

SIEMENS

Installation Instructions

Model ASC-2

Audio Supervision Card

INTRODUCTION

The Model ASC-2 Audio Supervision Card from Siemens Industry, Inc. supervises the output of one primary amplifier and one backup amplifier in an MXLV System. The ASC-2 compares the amplifier output to the amplifier input from the OMM-1. If they do not match, a trouble indicates on the MKB-2. The supervised output may be connected in Style Y or Style Z. The audio output can be connected to the ZC zone card series.

If the primary amplifier fails, the ASC-2 switches:

- the input signal for the failed amplifier to the backup amplifier,
- and the backup amplifier output to the audio channel formerly served by the failed amplifier.

This card provides the means for multiple ASC-1/-2 cards that supervise many amplifiers to share one backup amplifier.

The primary amplifier gets its input from the OMM-1 terminal block adjacent to the OCC-1 Output Control Card module. The amplifiers can be assigned to any one of the three audio risers by setting switch S2 on the ASC-2. Follow the switch setting instructions in the **INSTALLATION** section to set the desired amplifier input selections.

The ASC-2 occupies one of eleven sub-addresses of the OCC-1. When installing an ASC-2 card, use the CSG-M configuration printout to locate the address of the card. Use switch S1 to set a unique address for the ASC-2 card as described in the **INSTALLATION** section.

For additional information on the Voice System, refer to the MXLV Manual P/N 315-092036.

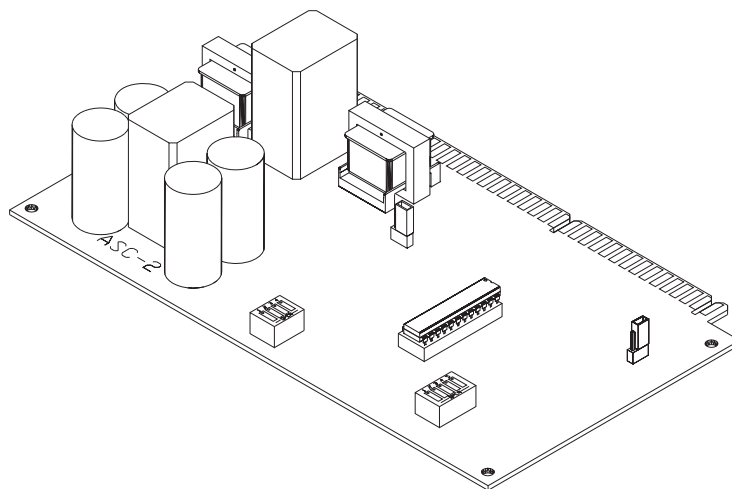


Figure 1
ASC-2 Module Board

INSTALLATION

Remove all system power before installation, first battery and then AC.
 (To power up, connect the AC first and then the battery.)

1. Remove the card from its protective bag. Do not touch the gold edge of the board.
2. Refer to the CSG-M configuration printout for the address of the module.
3. Set the card address on switch S1 using dipswitches SW1 - SW4.
 - a. Refer to Figure 2 for the location of S1.
 - b. Refer to Table 1 for switch settings.
 - c. Set the card address (See NOTE below).

TABLE 1									
ADDR	4	3	2	1	ADDR	4	3	2	1
ILLEGAL	0	0	0	0	8	X	0	0	0
1	0	0	0	X	9	X	0	0	X
2	0	0	X	0	10	X	0	X	0
3	0	0	X	X	11	X	0	X	X
4	0	X	0	0	ILLEGAL	X	X	0	0
5	0	X	0	X	ILLEGAL	X	X	0	X
6	0	X	X	0	ILLEGAL	X	X	X	0
7	0	X	X	X	ILLEGAL	X	X	X	X

NOTE: To open a dipswitch, press down on the side of the dipswitch marked OPEN. To close a dipswitch, press down on the side of the dipswitch opposite the side marked OPEN.

To open a slide switch, push the slide to the side opposite the side marked ON. To close a slide switch, push the slide to the side marked ON.

