the microphone station. If the Control input is not connected, the voltage should read between +29 VDC and +31 VDC when measured between the '+' and 'S' terminals, and between the '–' and 'S' terminals. If the microphone station is connected, the voltage measured should be between +28 VDC and +31 VDC.

The normal audio 'Station Output' is connected to the 500M/ME Mainframe in one of two ways: 1. Without local backup capability, the audio 'Station Output' is wired using a 3-position plug-in screw terminal connector connected to the 'Station Output' terminals. 2. When local output capability is used, the 'Station Output' is connected to 3 positions of a 9-position plug-in compression type screw terminal connector. The other six connections which are employed when operating in the 'Local' mode are used to route audio to/from the next/previous microphone stations in that local group. To operate in the 'Local' mode, RS422 connections must be made to/from the next/previous microphone stations in that local group using 9-position plug-in compression type screw terminal connectors.

Expansion station connections utilize another 6 position plug-in compression type screw terminal connector. One shielded twisted pair, Belden 8451 or equivalent, is used for the audio connection. A single twisted pair is used for the switch and power connections. A shielded twisted pair is recommended, but not mandatory.

The power supply voltage can be measured at the expansion microphone station between the +15 V and Ground terminals to verify proper voltage to the expansion station. The voltage should be between +14 VDC and +15.5 VDC.

Each of the 508 Series microphone station types can interface with IED's 500ACS™, 8000 Series TIPS™, and 2000 Series UDAPS™ systems. A diagram is provided for connecting each microphone station type to each series of system. The connection diagrams are generic and may not be an exact representation of the particular system which is being installed. Exact wiring diagrams accompany each system which is shipped as part of the system rack layout. Locate the microphone station type and the system to which it is being connected in Table 1. The location of the wiring diagram will be indicated.

IED®
Innovative Electronic Designs

There are no user adjustments on these microphone stations. All adjustments are preset at the factory for optimum performance when used with IED systems. Do not change settings or attempt to service this equipment without consulting with the factory. Doing so may void the warranty.

SETUP PROCEDURE

Once the system components are in place and properly connected, the software setup of the microphone stations must be performed.

Before Attempting Setup, with the system powered up observe the microphone station display. If it reads "***ENTRY CODE_____",** this means that the 590 software setup does not have that microphone station setup as a 5.x or later revision. Go to microphone station setup in the 590 Toolset software.

If changing EPROMS, 508 EPROM version 5.0 can only be installed in microphone stations used in a system with 590 software Revision 4.99x or later and 500ACS software Revision 4.27b or later.

When changing a 508 microphone station EPROM to Revision. 5.0 and later**,** the following setup procedure must be completed.

SETUP FROM KEYPAD

Simultaneously press and release **"1" "3" "Shift"** and **"Enter"** (4 corners). Display Reads> **KEYPAD=_____**(will read either **HOR** or **VERT**) **PRESS ANNC (0).** Orientation will automatically adjust.

Simultaneously press and release **"7"** and **"9"**. Display reads> **MIC=_____** (will read either **HANDHELD** or **GOOSENECK**). If this is correct for this station press **"Enter."** If not correct press **"Shift"** to change the type of microphone and then press **"Enter."**

Enter **"993,"** Then while holding down the **"Enter"** key, press the **"Shift"** key. Display reads> **ENTER IF GREEN/SHIFT IF RED.** If the green Ready LED is lit, press **"Enter."** If the Red Busy LED is lit, press **"Shift"** and then press **"Enter."** The green Ready Led must be lit before pressing **"Enter."**

Enter **"994,"** Then while holding down the **"Enter"** key, press the **"Shift"** key. Display reads> **OSC BOARD_____**(will read either **508A** or **508H/V**)**. 508A** is an older version with the keypad sticking up approximately ½ inch. **508H/V** is the newer model with a low profile keypad. Press **"Shift"** to display the correct version and then press **"Enter."**

Enter **"995,"** Then while holding down the **"Enter"** key, press the **"Shift"** key. Display reads> **SER LINK_____**(will read either **ASC** or **422**)**.** If microphone station is connected by RS422, select 422 by pressing the **"Shift"** key and press **"Enter."** If the microphone station is connected directly to the ACS control input with a single shielded pair, select ACS by pressing the **"Shift"** key and then press **"Enter."**

If **FAS** is used and requires the airline name on the second line of the display, it can be entered from the microphone station by pressing **"9999"** and then press **"Enter."** A prompt will request an airline code. Enter the airline code and then press **"Enter."** A prompt requests the airline password. Enter airline password and then press **"Enter"**. If there was an airline name in the display, the new airline name will replace it. If there was no airline name in the display, the display will read "508 Setup Active". The airline infor-

mation will be downloaded from the ACS, taking approximately a minute. When the download is complete, the airline name will appear in the display.

Alternatively, the airline name may be entered from the 590 Toolset software. If this is done, when you click “Apply” or “OK” in the 590 Toolset software, you will override the entry made from the microphone station.

Enter **“996,”** Then while holding down the **“Enter”** key, press the **“Shift”** key. Release keys. Display reads**> 508 SETUP ACTIVE** and the red Busy LED is flashing. The microphone station is now loading setup information from the ACS. Setup requires about 45 seconds to load.

OTHER KEYPAD FUNCTIONS

Identify EPROM Revision

Simultaneously press and hold **“4”** and **“6.”** Display reads current EPROM Revision and Date.

Use Internal Oscillator for Testing

Enter **“997,”** Then while holding down the **“Enter”** key, press the **“Shift”** key. Release the keys. The Display reads **“OSCILLATOR TEST/PRESS 1 and 3”.** The oscillator is now on for feeding the test tone from the output of the microphone station to the signal input of the ACS. It does not route the test tone through the ACS. Simultaneously press **“1”** and **“3”** to turn off oscillator and exit.

Self Test

Enter **“998,”** Then while holding down the **“Enter”** key, press the **“Shift”** key. Release keys. This puts the station into self test mode. The top left displays> SW__. This is for testing each keypad button. Push each button and verify response. Press and hold microphone station switch (if handheld) to pause test. Simultaneously press **“1”** and **“3”** to stop test and exit.

Locking Keypad

Enter **“999,”** Then while holding down the **“Enter”** key, press the **“Shift”** key. Release keys. Display reads> **KEYPAD LOCKED** (keypad and microphonewitch are locked out). Simultaneously press **“1”** and **“3”** to unlock.

508T SETUP

The 508T has an input for a closure from the phone equipment. This closure, when connected to ground, will activate an off hook condition in the 508T. This closure must be maintained for the duration of the Page. Once the page is completed and the operator hangs up the phone the ground is removed from this input and the 508T will terminate the Page without the need to press the asterisk key (*) on the Keypad.

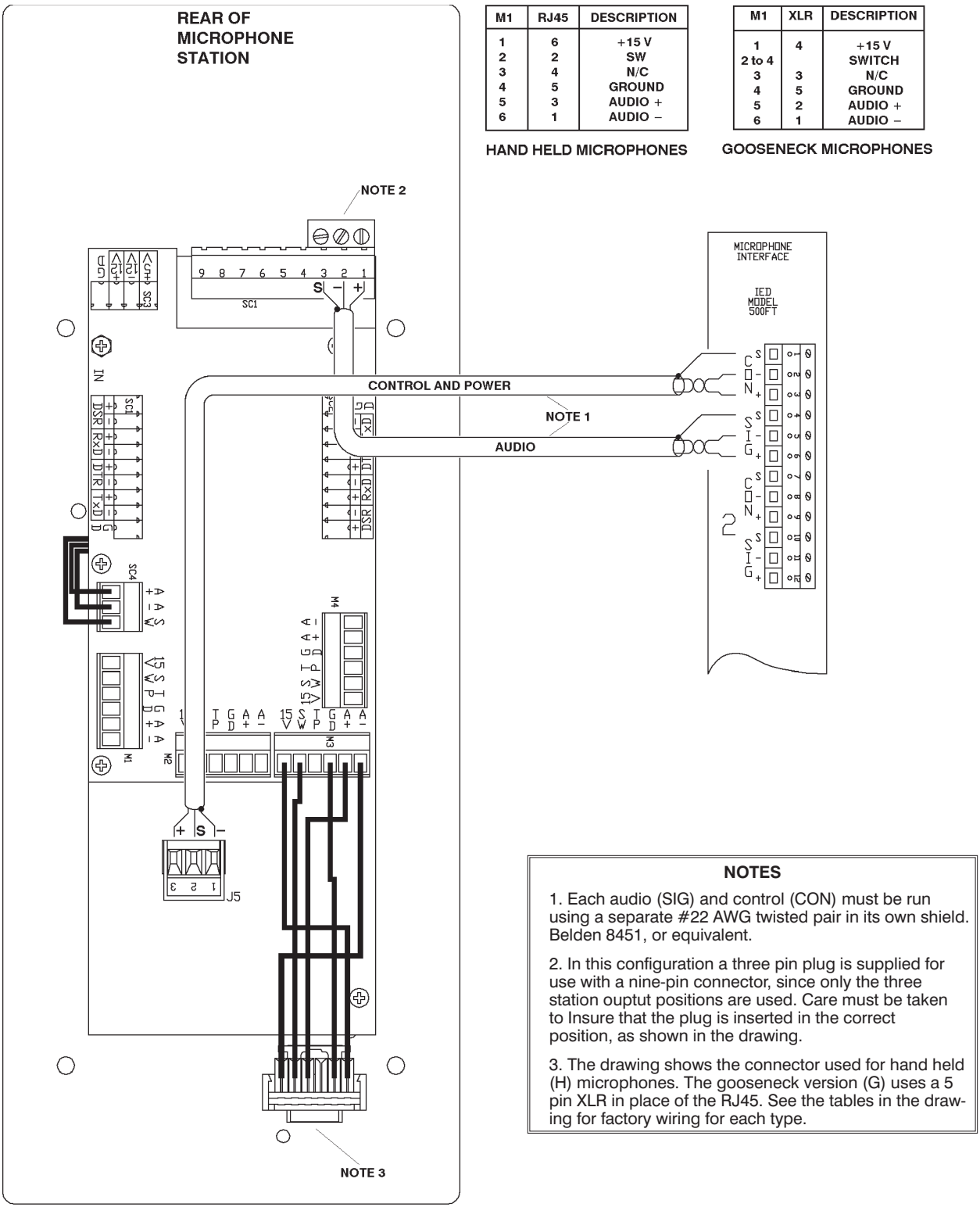
The Jumper, J1, is used to select the number of rings the 508T will require before it responds. With the jumper in the open position (not shorted) the 508T will require 4 rings from the phone equipment in order to respond. With the jumper in the closed (shorted) position the 508T will respond after 1 ring from the phone equipment. The variable resistor RT4 (Ringer Sensitivity) may have to be adjusted if the 508T does not respond in the proper number of rings or not at all. Clockwise rotation of the pot increases the sensitivity. See figures 24, 25, and 26.

IED®
Innovative Electronic Designs

MICROPHONE STATION TYPE	SYSTEM SERIES OR EXPANSION STATION	DIAGRAM 3 PIN		DIAGRAM 9 PIN	
		FIGURE	PAGE	FIGURE	PAGE
508VFM-H/G	500ACS™	1	5	2	6
508VFM-H/G	2000 Series UDAPS™	3	7	4	8
508VFM-H/G	8000 Series TIPS™	5	9	6	10
508HFM-H/G	500ACS™	7	11	8	12
508HFM-H/G	2000 Series UDAPS™	9	13	10	14
508HFM-H/G	8000 Series TIPS™	11	15	12	16
508LD-H	500ACS™	1	5	2	6
508LD-H	2000 Series UDAPS™	3	7	4	8
508LD-H	8000 Series TIPS™	5	9	6	10
508DT-H/G	500ACS™	17	21	N/A	N/A
508DT-H/G	2000 Series UDAPS™	18	22	N/A	N/A
508DT-H/G	8000 Series TIPS™	19	23	N/A	N/A
508HFM-H	500FME-H	20	24	N/A	N/A
508HFM-H	500LDE-H	21	25	N/A	N/A
508VFM-H	500FME-H	20	24	N/A	N/A
508VFM-H	500LDE-H	21	25	N/A	N/A
508LD-H	500FME-H	20	24	N/A	N/A
508LD-H	500LDE-H	21	25	N/A	N/A
508RM	500ACS™	1	5	2	6
508RM	2000 Series UDAPS™	3	7	4	8
508RM	8000 Series TIPS™	5	9	6	10
508RMIO	500ACS™	1	5	2	6
508RMIO	2000 Series UDAPS™	3	7	4	8
508RMIO	8000 Series TIPS™	5	9	6	10
508SRM	500ACS™	13	17	N/A	N/A
508SRM	2000 Series UDAPS™	14	18	N/A	N/A
508SRM	8000 Series TIPS™	15	19	N/A	N/A
508SRMIO	500ACS™	13	17	N/A	N/A
508SRMIO	2000 Series UDAPS™	14	18	N/A	N/A
508SRMIO	8000 Series TIPS™	15	19	N/A	N/A
508BIO		22	26	N/A	N/A
508T	500ACS™	24	28	N/A	N/A
508T	2000 Series UDAPS™	25	29	N/A	N/A
508T	8000 Series TIPS™	26	30	N/A	N/A
508T4	500ACS™	27	31	N/A	N/A
508T4	2000 Series UDAPS™	28	32	N/A	N/A
508T4	8000 Series TIPS™	29	33	N/A	N/A
508BIO4	500ACS™	30	34	N/A	N/A

Table 1 - Wiring Diagram Locator

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com



M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

NOTES

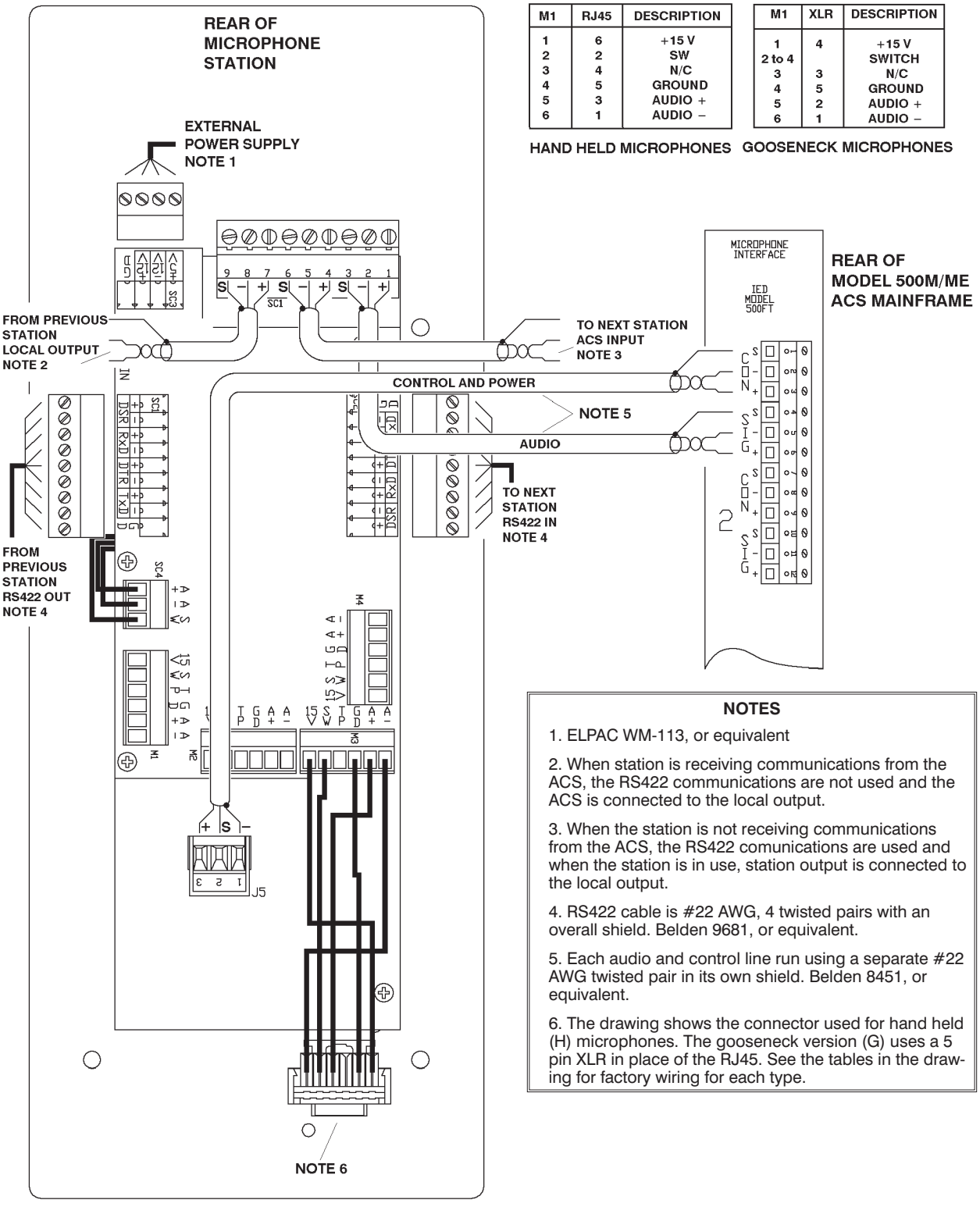
1. Each audio (SIG) and control (CON) must be run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

2. In this configuration a three pin plug is supplied for use with a nine-pin connector, since only the three station ouptut positions are used. Care must be taken to Insure that the plug is inserted in the correct position, as shown in the drawing.

