

# SIEMENS

## Installation Instructions

### Model ASC-1

### Audio Supervision Card Module

## INTRODUCTION

The Model ASC-1 Audio Supervision Card from Siemens Industry, Inc. supervises the outputs of up to three primary amplifiers and one backup amplifier by comparing the amplifier output to the amplifier input that is available on the OMM-1 Output Master module. A trouble is indicated on the MKB-2 if they do not match.

The audio outputs from the ASC-1 can be connected to the ZC zone card series for audio circuits. Wiring from the ASC-1 to the ZC series cards is NOT supervised.

If one of the primary amplifiers fails, the ASC-1 switches:

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

The ASC-1 switches the backup amplifier only to the first amplifier that fails.

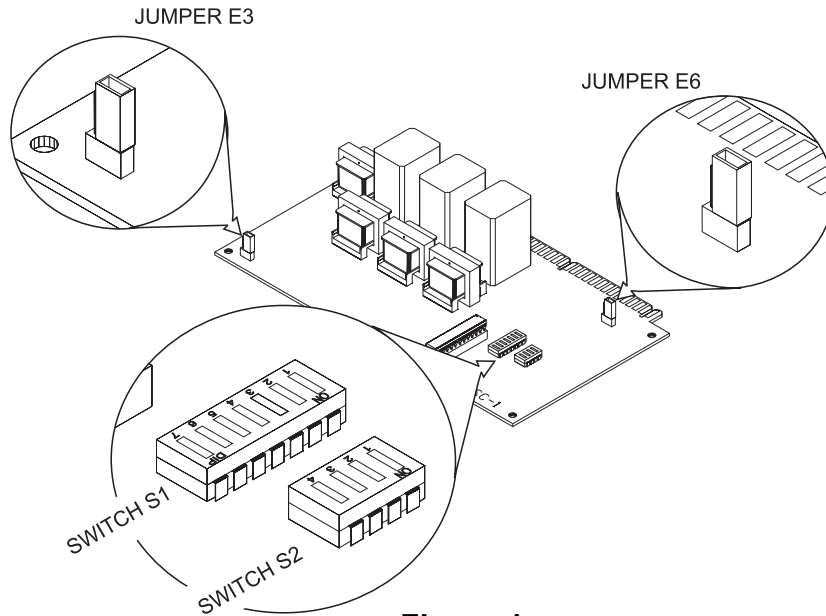
One backup amplifier can be shared by up to 11 ASC-1 cards supervising as many as 33 amplifiers.

***A system that requires one to one backup must use one ASC-1 card for each primary and backup amplifier.***

The primary amplifiers get their inputs 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 S1 on the ASC-1. Follow the switch setting instructions below to set the desired amplifier input selections.

The ASC-1 occupies one of eleven subaddresses of the OCC-1 Output Control Card module. When installing an ASC-1 card, use the CSG-M (Accu-LINK) configuration printout to locate the address of the card. Use switch S2 to set a unique address for the ASC-1 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-1 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.)

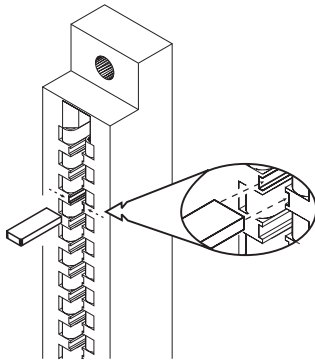
1. Remove the card from its protective bag. Do not touch the gold edge of the board.
2. Refer to the CSG-M configuration printout for the address of the module.
3. Set the card address on switch S2 using dipswitches SW1-SW4.
  - a. Refer to Figure 1 for the location of S2.
  - b. Refer to Table 1 for the switch settings.
  - c. Set the switches (See Note below).