X = SWITCH CLOSED OR ON, 0 = SWITCH OPEN OR OFF

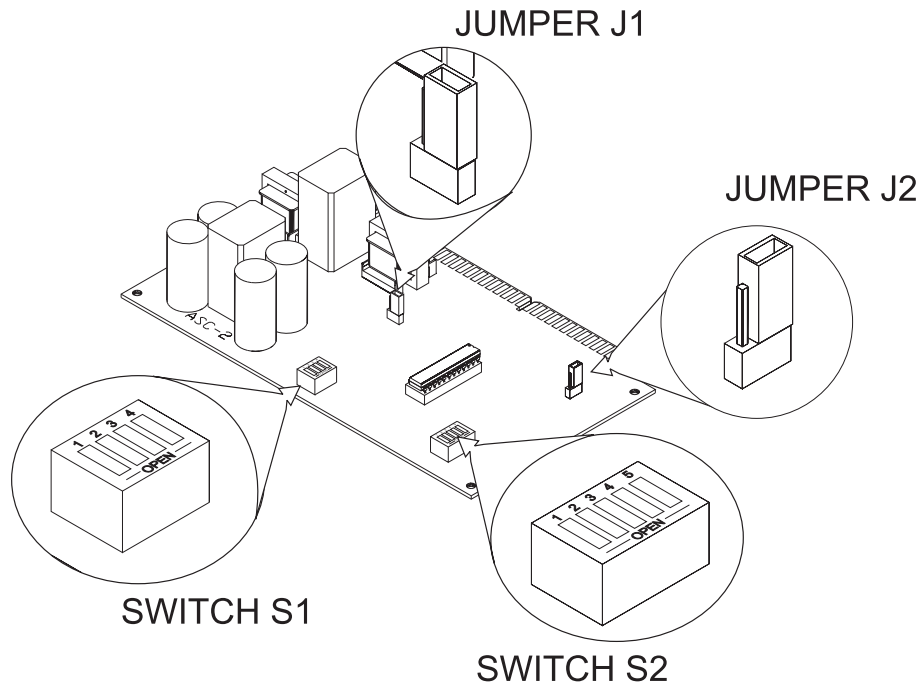


Figure 2
Locating Switches S1 and S2 and Jumpers J1 and J2 on the ASC-2

4. Set switch S2 for proper supervision of the ASC-2.

CAUTION: Incorrect settings can cause failure of the backup amplifier to transfer.

SETTING SWITCH S2

	Amplifier input			
	Riser 1	Riser 2	Riser 3	ILLEGAL
SW1	O	X	O	X
SW2	O	O	X	X

SW3	NOT USED
SW4	NOT USED

SW5	X = Enable backup amplifier supervision O = Disable backup amplifier supervision
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X = Closed or ON, O = Open or OFF

- a. Check the system wiring plan to be certain of amplifier and riser assignments; then set switch S2, dipswitches SW1 and SW2 by following the table above. Refer to Figure 2 for the location of switch S2.
 - b. Close SW5 on switch S2 if this ASC-2 card supervises the backup amplifier. If one backup amplifier is shared by more than one ASC-2 card, open SW5 of S2 on all ASC-2 cards except the one that supervises the backup amplifier.
5. Refer to Figure 2 again; note the position of J1 and J2.

a. **To set the ASC-2 for 25.2V RMS:**

- Refer to No. 10 below.
- Place J1 jumper in the left-hand position with the gold-plated edge facing up.
- Check that fuse F1 is 6A.

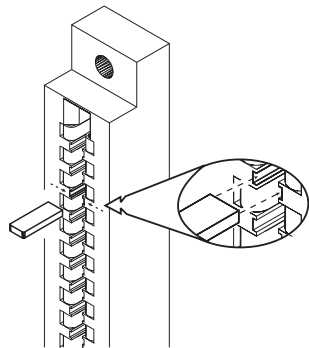


Figure 3
Placing the User Key in the OMM-1

b. **To set the ASC-2 for 70.7V RMS:**

- Refer to No. 10 below.
- Place the J1 jumper in the right-hand position with the gold-plated edge facing up.
- Check that fuse F1 is 2A.

- c. If the backup amplifier is an EL-410C/D, place the jumper J2 in the upper position with the gold-plated edge facing up. This connects the backup amplifier input negative side to the MXLV power supply. Otherwise, place J2 in the lower position. Check the data sheet of your amplifier for more information.

6. Do **NOT** install the card in its edge connector until ALL OMM-1 field wiring is completed and checked for shorts, opens, and other faults. Refer to the **Wiring Checkout Chart**. Replace the card in its protective bag if the wiring is not complete.
7. Place the user key from the installation kit in the OMM-1 card edge connector for the ASC-2. This prevents the installation of any other card type in the ASC-2 slot. Two keys to prevent reverse installation of the card are already factory installed in the OMM-1 edge connectors. See Figures 3 and 4.