3. The drawing shows the connector used for hand held (H) microphones. The gooseneck version (G) uses a 5 pin XLR in place of the RJ45. See the tables in the drawing for factory wiring for each type.

Figure 1 - Interconnection Diagram
508VFM-H/G, 508LD-H, 508RM/RMIO-H/G to 500ACS

IED®
Innovative Electronic Designs



M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

NOTES

1. ELPAC WM-113, or equivalent
2. When station is receiving communications from the ACS, the RS422 communications are not used and the ACS is connected to the local output.
3. When the station is not receiving communications from the ACS, the RS422 comunications are used and when the station is in use, station output is connected to the local output.
4. RS422 cable is #22 AWG, 4 twisted pairs with an overall shield. Belden 9681, or equivalent.
5. Each audio and control line run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.
6. The drawing shows the connector used for hand held (H) microphones. The gooseneck version (G) uses a 5 pin XLR in place of the RJ45. See the tables in the drawing for factory wiring for each type.

Figure 2 - Interconnection Diagram
508VFM-H/G, 508LD-H, 508RM/RMIO-H/G to 500ACS with RS422 and Local Backup

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com

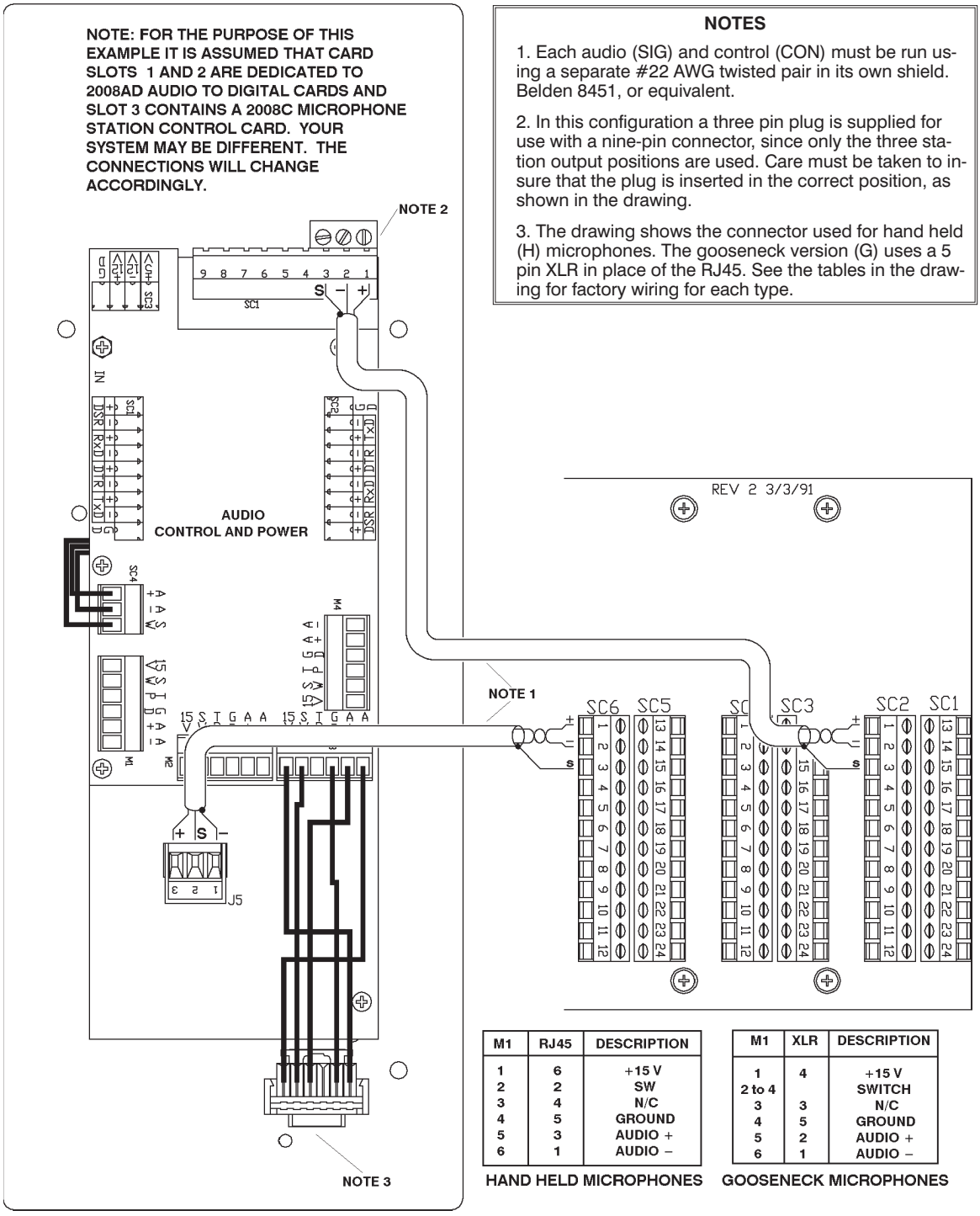
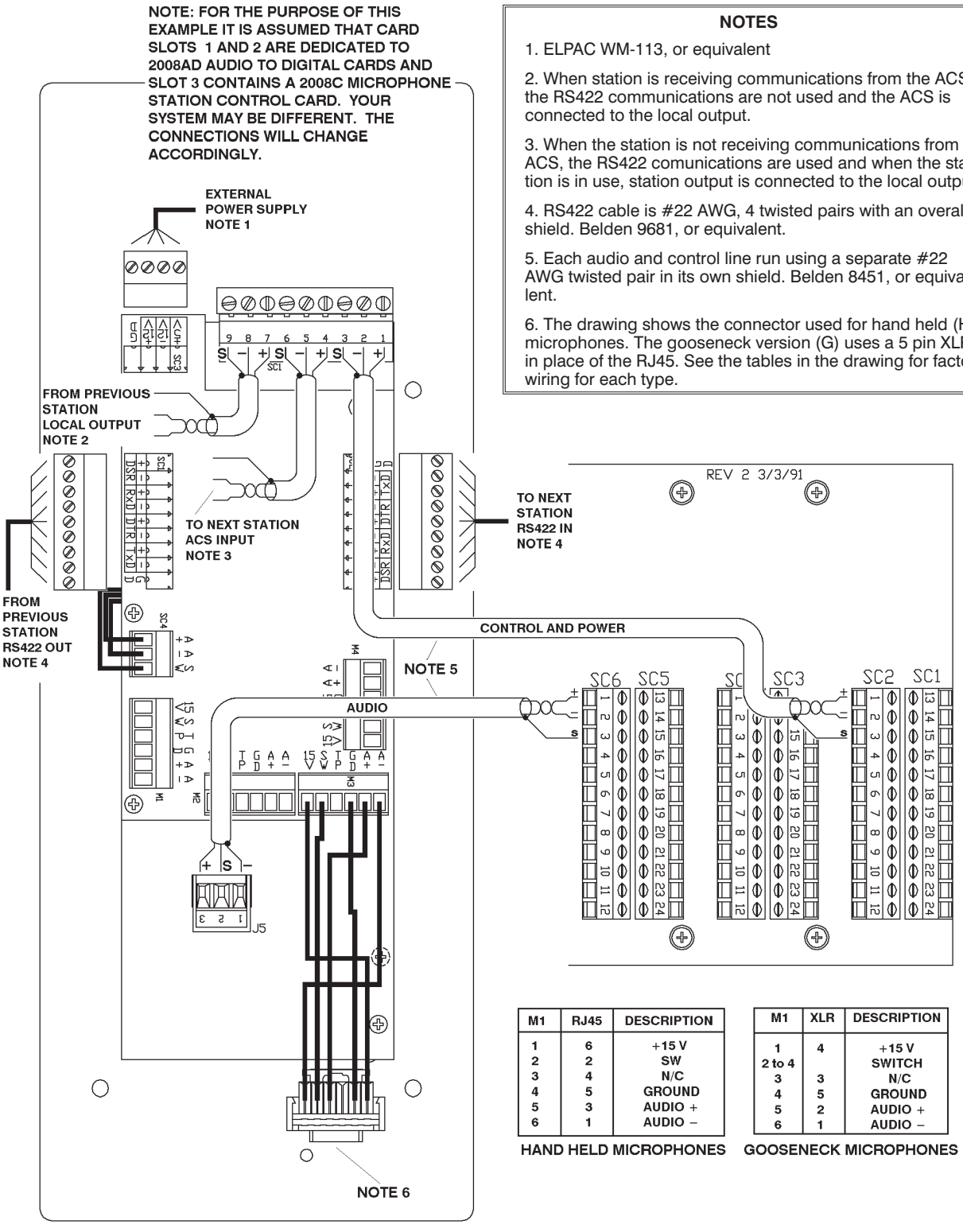


Figure 3 - Interconnection Diagram
508VFM-H/G, 508LD-H, 508RM/RMIO-H/G to 2000 Series UDAPS™

IED®
Innovative Electronic Designs



NOTES

1. ELPAC WM-113, or equivalent
2. When station is receiving communications from the ACS, the RS422 communications are not used and the ACS is connected to the local output.
3. When the station is not receiving communications from the ACS, the RS422 comunications are used and when the station is in use, station output is connected to the local output.
4. RS422 cable is #22 AWG, 4 twisted pairs with an overall shield. Belden 9681, or equivalent.
5. Each audio and control line run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.
6. The drawing shows the connector used for hand held (H) microphones. The gooseneck version (G) uses a 5 pin XLR in place of the RJ45. See the tables in the drawing for factory wiring for each type.

M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

Figure 4 - Interconnection Diagram
508VFM-H/G, 508LD-H, 508RM/RMIO-H/G to 2000 Series UDAPS™ with RS422 and Local Backup

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com

NOTES

1. Each audio (SIG) and control (CON) must be run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

2. In this configuration a three pin plug is supplied for use with a nine-pin connector, since only the three station output positions are used. Care must be taken to insure that the plug is inserted in the correct position, as shown in the drawing.

3. The drawing shows the connector used for hand held (H) microphones. The gooseneck version (G) uses a 5 pin XLR in place of the RJ45. See the tables in the drawing for factory wiring for each type.

M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

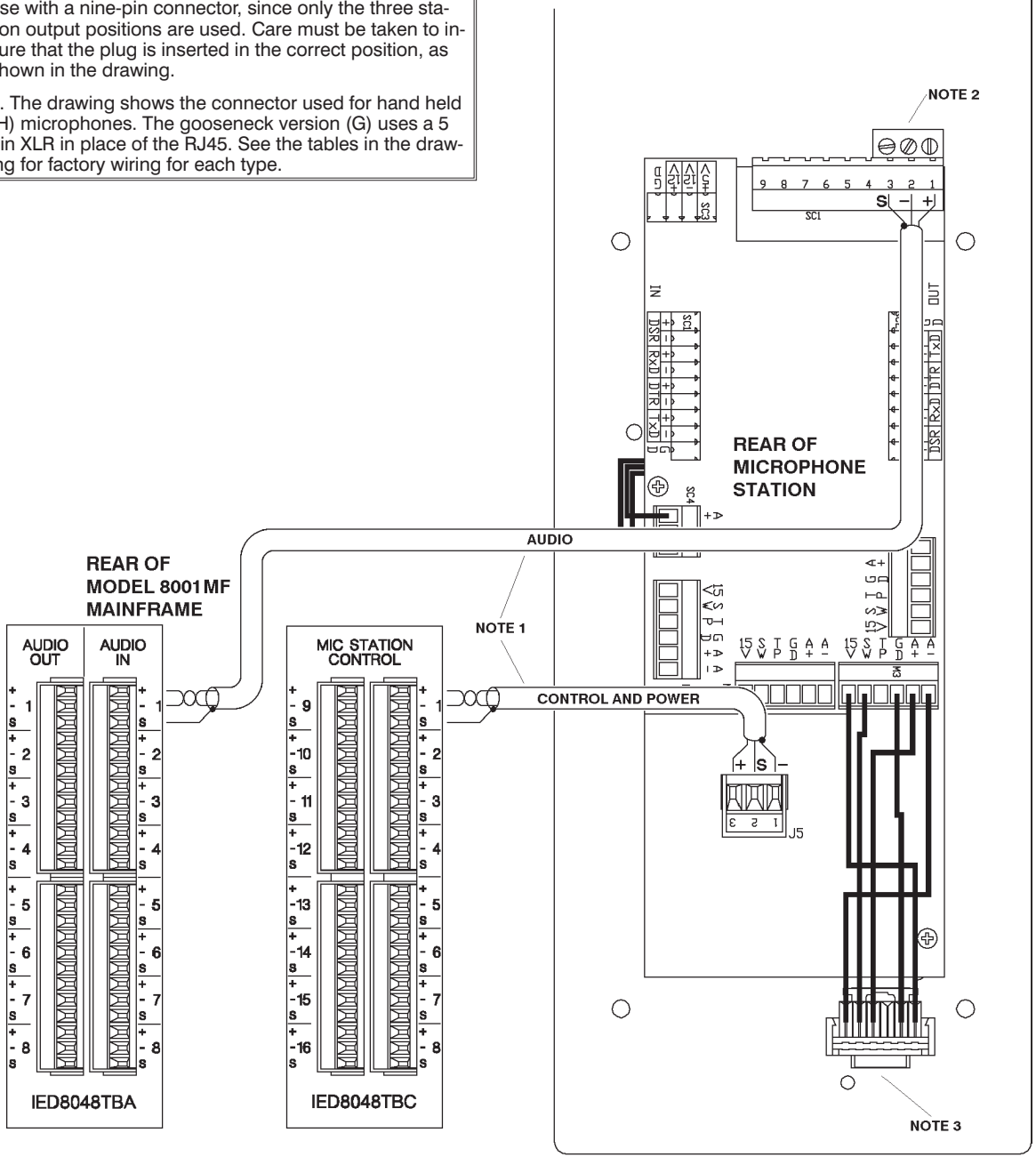


Figure 5 - Interconnection Diagram
508VFM-H/G, 508LD-H, 508RM/RMIO-H/G to 8000 Series TIPS™

IED®
Innovative Electronic Designs

NOTES

1. ELPAC WM-113, or equivalent

2. When station is receiving communications from the ACS, the RS422 communications are not used and the ACS is connected to the local output.

3. When the station is not receiving communications from the ACS, the RS422 comunications are used and when the station is in use, station output is connected to the local output.

4. RS422 cable is #22 AWG, 4 twisted pairs with an overall shield. Belden 9681, or equivalent.

5. Each audio and control line run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

6. The drawing shows the connector used for hand held (H) microphones. The gooseneck version (G) uses a 5 pin XLR in place of the RJ45. See the tables in the drawing for factory wiring for each type.