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

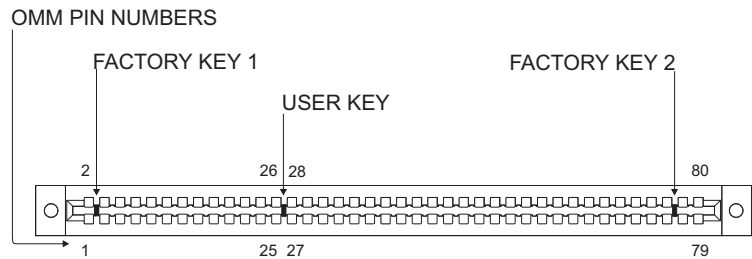
X = SWITCH CLOSED OR **ON**, 0 = SWITCH OPEN OR **OFF**

**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.



**Figure 2**  
**Placing the Card Slot Key in the OMM-1**



**Figure 3**  
**Location of the User Key for the ASC-1**

- Set Switch S1 for proper supervision of the ASC-1. Check the system wiring diagram (Figure 4) for amplifier and riser assignments. Set switch S1 dipswitches SW1 through SW6 using the tables below as guides. Refer to Figure 1 for the location of switch S1.

Amplifier 1 uses S1, switches SW1 and SW2.

SW2	SW1	Amplifier input
O	O	Riser 1
O	X	Riser 2
X	O	Riser 3
X	X	No amplifier connected

Amplifier 2 uses S1, switches SW3 and SW4.

SW4	SW3	Amplifier input
O	O	Riser 1
O	X	Riser 2
X	O	Riser 3
X	X	No amplifier connected

Amplifier 3 uses S1, switches SW5 and SW6.

SW6	SW5	Amplifier input
O	O	Riser 1
O	X	Riser 2
X	O	Riser 3
X	X	No amplifier connected

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

- If this ASC-1 card supervises the backup amplifier, SW7 on switch S1 must be CLOSED or ON. If one backup amplifier is shared by more than one ASC-1 card, SW7 of S1 must be OPEN or OFF on all ASC-1 cards except the one supervising the backup amplifier.
- Set the two jumpers on the ASC-1, E3 and E6. Refer to Figure 1 for the locations of the jumpers.
  - Jumper E3 sets the ASC-1 for 25.2V RMS or 70.7V RMS amplifier output.
 

**To set the jumper for 25.2V RMS**, place the jumper in the left-hand position.

**To set the jumper for 70.7V RMS**, place the jumper in the right-hand position.
  - If the backup amplifier is an EL-410C/D, place jumper E6 in the right-hand position. This connects the backup amplifier input negative side to the MXLV power supply. Other amplifiers may not allow this. If not, place the jumper in the left-hand position. Check the data sheet of your amplifier for more information on this setting.
- 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.
- Place the card slot key from the installation kit in the OMM-1 card edge connector for the ASC-1. This prevents the installation of any

other card type in the ASC-1 slot. Two other keys that prevent reverse installation of the card are already factory installed in the OMM-1 edge connectors. See Figures 2 and 3.

**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.

9. ***If one backup amplifier is shared by more than one ASC-1***, connect terminal 3 of the terminal block of the primary ASC-1 to terminal 3 of the terminal blocks of all of the other ASC-1 cards that share the same backup amplifier. ***If the system has NO backup amplifier***, place a jumper across terminals 3 and 4.
10. 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.

**ELECTRICAL CHARACTERISTICS**

Active 5VDC Module Current	10mA
Active 24VDC Module Current	50mA
Standby 24VDC Module Current	55mA

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 the length of the wire from the amplifier to the ASC-1, from the ASC-1 to the ZC series of audio cards, and the wire length in the longest audio zone served by the amplifier.

High level outputs: 25.2V RMS, 7.2A, 100W max  
70.7V RMS, 2.5A, 100W max

Backup amplifier input: 1V RMS max

**WIRING**

Refer to Figure 4.