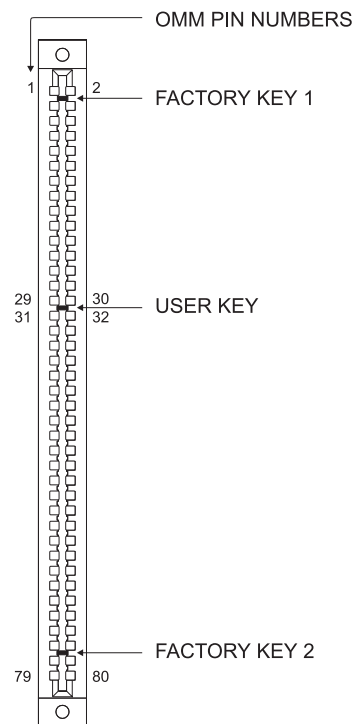


Figure 4
Location of the User Key for the ASC-2

8. **If one backup amplifier is shared by more than one ASC-2**, connect terminal 3 of the terminal block on the primary ASC-2 to terminal 3 of the terminal blocks of all other ASC-2 cards that share the same backup amplifier.

If the system has NO backup amplifier, place a jumper across terminals 3 and 4.

9. After completing and checking all field wiring, place the card in its card edge connector. The components on the board must face the 22-position terminal block where the wiring terminates. Press the card firmly in place to be sure it is seated properly in the edge connector.

CAUTION

At all times handle all plug-in cards with extreme care. When inserting or removing a card, be sure the position of the card is kept at right angles to the OMM-1 board. Otherwise, the plug-in card can damage or displace other components.

10. If power limiting is required with a 70.7V application, use a PLC-4. Refer to the *PLC-4 Installation Instructions*, P/N 315-093312, and to Figures 5 and 6 for wiring information.

ELECTRICAL CHARACTERISTICS

Active 5VDC Module Current	10mA
Active 24VDC Module Current	80mA
Standby 24VDC Module Current	85mA

Maximum wire size: 14 AWG twisted pair, unshielded

Minimum wire size: 18 AWG twisted pair, unshielded

NOTE: Use unshielded twisted pair for high level amplifier connections. Use shielded twisted pair for terminals 1

and 2. Use single conductor wire for other connections.

Maximum wire length:

Refer to the decibel (dB) loss chart in the Speaker Application Guide. The wire length includes:

- (1) from the amplifier to the ASC-2,
- (2) from the ASC-2 to the ZC series of audio cards, and
- (3) also includes the wire in the longest audio zone served by the amplifier.

High level outputs: 25.2V RMS, 4.0A, 100W max
70.7V RMS, 1.4A, 100W max

Backup amplifier input: 1V RMS max

WIRING

Refer to Figures 5 and 6.

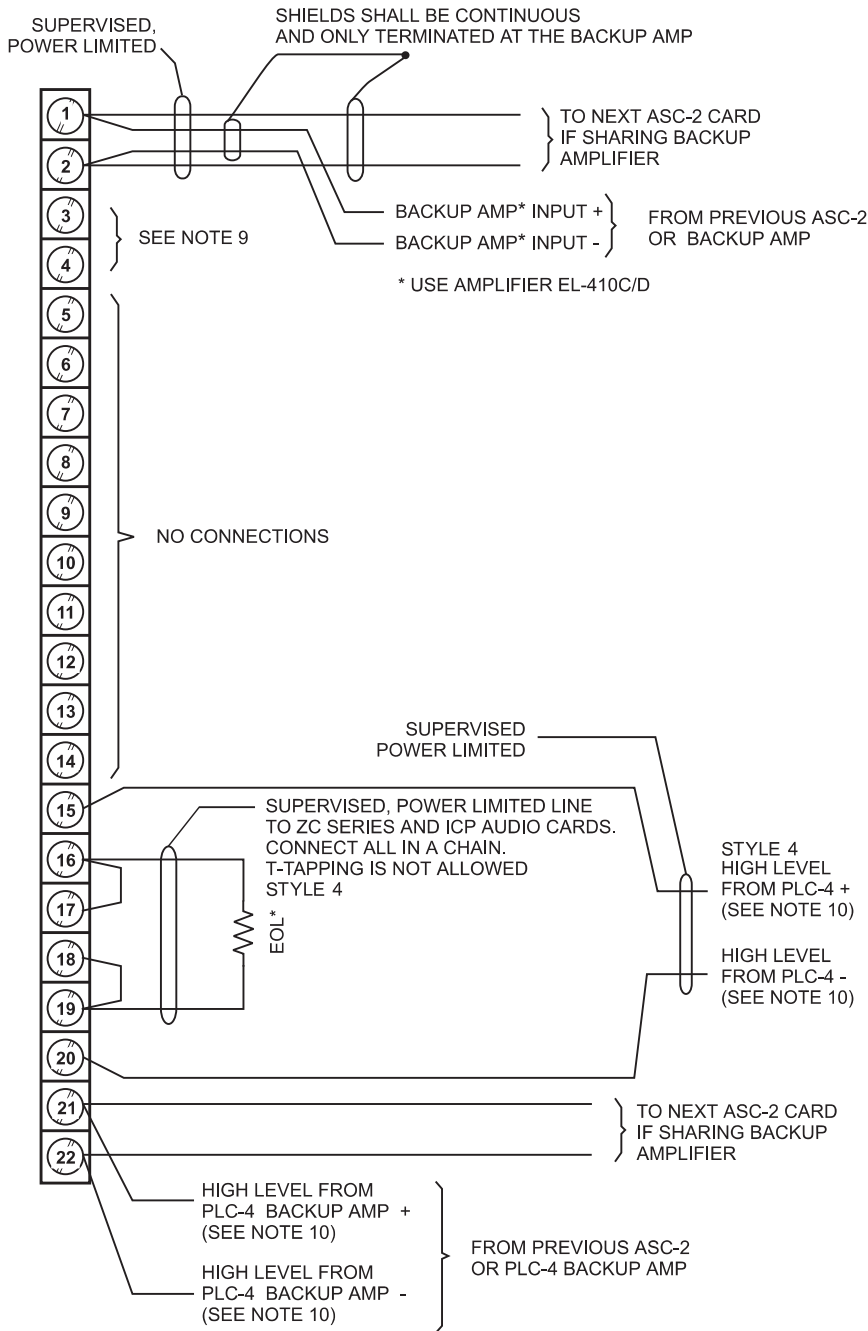
All wiring must comply with national and local codes.