M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

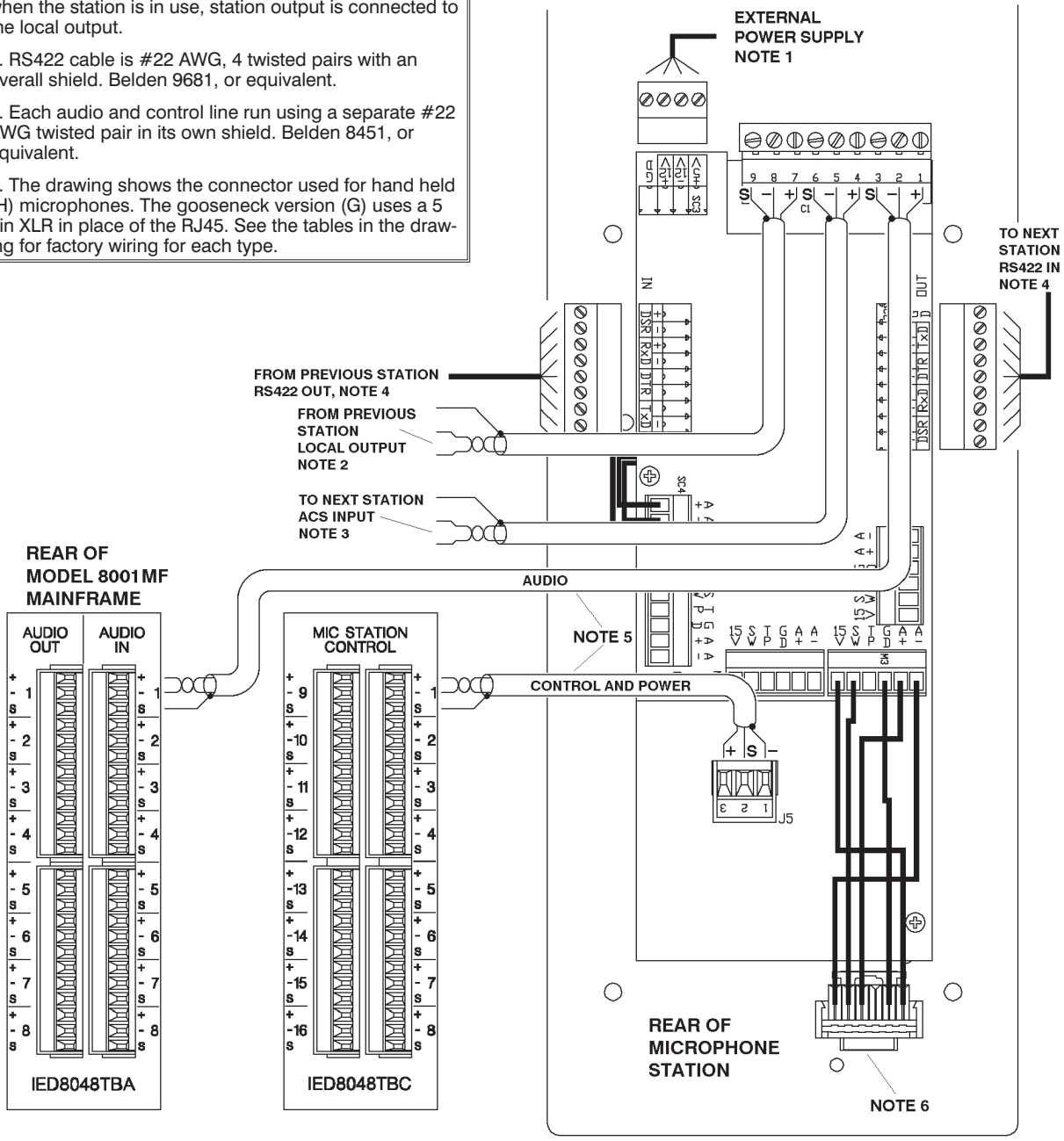
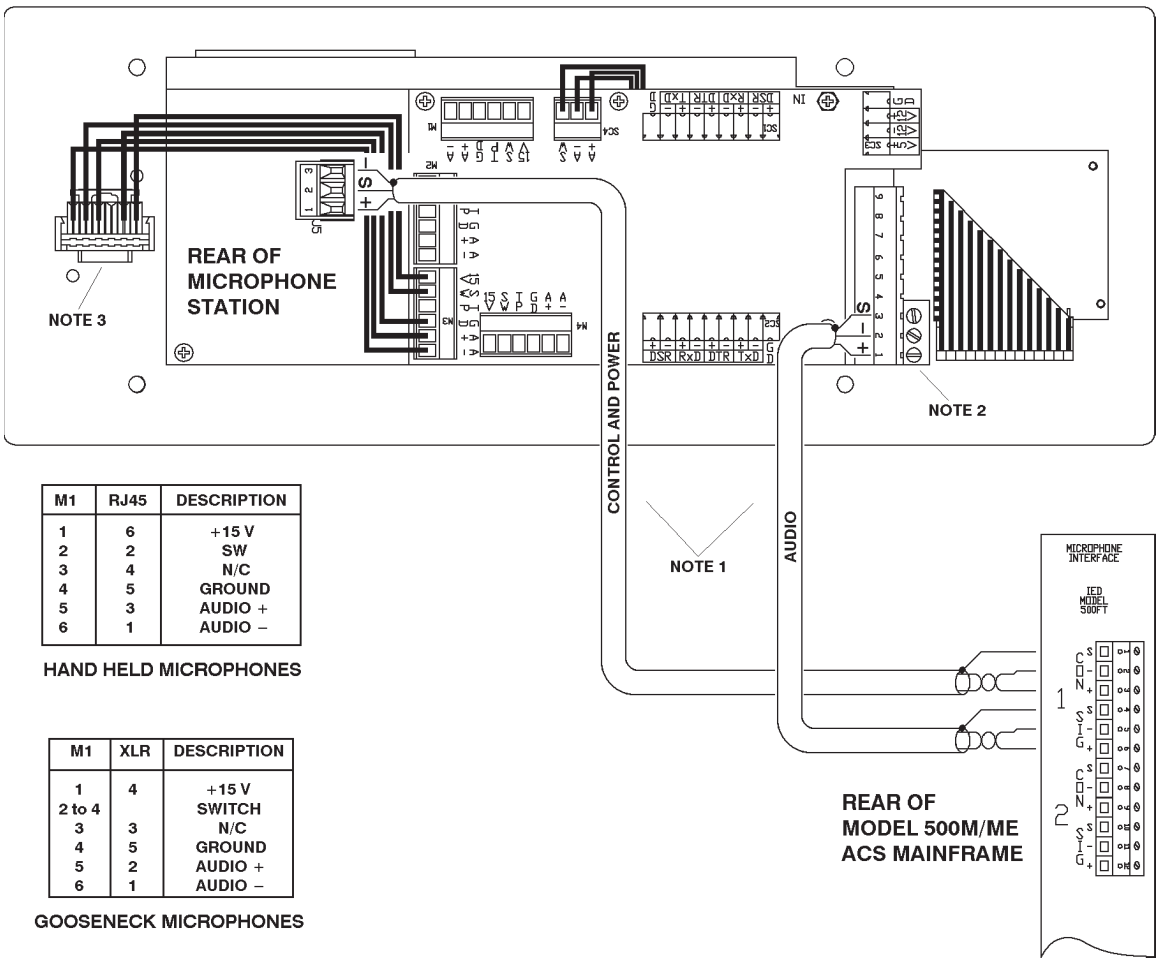


Figure 6 - Interconnection Diagram
508VFM-H/G, 508LD-H, 508RM/RMIO-H/G to 8000 Series TIPS™ with RS422 and Local Backup

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com



M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

NOTES

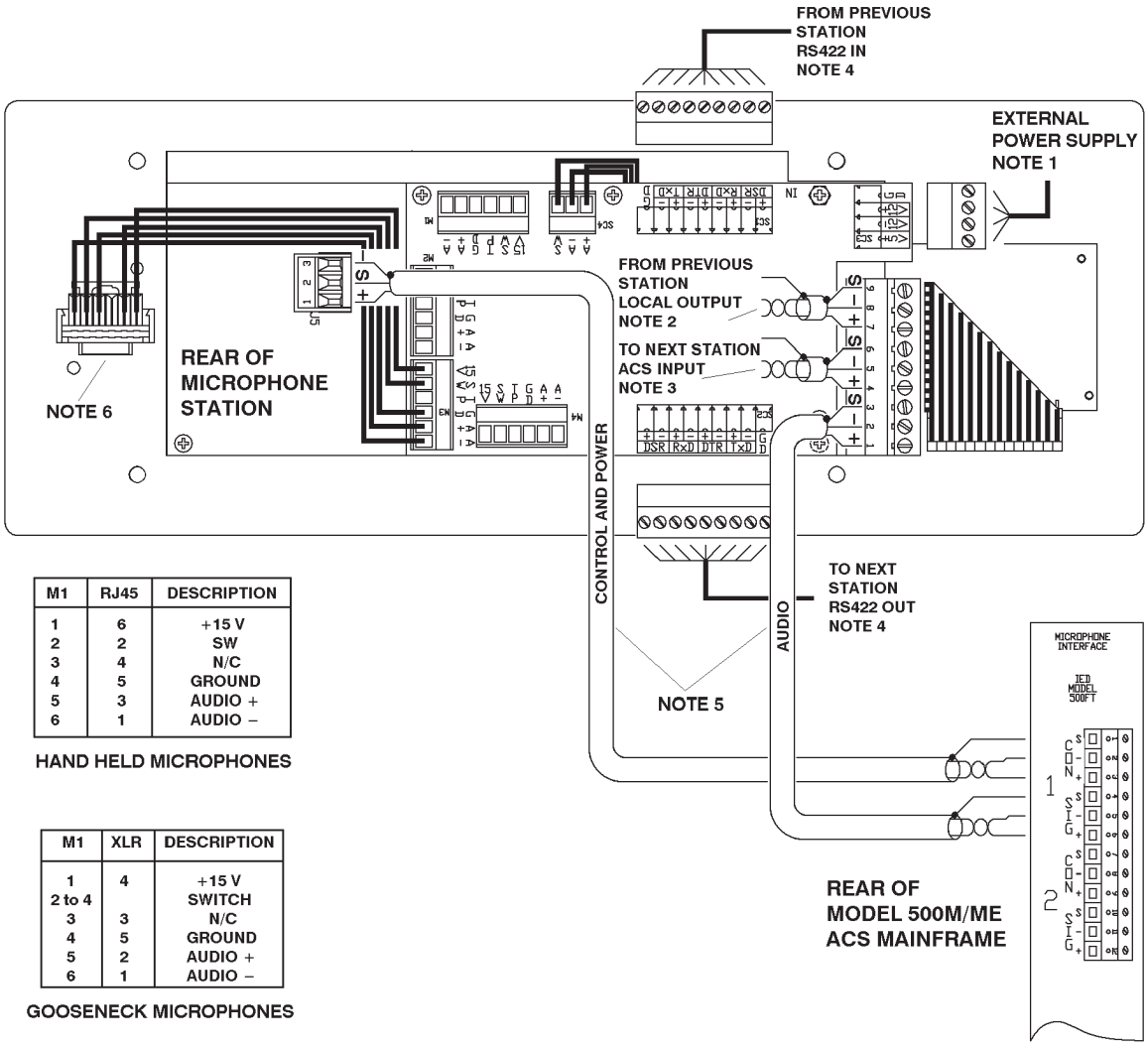
1. Each audio (SIG) and control (CON) must be run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

2. In this configuration a three pin plug is supplied for use with a nine-pin connector, since only the three station output positions are used. Care must be taken to insure that the plug is inserted in the correct position, as shown in the drawing.

3. The drawing shows the connector used for hand held (H) microphones. The gooseneck version (G) uses a 5 pin XLR in place of the RJ45. See the tables in the drawing for factory wiring for each type.

Figure 7 - Interconnection Diagram
508HFM-H/G to 500 ACS

IED®
Innovative Electronic Designs



M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

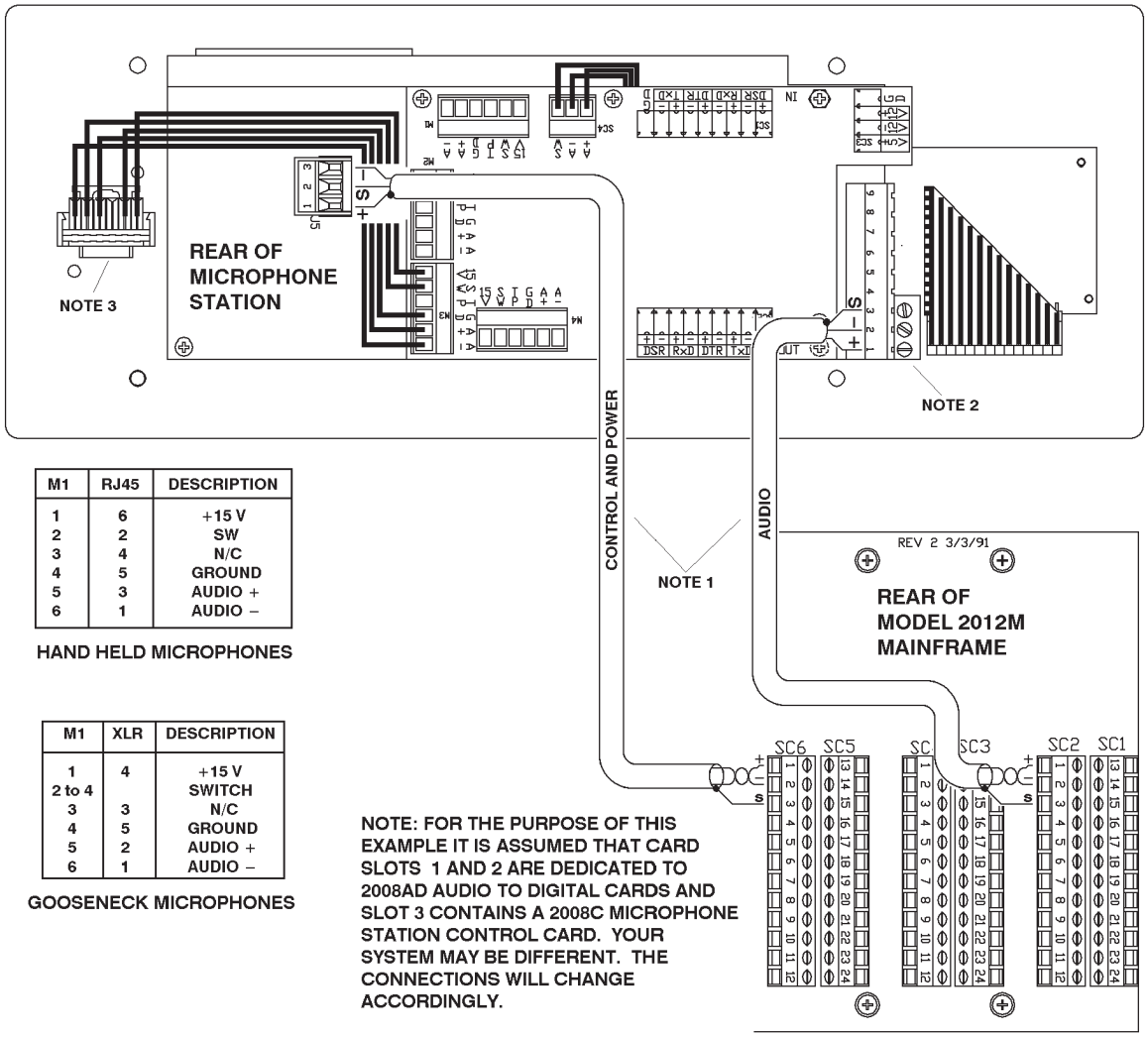
GOOSENECK MICROPHONES

NOTES

1. ELPAC WM-113, or equivalent
2. When station is receiving communications from the ACS, the RS422 communications are not used and the ACS is connected to the local output.
3. When the station is not receiving communications from the ACS, the RS422 comunications are used and when the station is in use, station output is connected to the local output.
4. RS422 cable is #22 AWG, 4 twisted pairs with an overall shield. Belden 9681, or equivalent.
5. Each audio and control line run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.
6. The drawing shows the connector used for hand held (H) microphones. The gooseneck version (G) uses a 5 pin XLR in place of the RJ45. See the tables in the drawing for factory wiring for each type.