Some signal is lost in the zone wires due to line resistance. Refer to the Speaker Application Guide (<http://www.buildingtechnologies.usa.siemens.com/Support/?languagecode=en>). Then click on Application Guide in Fire Safety) for further information. A reduction in load reduces the loss. Use the largest wire size possible for minimum loss.

ASC-2 WIRING CHECKOUT CHART

RESISTANCE BETWEEN TERMINALS	RESISTANCE DESIRED	POSSIBLE CAUSE OF PROBLEM
1 to 2	> 1 Meg	Line open; other than EL-410C/D connected
1 through 22 to chassis	> 1 Meg	Short in wiring
15 to 16 17 to 18 19 to 20	> 1 Meg	Line shorted
16 to 17 18 to 19	< 1.5 ohms	Line open
15 to 20	0.2 ohms* (25.2V system) 1.4 ohms* (70.7V system) *These are the output impedances of the EL-410C/D power amplifier.	Line open Line open

> = greater than, < = less than.



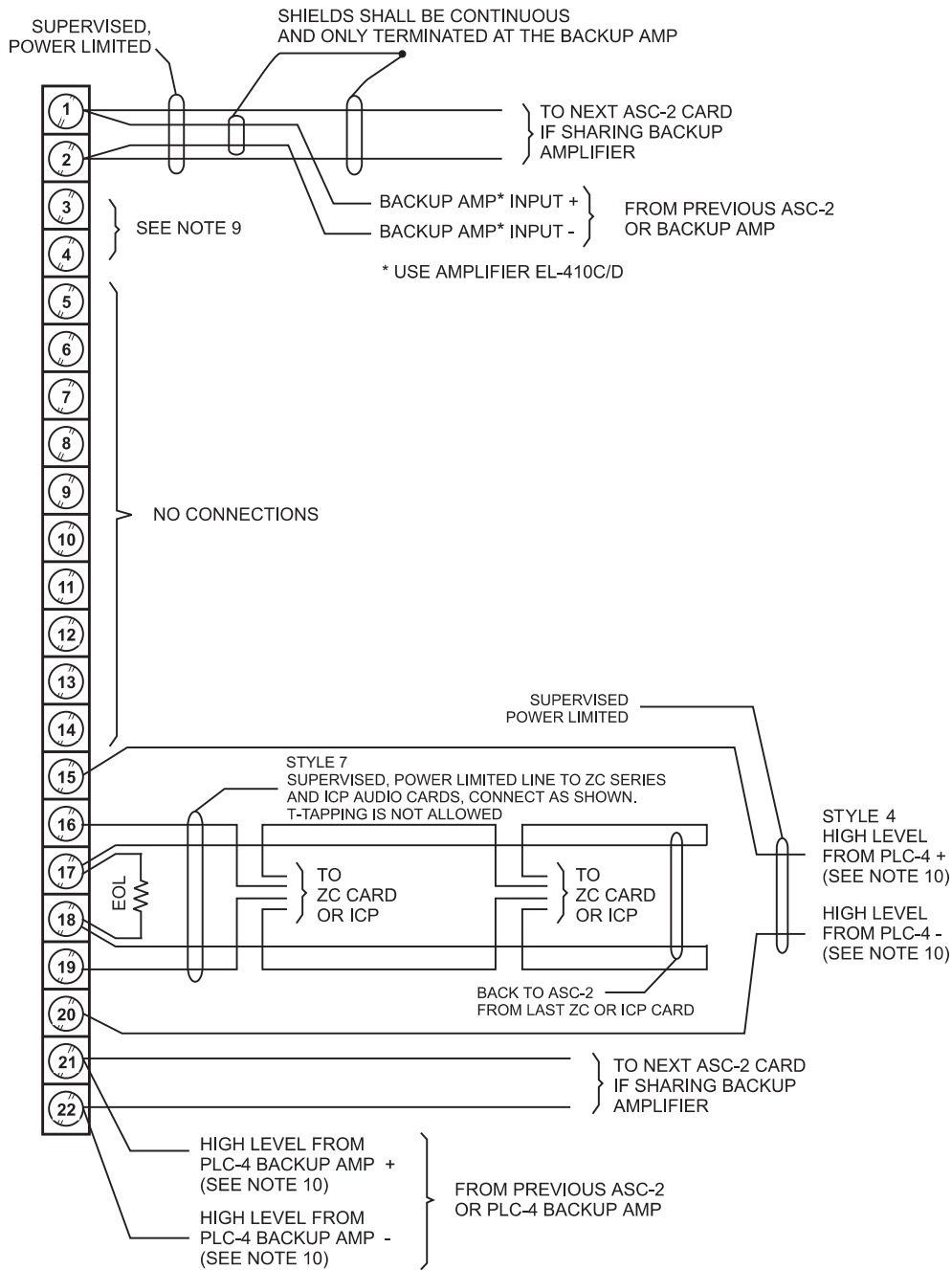
*EOL is located at the last ZC Series or ICP audio card

NOTES:

1. All wiring must be in accordance with Article 760 of NEC or the local building codes.
2. Minimum wire size: 18 AWG twisted pair.
3. Maximum wire size: 14 AWG twisted pair.
4. High level amplifier connections = unshielded twisted pair.
Low level amplifier connections = shielded twisted pair.
Other connections = single conductor wire
5. Maximum rating:
25.2V RMS: 100W - 4.0A each input/output
70.7V RMS: 100W - 1.4A each input/output
6. Maximum loop length: Refer to Tables 2 and 3.
7. The wire length includes: The length of the wire from the ASC-2 to the amplifier, the length of the wire from the ASC-2 to the ZC Series of audio cards and back, and the length of the longest speaker zone served by the amplifier.
8. End of Line device: 24K, ½W, 5%, (P/N 140-820405)