Figure 8 - Interconnection Diagram
508HFM-H/G to 500 ACS with RS422 communications and Local Backup

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com



M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

NOTES

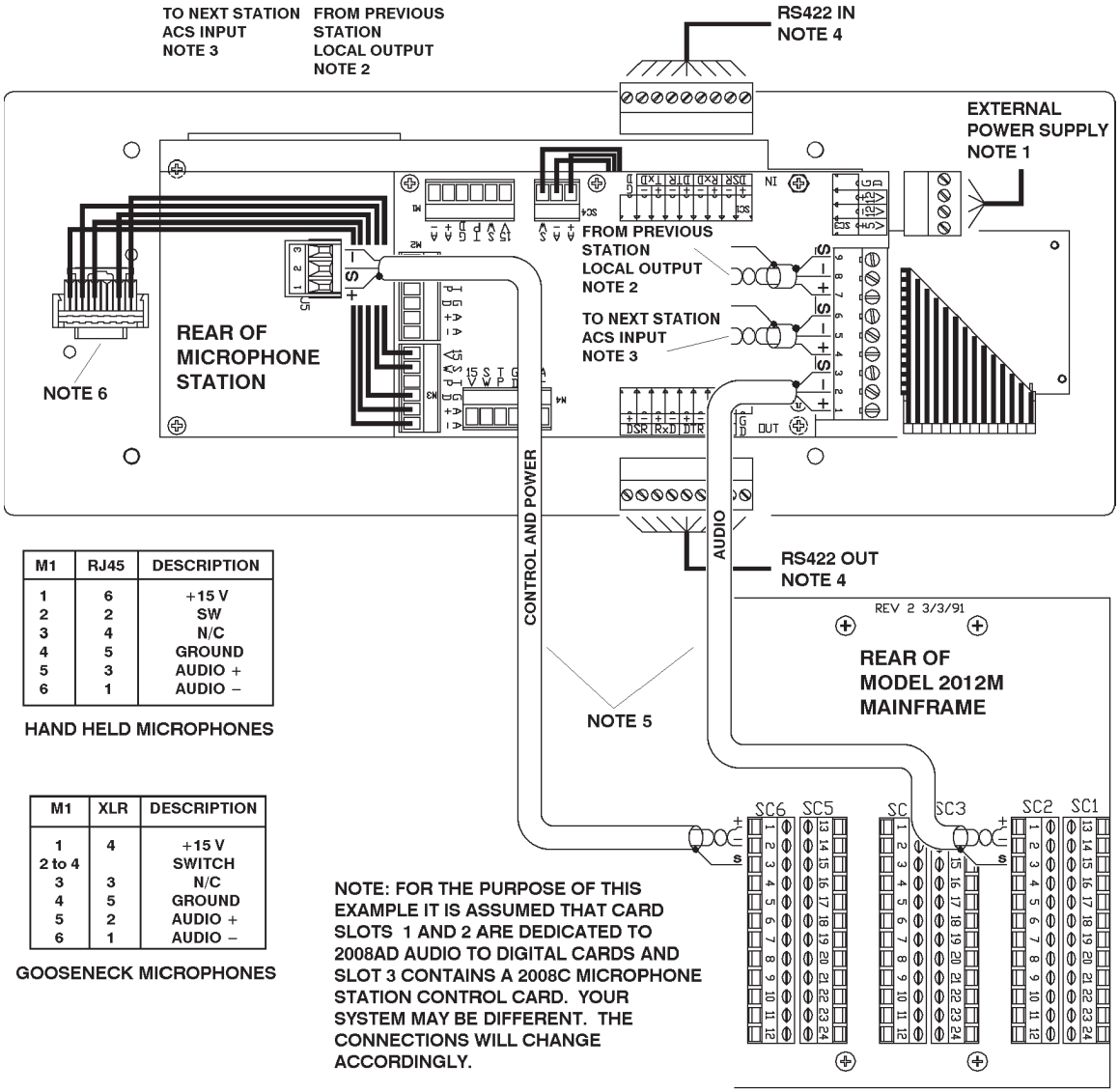
1. Each audio (SIG) and control (CON) must be run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

2. In this configuration a three pin plug is supplied for use with a nine-pin connector, since only the three station output positions are used. Care must be taken to insure that the plug is inserted in the correct position, as shown in the drawing.

3. The drawing shows the connector used for hand held (H) microphones. The gooseneck version (G) uses a 5 pin XLR in place of the RJ45. See the tables in the drawing for factory wiring for each type.

Figure 9 - Interconnection Diagram
508HFM-H/G to 2000 Series UDAPS™

IED®
Innovative Electronic Designs



M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

NOTES

1. ELPAC WM-113, or equivalent

2. When station is receiving communications from the ACS, the RS422 communications are not used and the ACS is connected to the local output.

3. When the station is not receiving communications from the ACS, the RS422 comunications are used and when the station is in use, station output is connected to the local output.

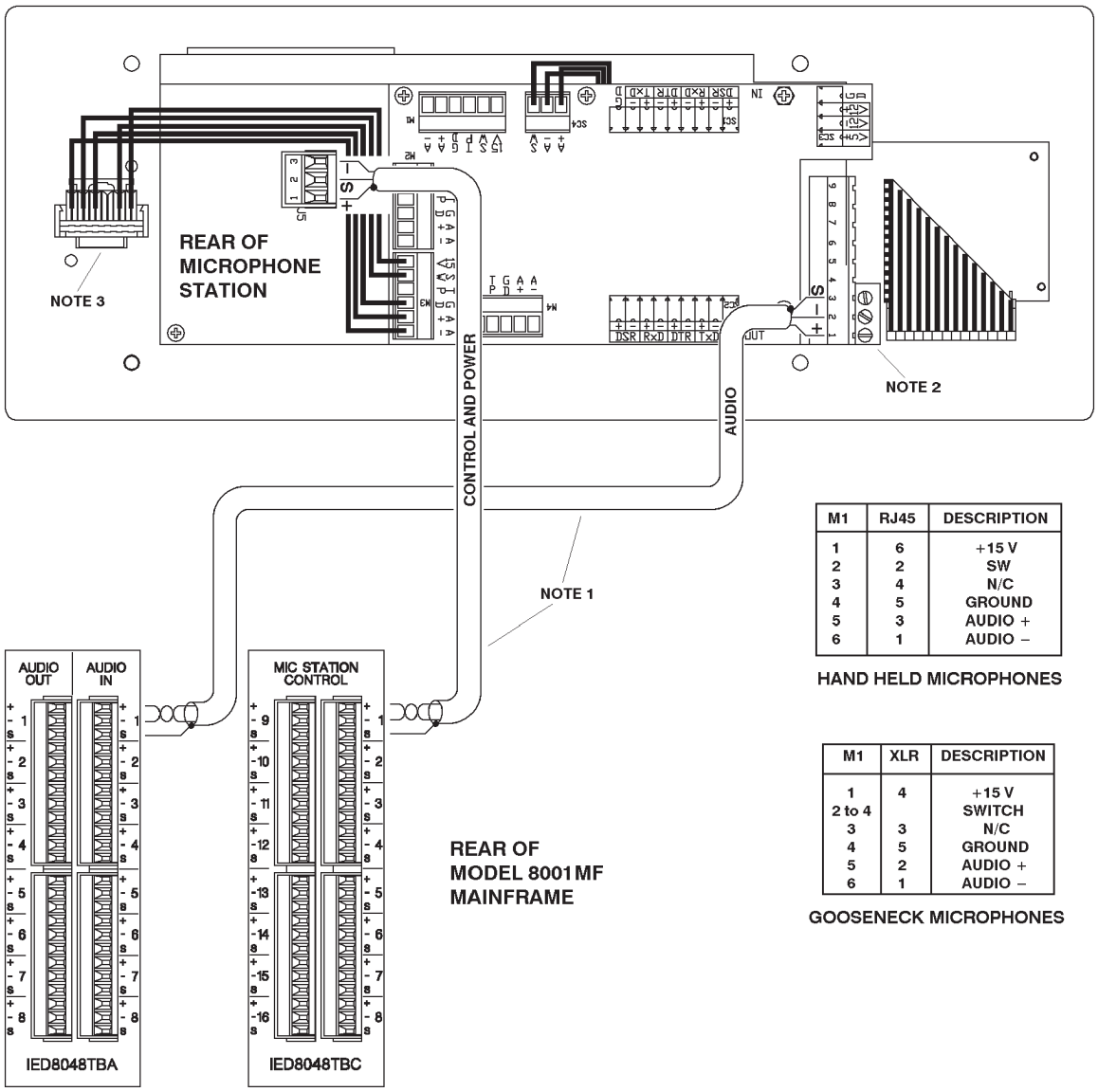
4. RS422 cable is #22 AWG, 4 twisted pairs with an overall shield. Belden 9681, or equivalent.

5. Each audio and control line run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

6. The drawing shows the connector used for hand held (H) microphones. The gooseneck version (G) uses a 5 pin XLR in place of the RJ45. See the tables in the drawing for factory wiring for each type.

Figure 10 - Interconnection Diagram
508HFM-H/G to 2000 Series UDAPS™ with RS422 communications and Local Backup

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com



M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

NOTES

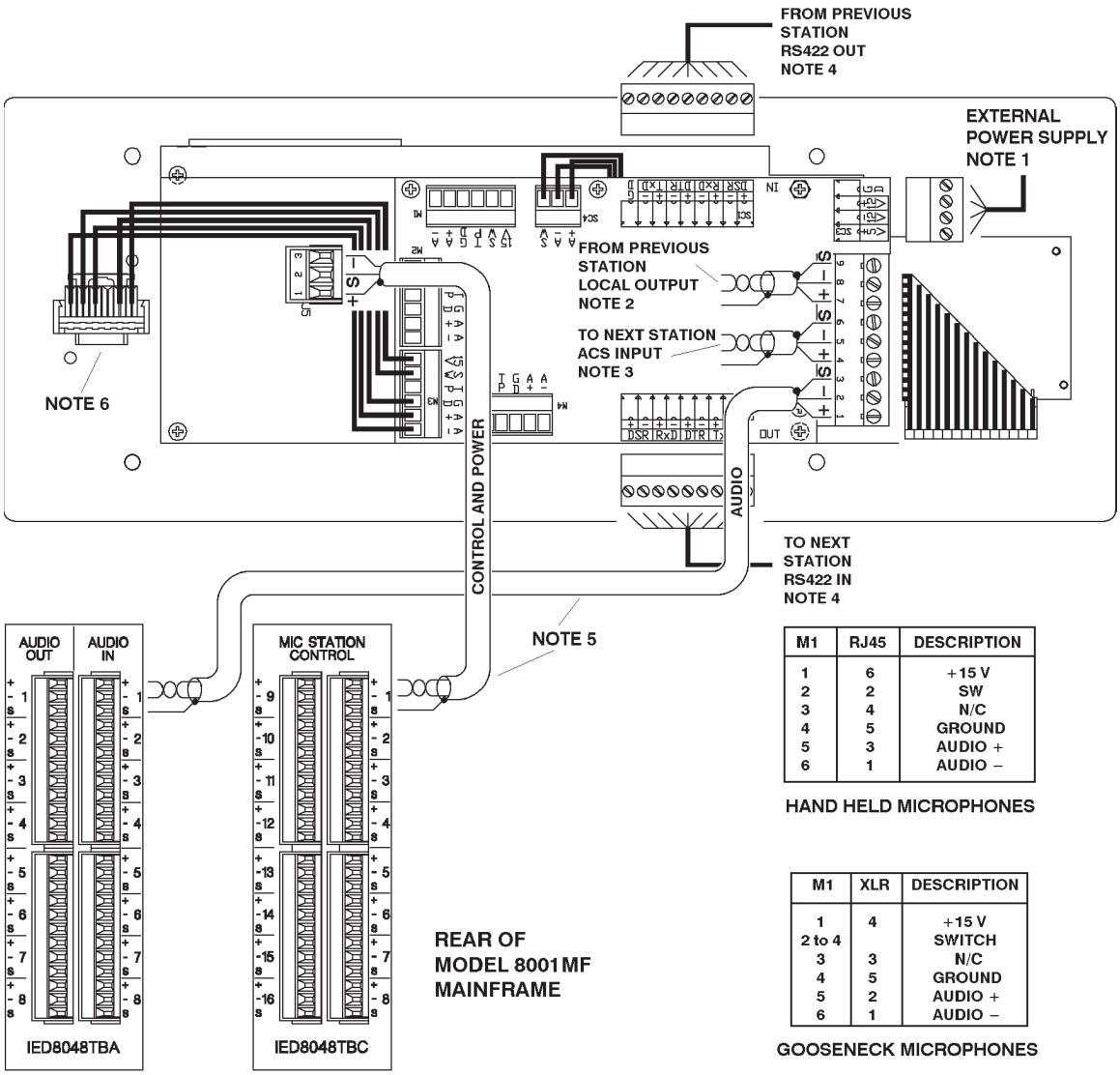
1. Each audio (SIG) and control (CON) must be run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

2. In this configuration a three pin plug is supplied for use with a nine-pin connector, since only the three station output positions are used. Care must be taken to insure that the plug is inserted in the correct position, as shown in the drawing.

3. The drawing shows the connector used for hand held (H) microphones. The gooseneck version (G) uses a 5 pin XLR in place of the RJ45. See the tables in the drawing for factory wiring for each type.

Figure 11 - Interconnection Diagram
508HFM-H/G to 8000 Series TIPS™

IED®
Innovative Electronic Designs



M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

NOTES

1. ELPAC WM-113, or equivalent

2. When station is receiving communications from the ACS, the RS422 communications are not used and the ACS is connected to the local output.

3. When the station is not receiving communications from the ACS, the RS422 comunications are used and when the station is in use, station output is connected to the local output.

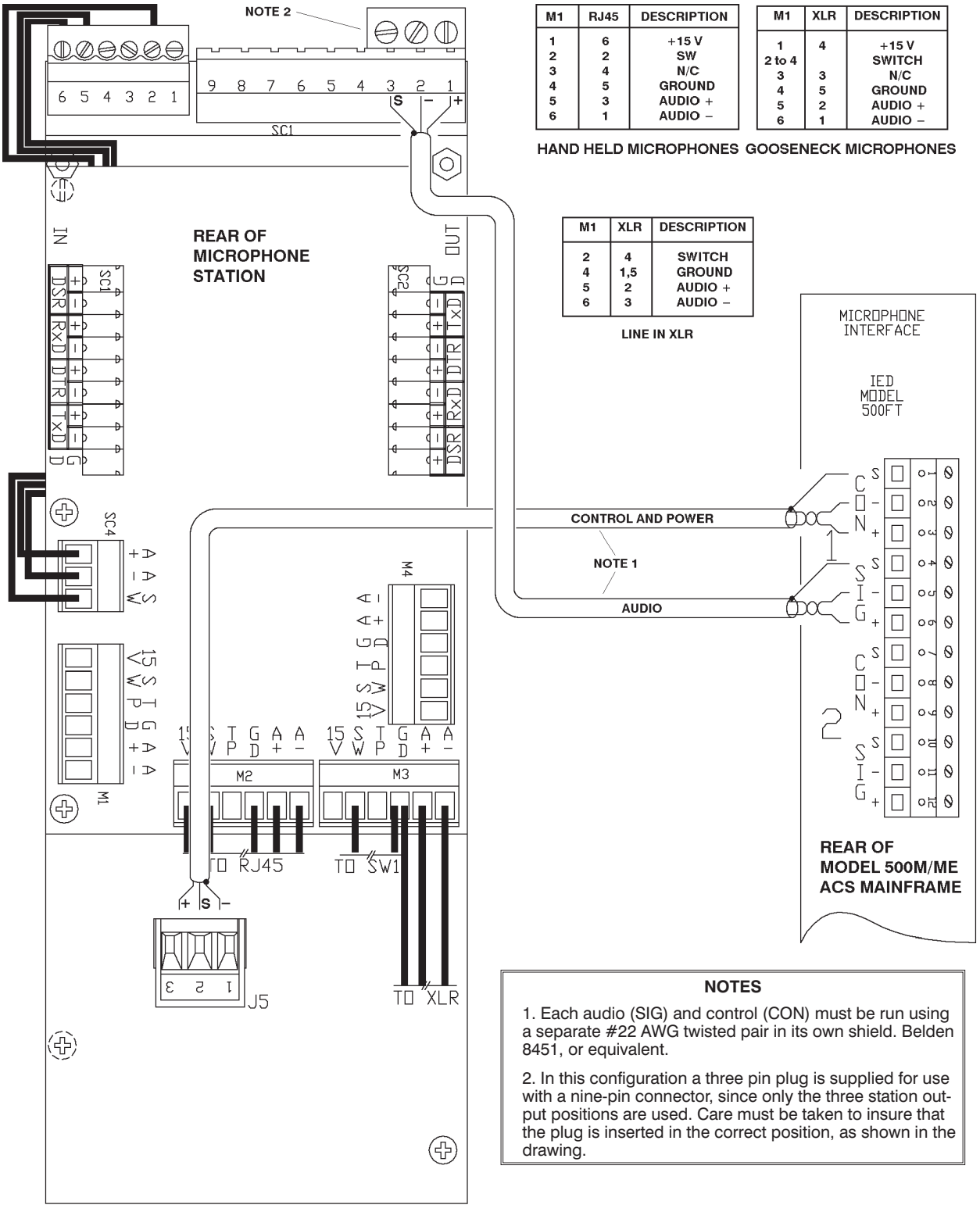
4. RS422 cable is #22 AWG, 4 twisted pairs with an overall shield. Belden 9681, or equivalent.

5. Each audio and control line run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

6. The drawing shows the connector used for hand held (H) microphones. The gooseneck version (G) uses a 5 pin XLR in place of the RJ45. See the tables in the drawing for factory wiring for each type.

Figure 12 - Interconnection Diagram
508HFM-H/G to 8000 Series TIPS™ with RS422 communications and Local Backup

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com



M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

M1	XLR	DESCRIPTION
2	4	SWITCH
4	1,5	GROUND
5	2	AUDIO +
6	3	AUDIO –

LINE IN XLR

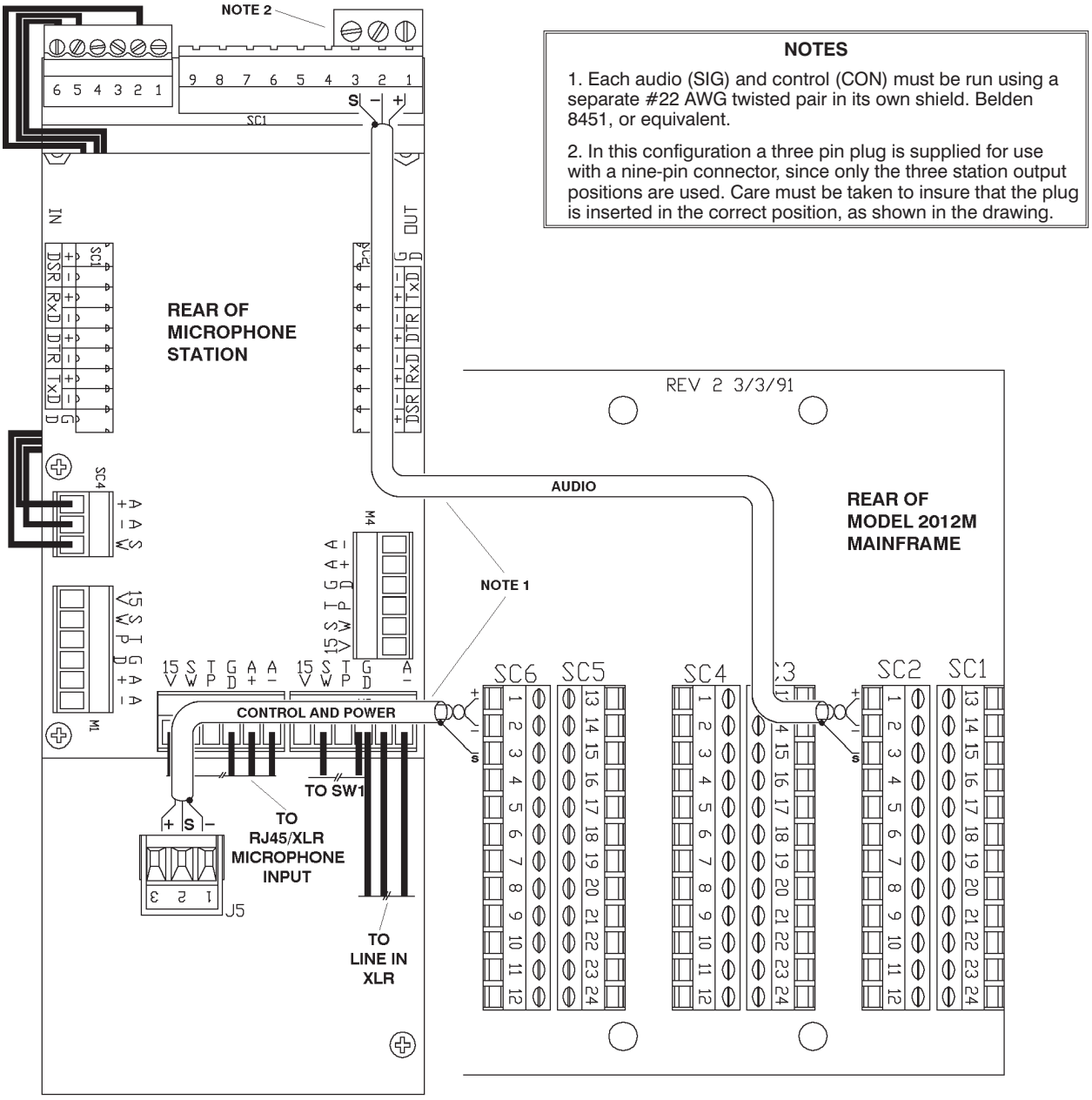
NOTES

1. Each audio (SIG) and control (CON) must be run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

2. In this configuration a three pin plug is supplied for use with a nine-pin connector, since only the three station output positions are used. Care must be taken to insure that the plug is inserted in the correct position, as shown in the drawing.

Figure 13 - Interconnection Diagram
508RM/508RMIO/508SRM/508SRMIO to 500ACS

IED
Innovative Electronic Designs



NOTES

1. Each audio (SIG) and control (CON) must be run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

2. In this configuration a three pin plug is supplied for use with a nine-pin connector, since only the three station output positions are used. Care must be taken to insure that the plug is inserted in the correct position, as shown in the drawing.

M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

M1	XLR	DESCRIPTION
2	4	SWITCH
4	1,5	GROUND
5	2	AUDIO +
6	3	AUDIO –

LINE IN XLR

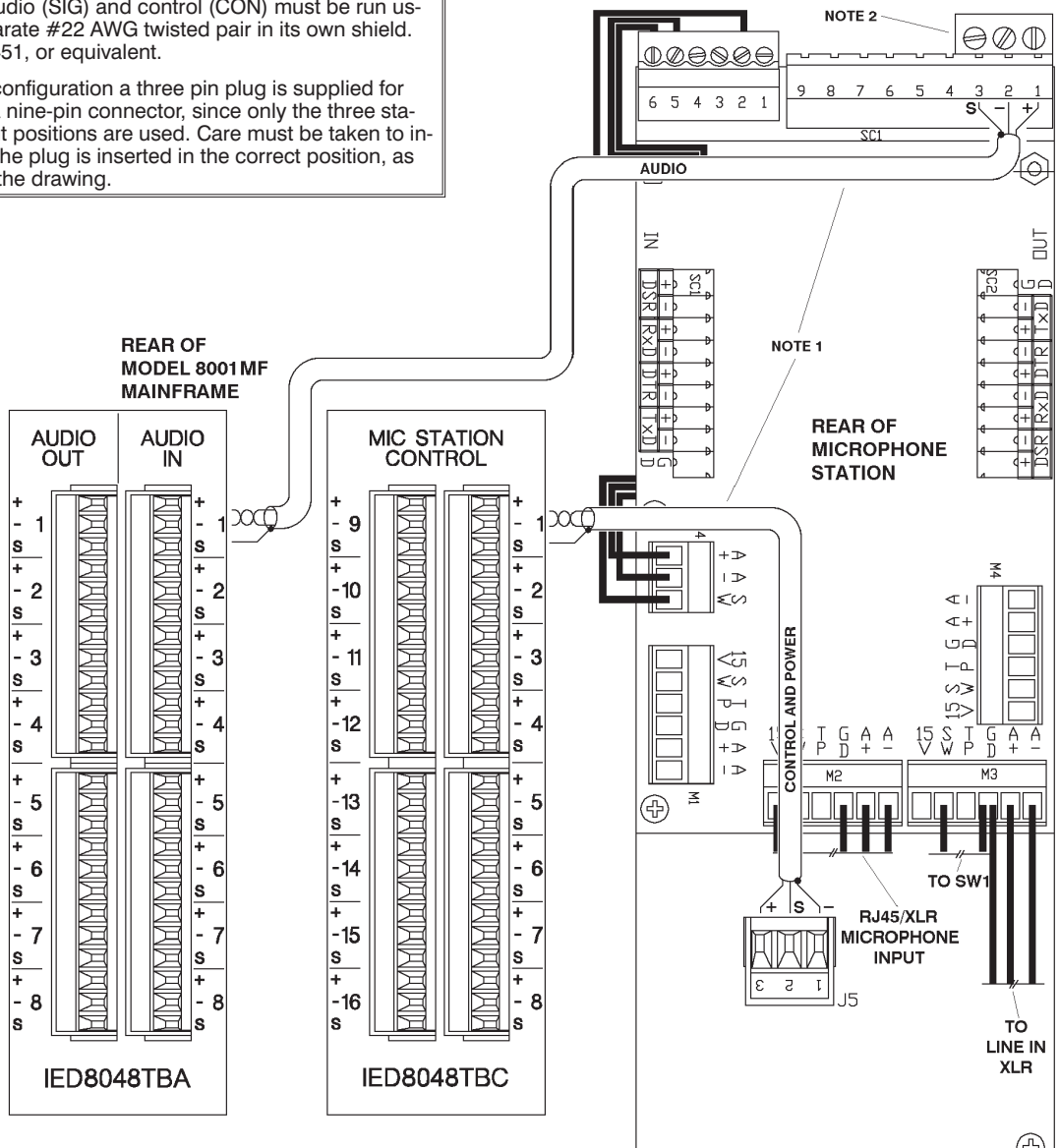
Figure 14 - Interconnection Diagram
508RM/508RMIO/508SRM/508SRMIO to 2000 Series UDAPS™

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com

NOTES

1. Each audio (SIG) and control (CON) must be run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

2. In this configuration a three pin plug is supplied for use with a nine-pin connector, since only the three station output positions are used. Care must be taken to insure that the plug is inserted in the correct position, as shown in the drawing.



M1	RJ45	DESCRIPTION
1	6	+15 V
2	2	SW
3	4	N/C
4	5	GROUND
5	3	AUDIO +
6	1	AUDIO –

HAND HELD MICROPHONES

M1	XLR	DESCRIPTION
1	4	+15 V
2 to 4		SWITCH
3	3	N/C
4	5	GROUND
5	2	AUDIO +
6	1	AUDIO –

GOOSENECK MICROPHONES

M1	XLR	DESCRIPTION
2	4	SWITCH
4	1,5	GROUND
5	2	AUDIO +
6	3	AUDIO –

LINE IN XLR

Figure 15 - Interconnection Diagram
508RM/508RMIO/508SRM/508SRMIO to 2000 Series TIPS™

IED®
Innovative Electronic Designs

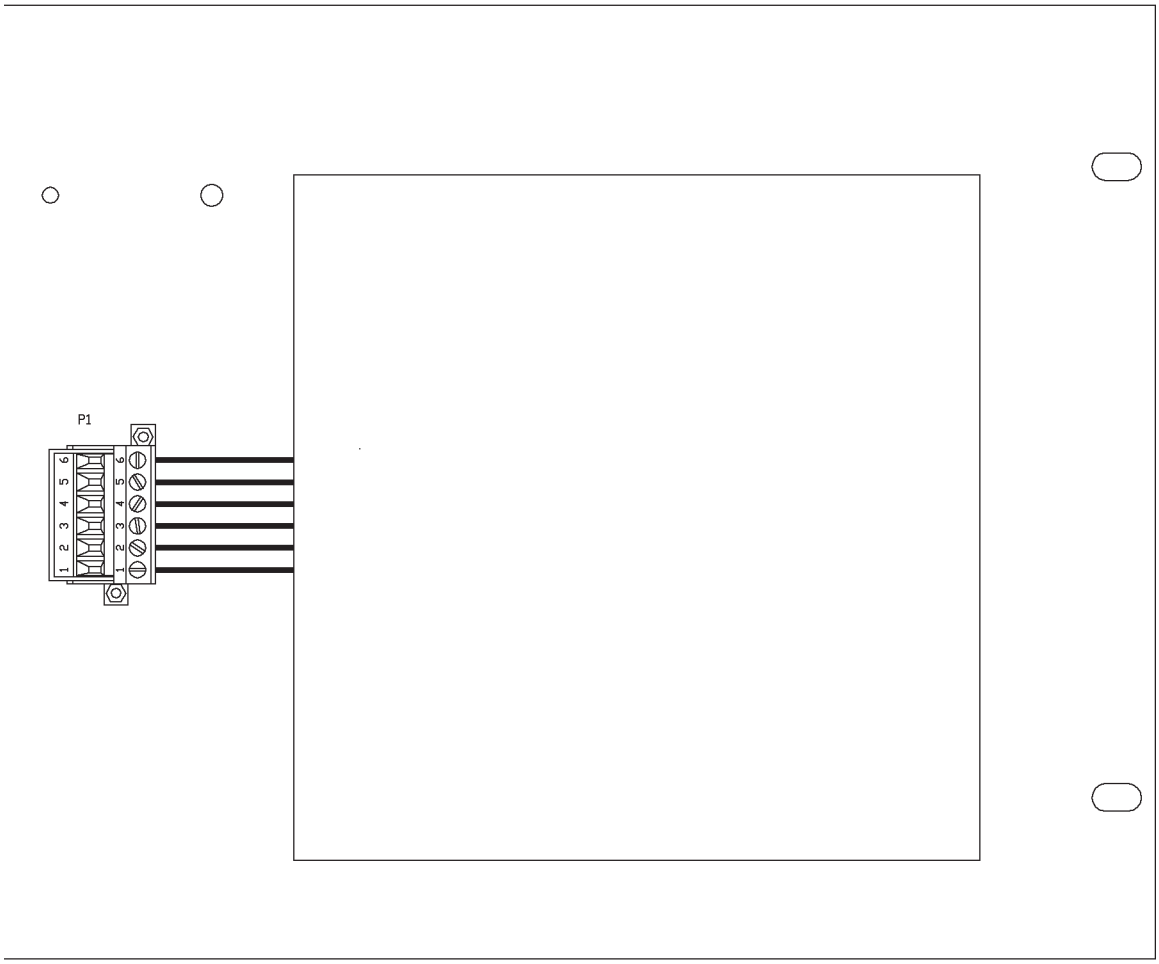


Figure 16 - Speaker Connections
508SRM and 508SRMIO Only, Rear View

P1 PIN	FUNCTION
6	Ground
5	–12 VDC
4	+12 VDC
3	Audio In Shield
2	Audio In –
1	Audio In +