9. If there is no backup amplifier, connect terminals 3 and 4 together. If one backup amplifier is shared by more than one ASC-2, connect all terminal 3s together and leave the terminal 4s unconnected.
10. Required for power limited wiring.

Refer to Wiring Specification for MXL, MXL-IQ and MXLV Systems, P/N 315-091772 revision 6 or higher, for additional wiring information.

Figure 5
ASC-2 Style Y Wiring Diagram



NOTES:

1. All wiring must be in accordance with Article 760 of NEC or the local building codes.
2. Minimum wire size: 18 AWG twisted pair.
3. Maximum wire size: 14 AWG twisted pair.
4. High level amplifier connections = unshielded twisted pair.
Low level amplifier connections = shielded twisted pair.
Other connections = single conductor wire
5. Maximum rating:
25.2V RMS: 10W - 4.0A each input/output
70.7V RMS: 100W - 1.4A each input/output
6. Maximum loop length: Refer to Tables 2 and 3.
7. The wire length includes: The length of the wire from the ASC-2 to the amplifier, the length of the wire from the ASC-2 to the ZC Series of audio cards and back, and the length of the longest speaker zone served by the amplifier.
8. End of Line device: 24K, 1/2W, 5%, (P/N 140-820405)
9. If there is no backup amplifier, connect terminals 3 and 4 together. If one backup amplifier is shared by more than one ASC-2, connect all terminal 3s together and leave the terminal 4s unconnected.
10. Required for power limited wiring.

Refer to Wiring Specification for MXL, MXL-IQ and MXLV Systems, P/N 315-091772 revision 6 or higher, for additional wiring information.

Figure 6
ASC-2 Style Z Wiring Diagram

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