Table 2 - Speaker connections
Models 508SRM and 508SRMIO

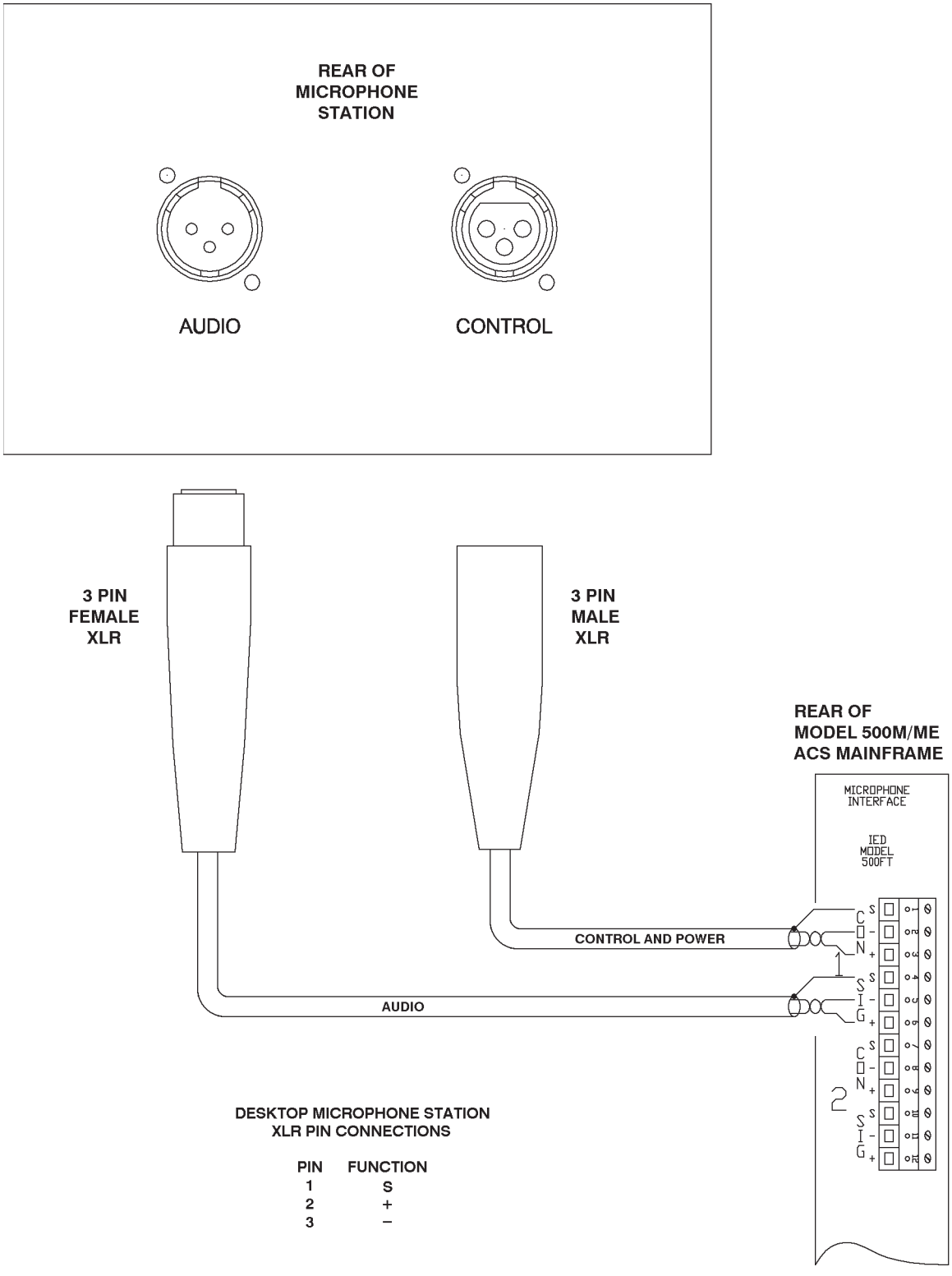


Figure 17 - Interconnection Diagram
508DT-H/G to 500ACS™

IED
Innovative Electronic Designs

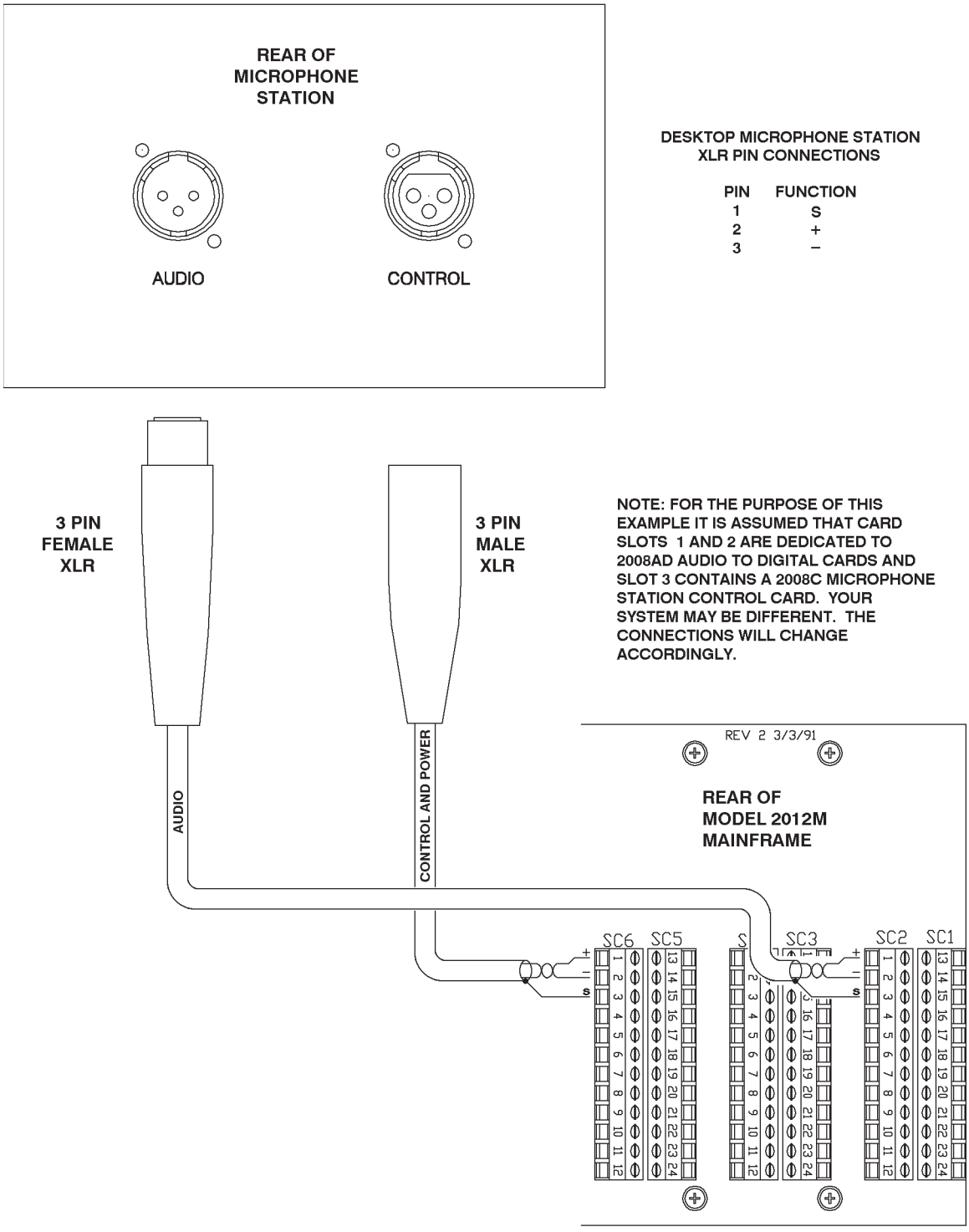


Figure 18 - Interconnection Diagram
508DT-H/G to 2000 Series UDAPS™

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com

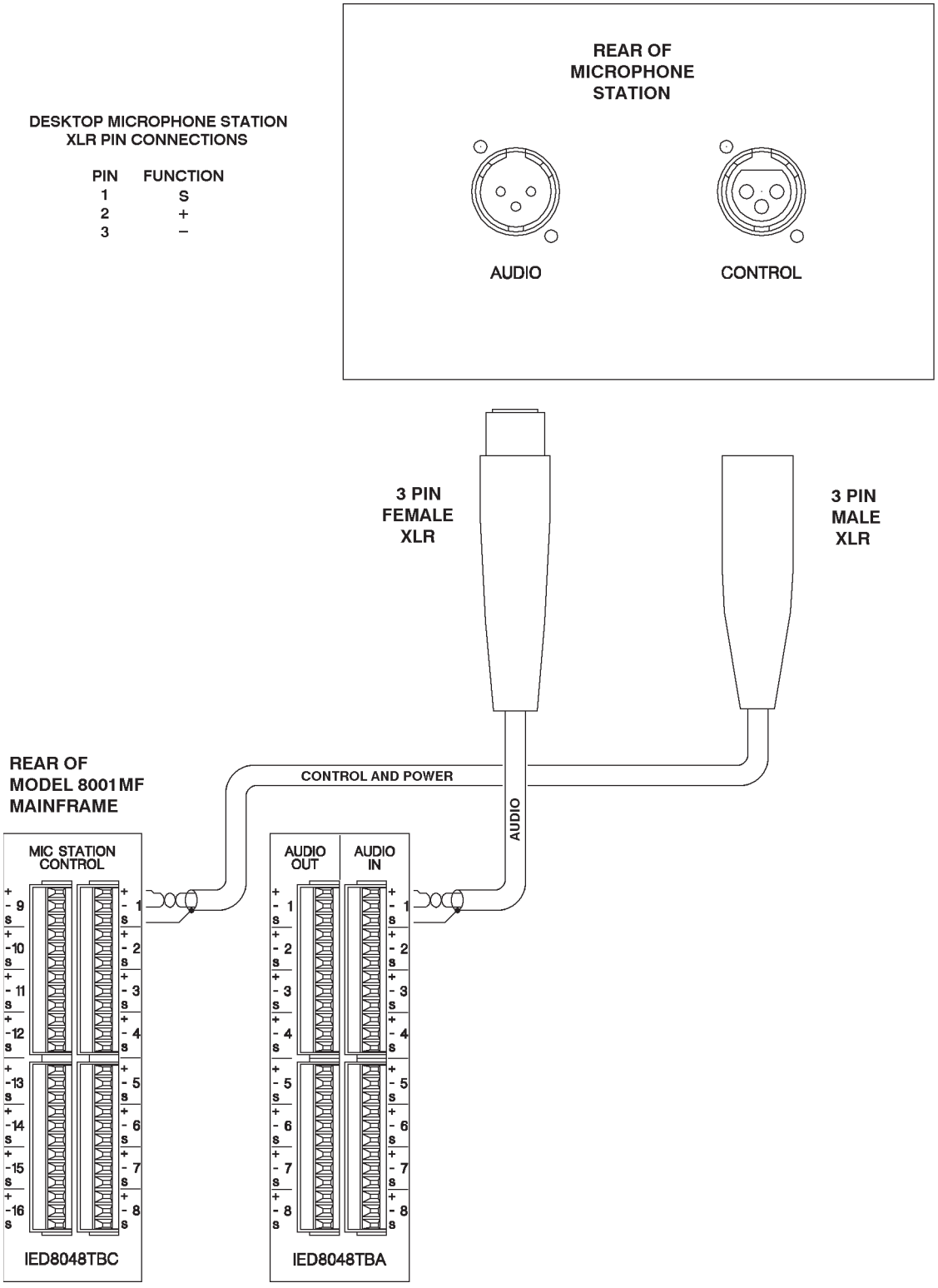
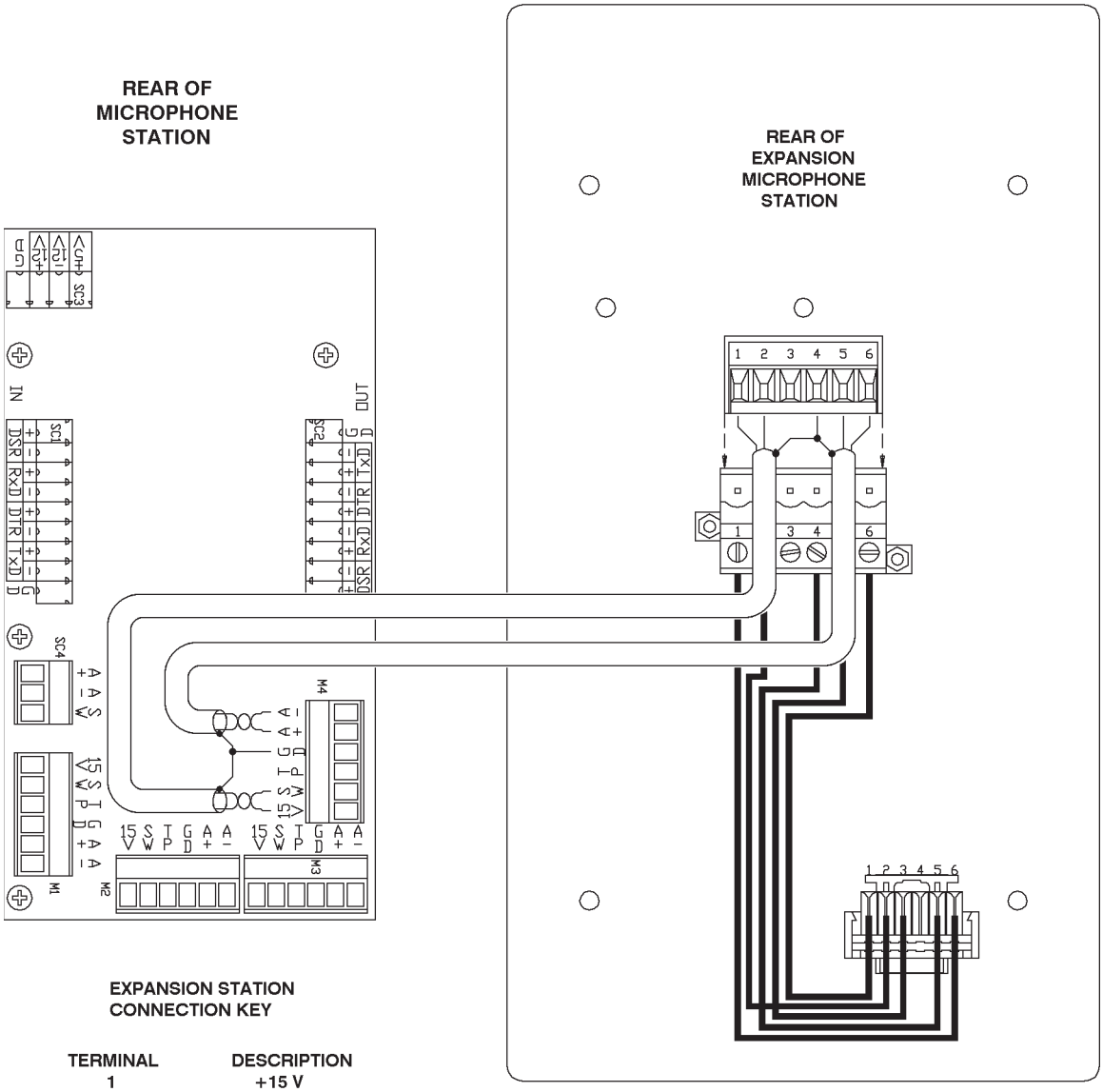


Figure 19 - Interconnection Diagram
508DT-H/G to 8000 Series TIPS™

IED®
Innovative Electronic Designs



EXPANSION STATION CONNECTION KEY

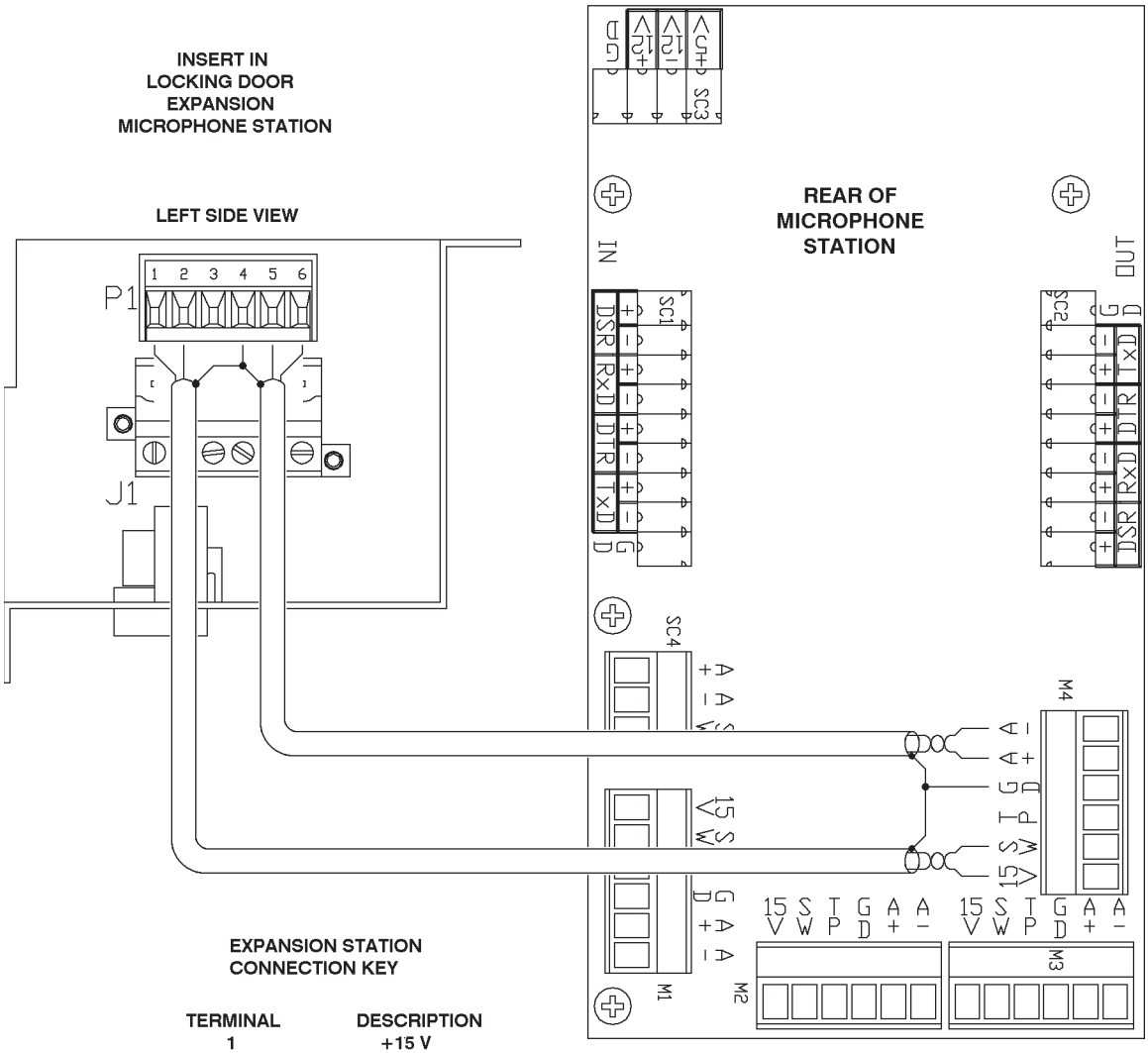
TERMINAL	DESCRIPTION
1	+15 V
2	SWITCH
3	N/C
4	GROUND
5	AUDIO +
6	AUDIO –

PIN CONNECTIONS AND NUMBERING ARE THE SAME AT BOTH ENDS OF THE CABLE

NOTE: THE EXPANSION MICROPHONE STATION IS SHOWN WIRED TO CONNECTOR M4 ON THE 508 SERIES MICROPHONE STATION. IT COULD BE CONNECTED TO M2 OR M3 IN THE SAME MANNER. ADDITIONAL EXPANSION MICROPHONES CAN BE WIRED TO CONNECTORS M2, M3, OR M4, AS AVAILABLE.

Figure 20 - Interconnection Diagram
All Flush Mount and Locking Door Microphone Stations to 500FME Expansion Station

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com



EXPANSION STATION CONNECTION KEY

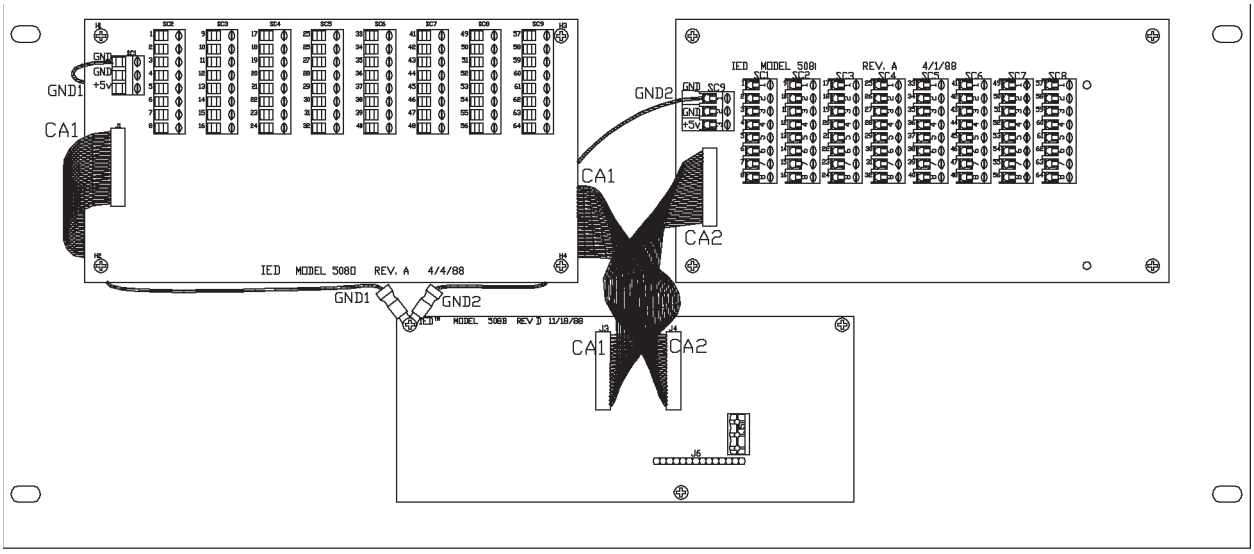
TERMINAL	DESCRIPTION
1	+15 V
2	SWITCH
3	N/C
4	GROUND
5	AUDIO +
6	AUDIO –

PIN CONNECTIONS AND NUMBERING ARE THE SAME AT BOTH ENDS OF THE CABLE

NOTE: THE EXPANSION MICROPHONE STATION IS SHOWN WIRED TO CONNECTOR M4 ON THE 508 SERIES MICROPHONE STATION. IT COULD BE CONNECTED TO M2 OR M3 IN THE SAME MANNER. ADDITIONAL EXPANSION MICROPHONES CAN BE WIRED TO CONNECTORS M2, M3, OR M4, AS AVAILABLE.

Figure 21 - Interconnection Diagram
All Flush Mount and Locking Door Microphone Stations to 500LDE Expansion Station

IED®
Innovative Electronic Designs



NOTES

1. See Table 3, page 27 for the SIP associated with each output of the 508O card.

Figure 22 - Interconnection Diagram
508BIO 64 X 64 Logic In/Logic Out Microcontroller Interface

OUTPUTS	SIP	OUTPUTS	SIP
1, 3, 5, 7	RS4	2, 4, 6, 8	RS3
9, 11, 13, 15	RS8	10, 12, 14, 16	RS7
17, 19, 21, 23	RS12	18, 20, 22, 24	RS11
25, 27, 29, 31	RS16	26, 28, 30, 32	RS15
33, 35, 37, 39	RS20	34, 36, 38, 40	RS19
41, 43, 45, 47	RS24	42, 44, 46, 48	RS23
49, 51, 53, 55	RS28	50, 52, 54, 56	RS27
57, 59, 61, 63	RS32	58, 60, 62, 64	RS31

Table 3 - SIPs Associated with Each Output
Model 508O Card

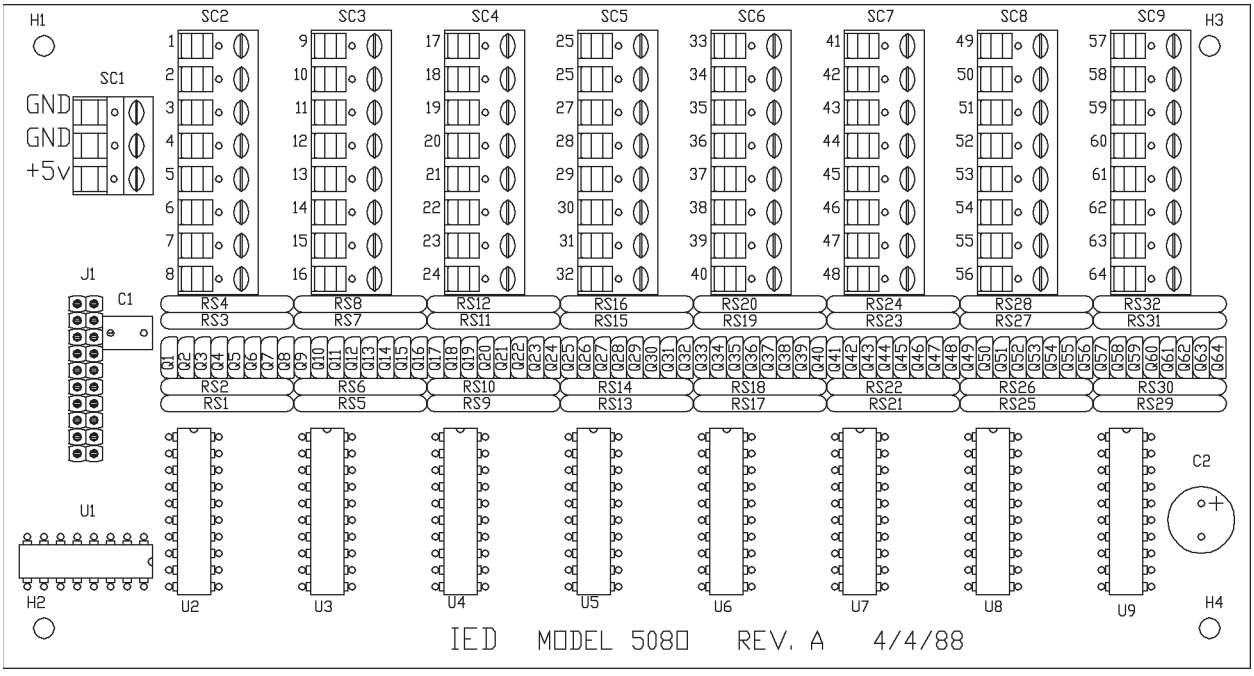
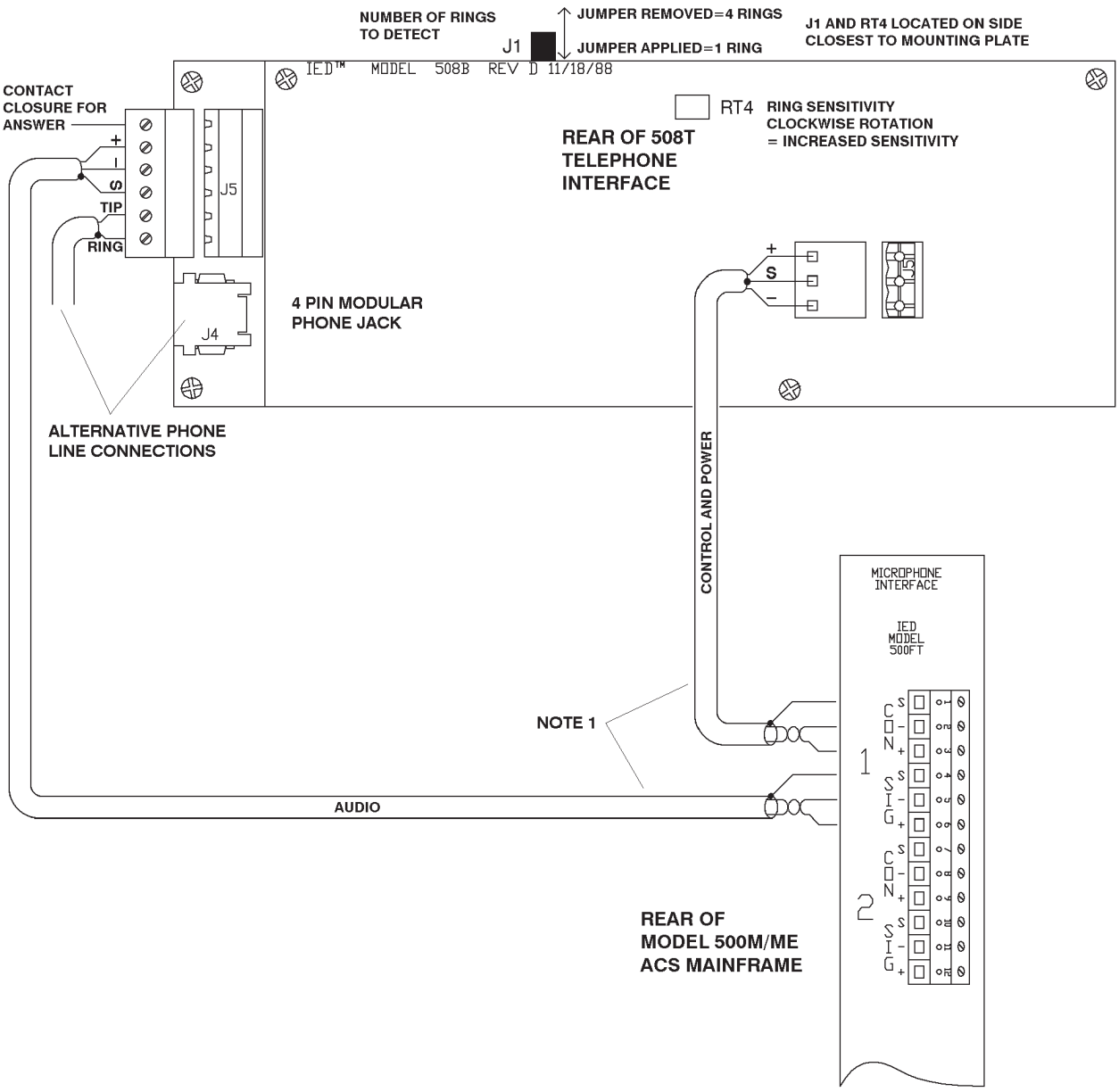


Figure 23 - 508O Parts Layout
Showing location of SIPs

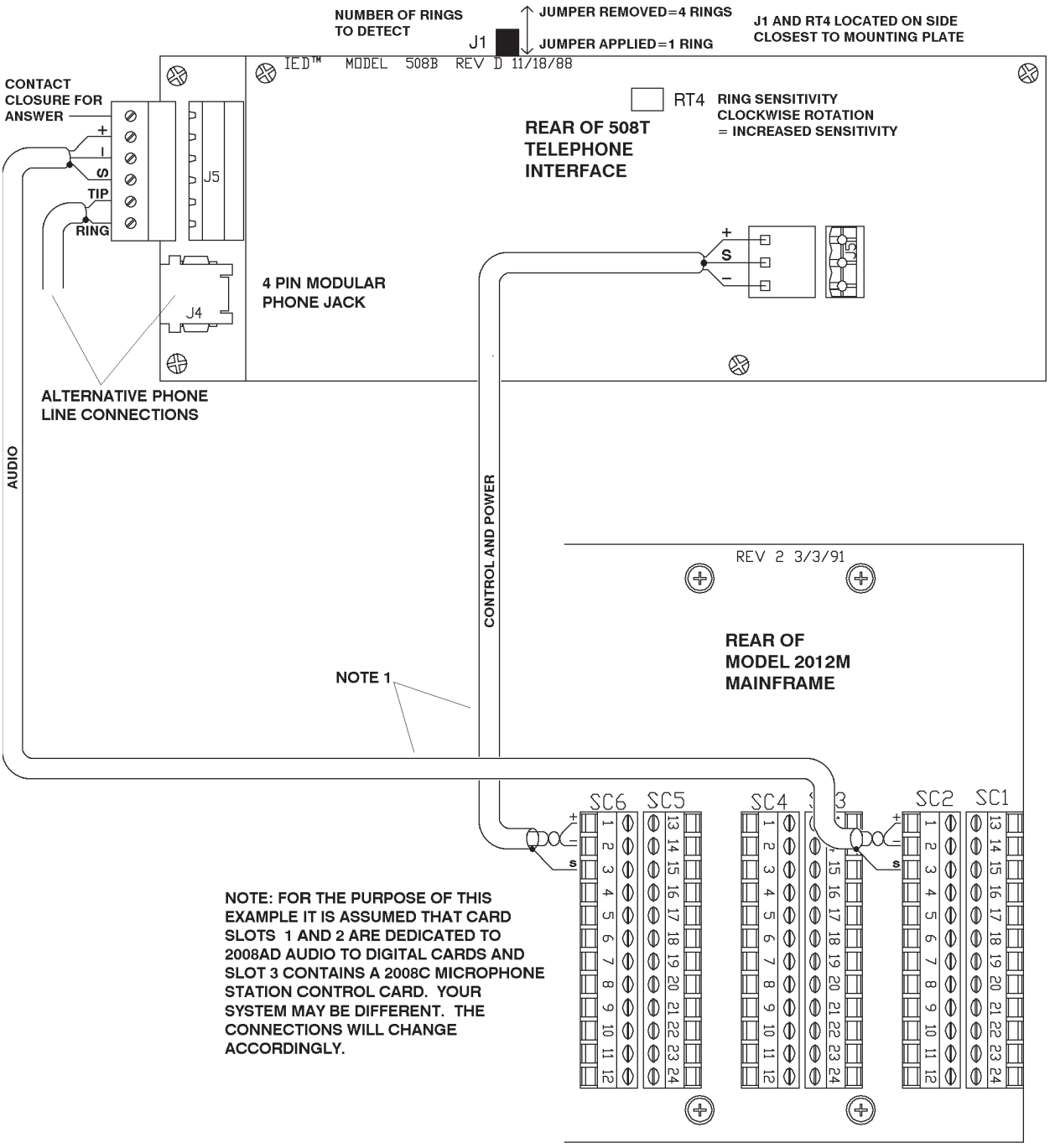


NOTES

1. Each audio (SIG) and control (CON) must be run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

Figure 24 - Interconnection Diagram
508T to 500ACS

Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com

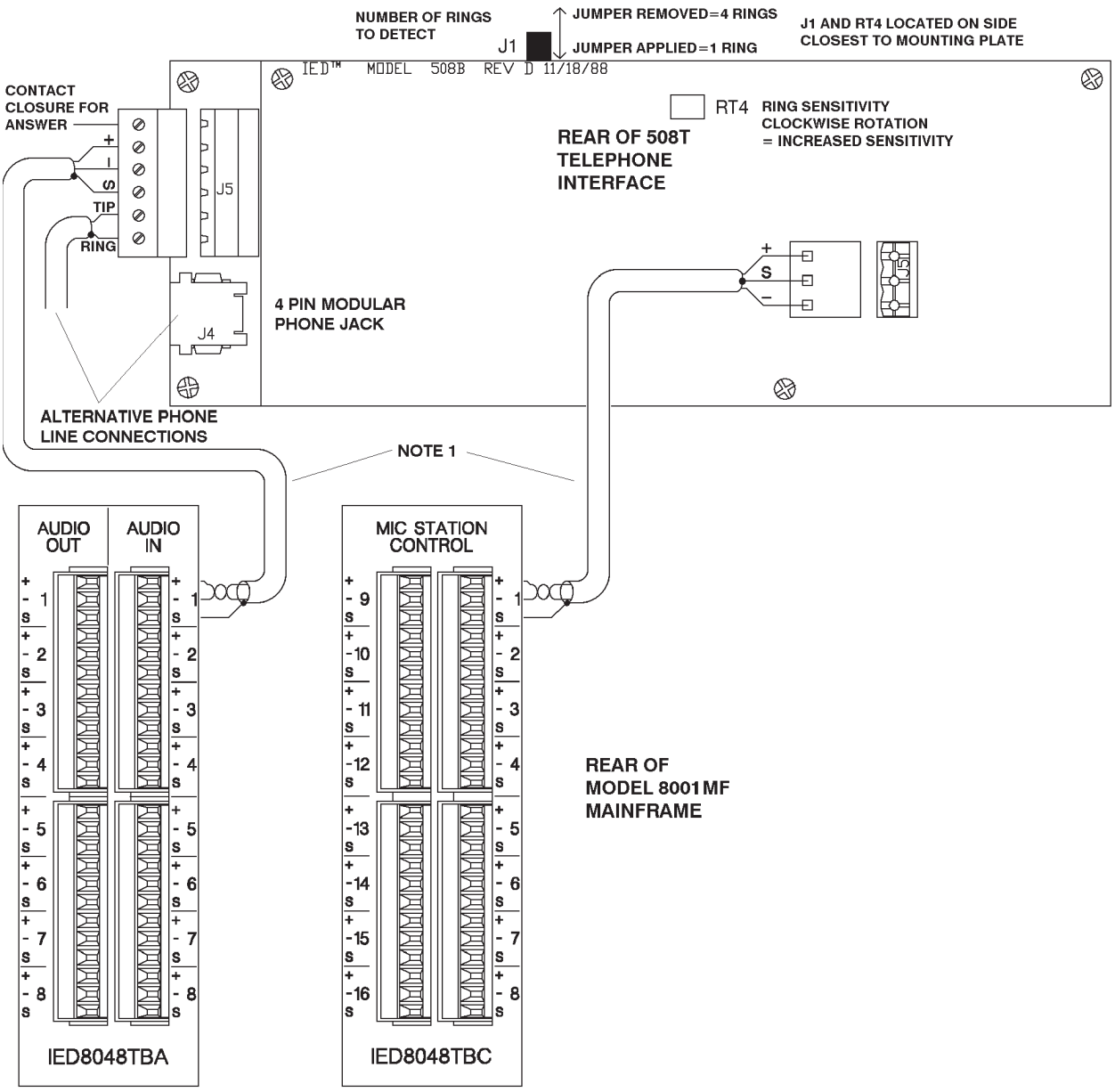


NOTES

1. Each audio (SIG) and control (CON) must be run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

Figure 25 - Interconnection Diagram
508T to 2000 Series UDAPS™

IED®
Innovative Electronic Designs

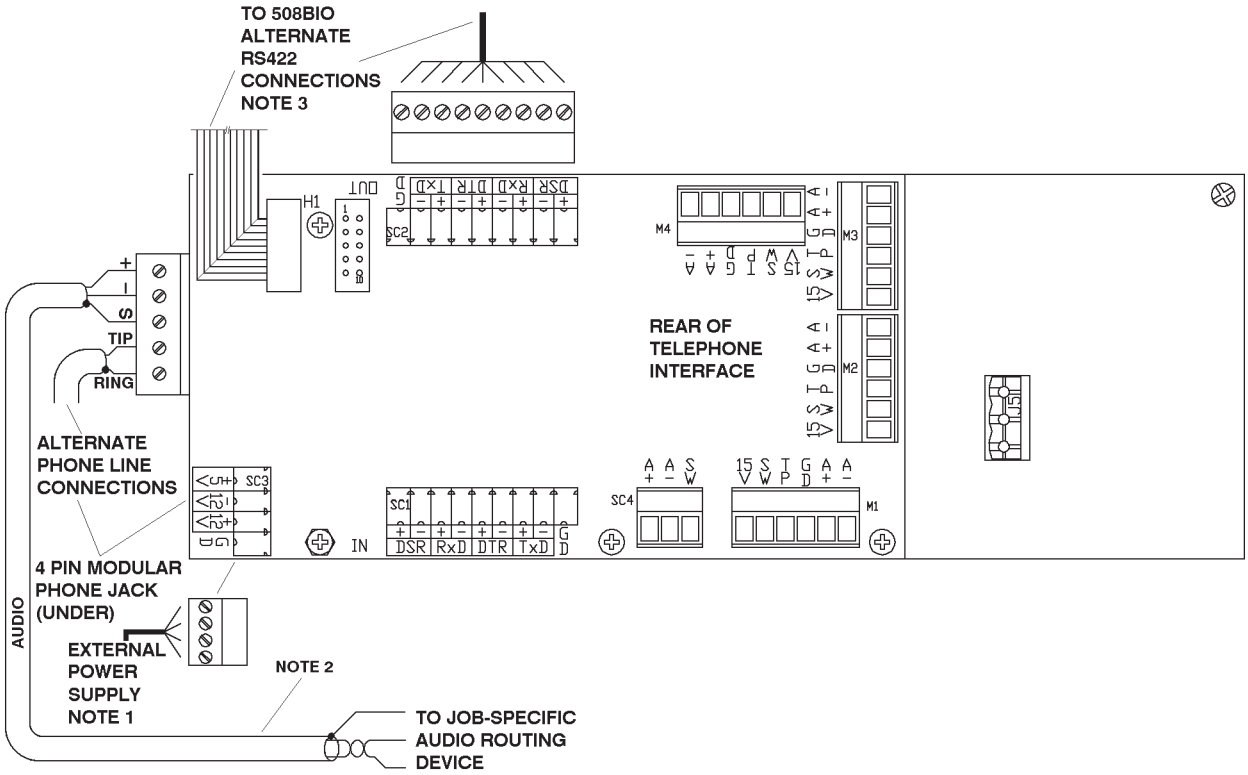


NOTES

1. Each audio (SIG) and control (CON) must be run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.

Figure 26 - Interconnection Diagram
508T to 8000 Series TIPS™

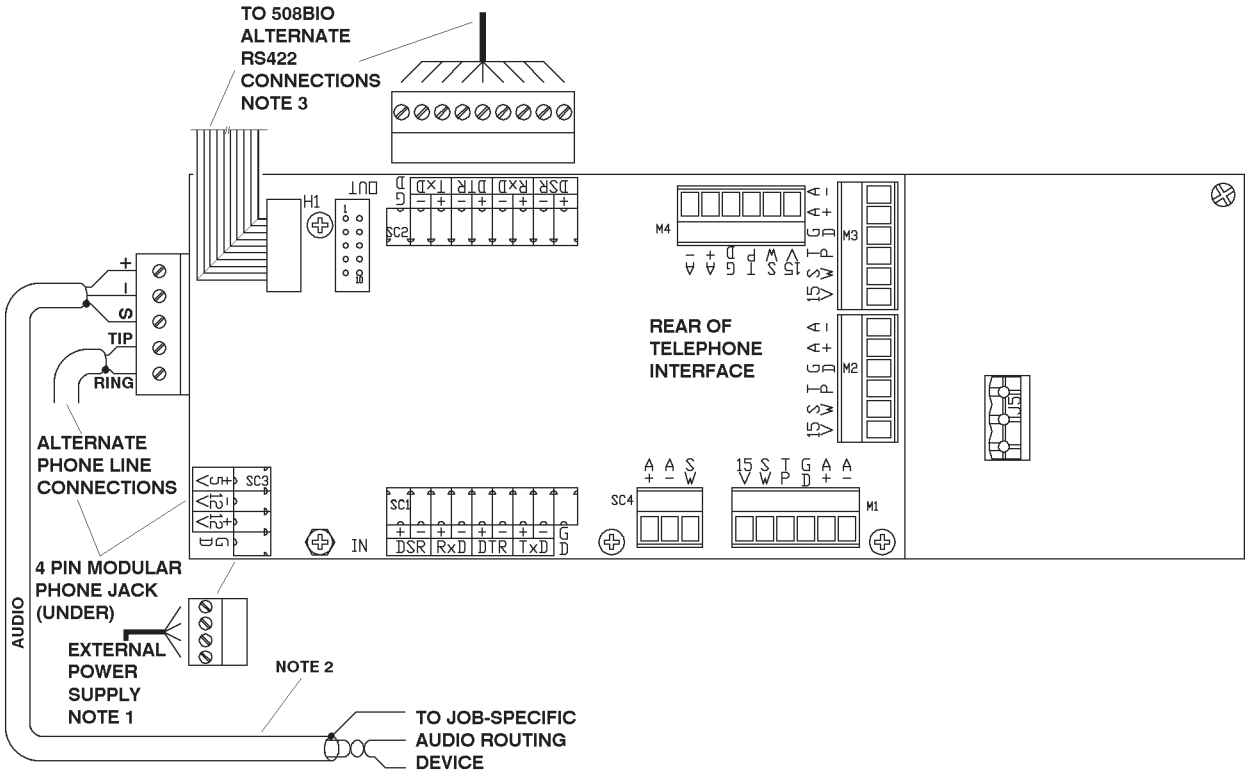
Innovative Electronic Designs, Inc. • 9701 Taylorsville Road • Louisville, Kentucky 40299 • USA
Phone: (502) 267-7436 • Fax: (502) 267-9070 • Internet: http://www.iedaudio.com



NOTES

1. ELPAC WM-113, or equivalent
2. Each audio line is run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.
3. The RS422 Out is normally connected to the RS422 In of a 508BIO4, using either a ribbon cable or a cable as in Note 4.
4. RS422 cable is #22 AWG, 4 twisted pairs with an overall shield. Belden 9681, or equivalent.

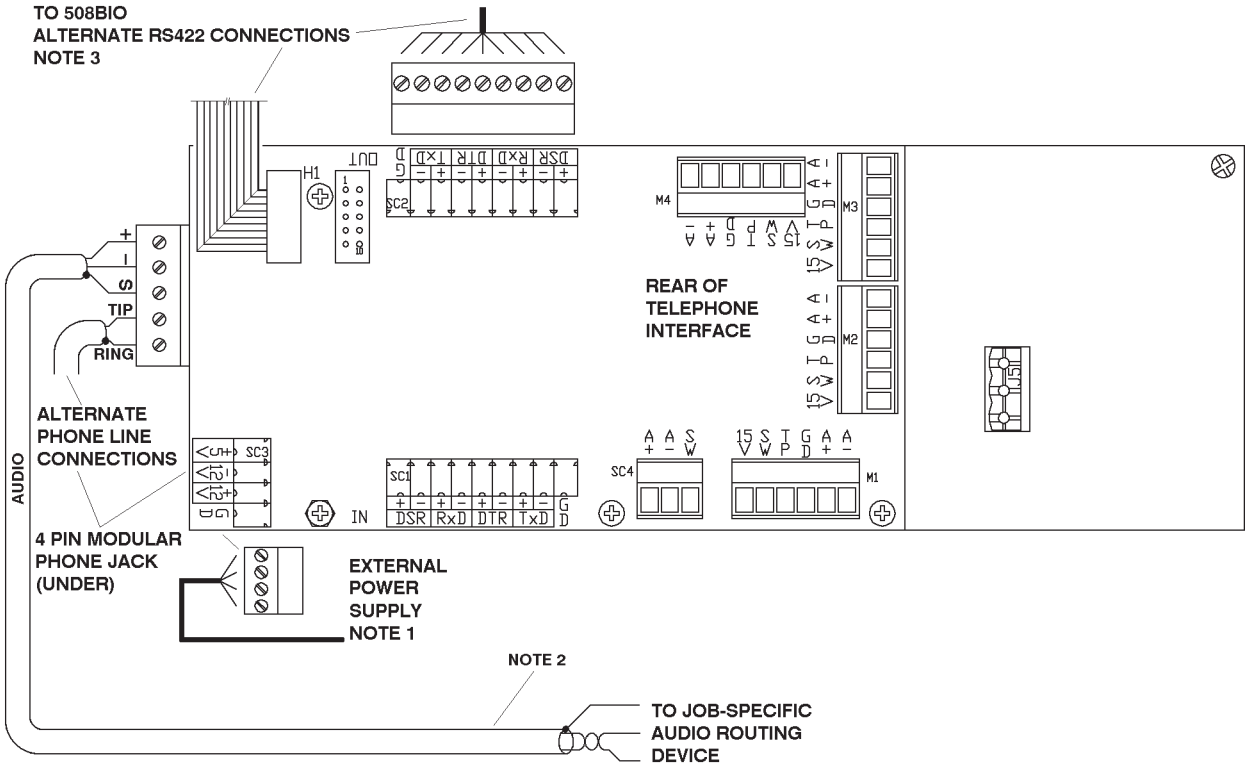
Figure 27 - Interconnection Diagram
508T4 to 500ACS



NOTES

1. ELPAC WM-113, or equivalent
2. Each audio line is run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.
3. The RS422 Out is normally connected to the RS422 In of a 508BIO4, using either a ribbon cable or a cable as in Note 4.
4. RS422 cable is #22 AWG, 4 twisted pairs with an overall shield. Belden 9681, or equivalent.

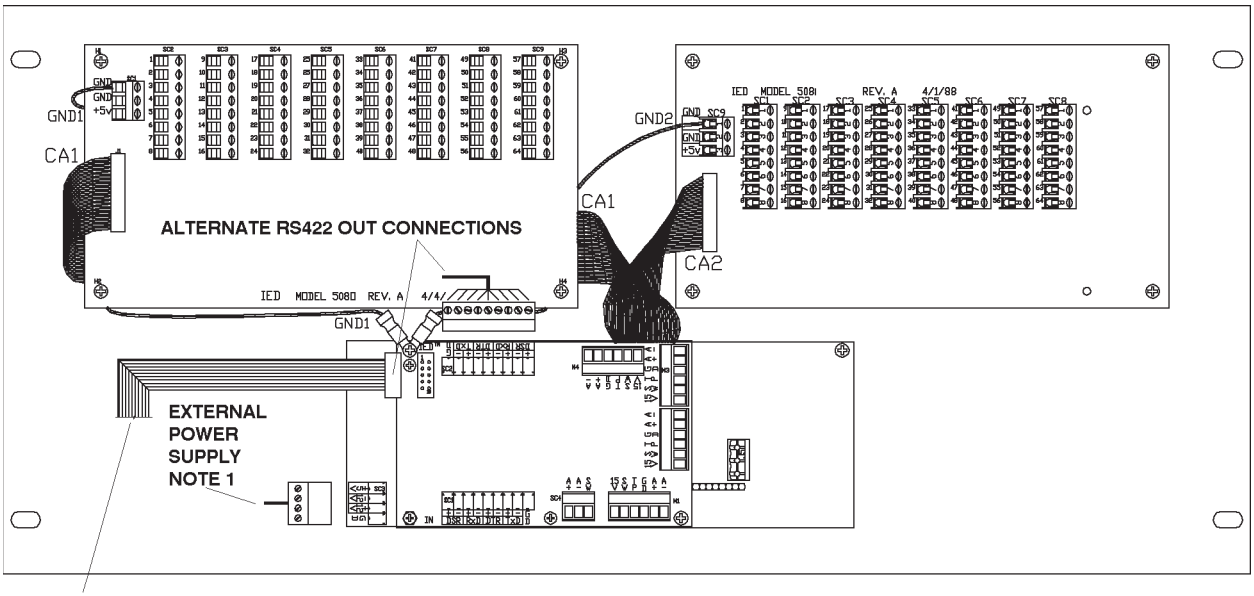
Figure 28 - Interconnection Diagram
508T4 to 2000 Series UDAPS™



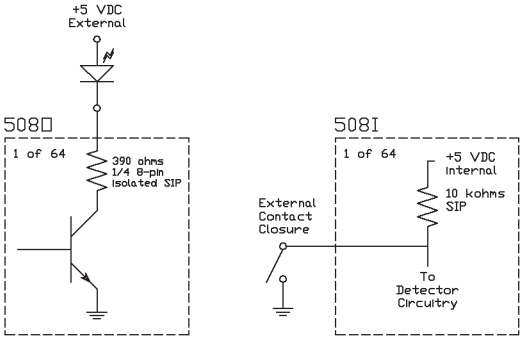
NOTES

1. ELPAC WM-113, or equivalent
2. Each audio line is run using a separate #22 AWG twisted pair in its own shield. Belden 8451, or equivalent.
3. The RS422 Out is normally connected to the RS422 In of a 508BIO4, using either a ribbon cable or a cable as in Note 4.
4. RS422 cable is #22 AWG, 4 twisted pairs with an overall shield. Belden 9681, or equivalent.

Figure 29 - Interconnection Diagram
508T4 to 8000 Series TIPS™



	Pin No.	Polarity	Function	Belden 9681 Color	Belden 9504 Color
Twisted pair	1	++	DSR	White body Blue stripe	Red
	2	–		Blue body White stripe	Black
	3			Shield	Shield
Twisted pair	4	++	RxD	White body Orange stripe	White
	5	–		Orange body white stripe	Black
Twisted pair	6	++	DTR	White body Green stripe	Green
	7	–		Green body White stripe	Black
Twisted pair	8	++	TxD	White body Brown stripe	Blue
	9	–		Brown body White stripe	Black



NOTE: RS422 OUT is normally connected to the RS422 IN of a 4174 Mainframe or a 564 relay frame.

Figure 30 - Interconnection Diagram
508BIO4 to 500ACS With RS422 Serial Communications