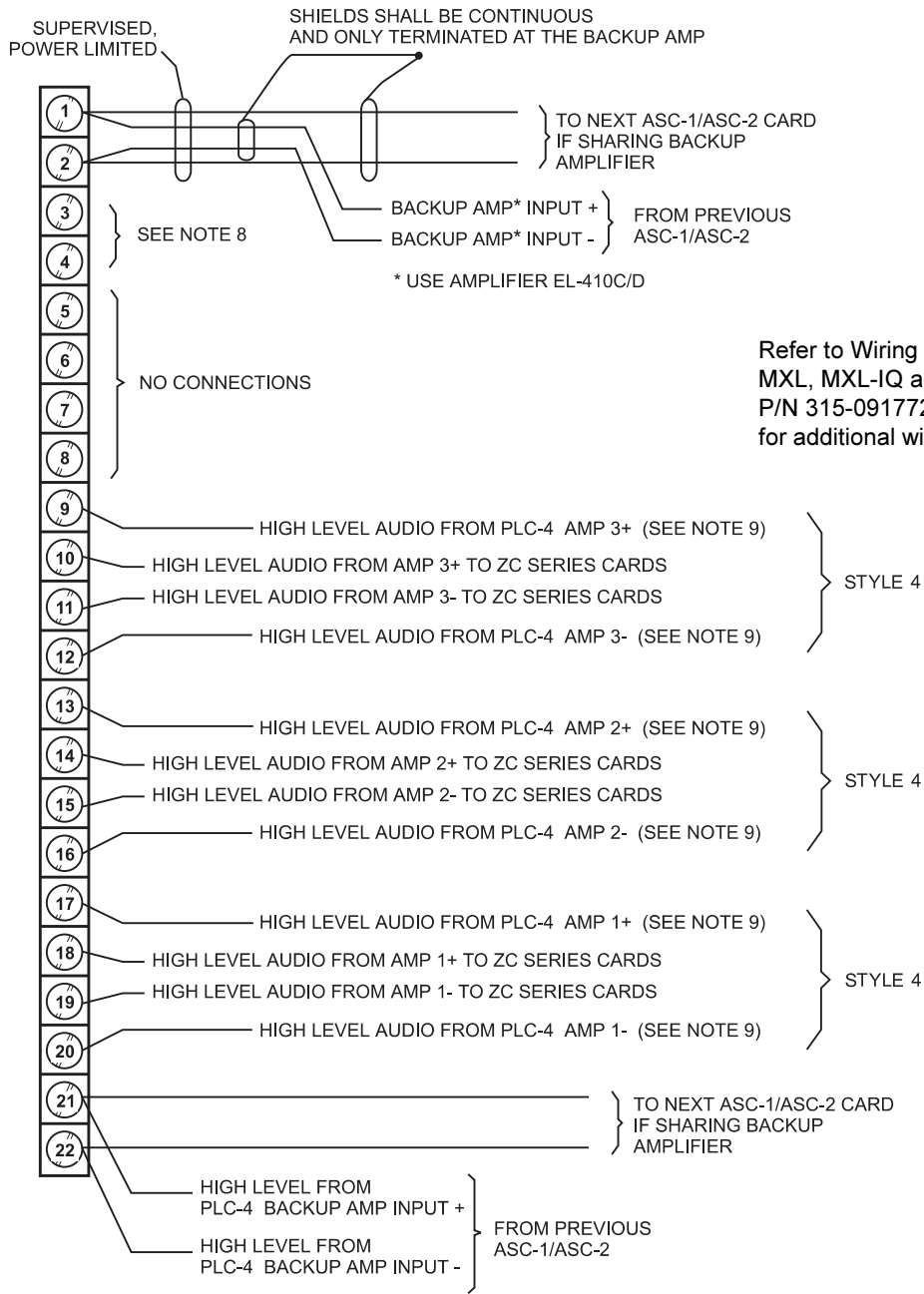
***All wiring must comply with national and local codes.***

Some signal is lost in the zone wires due to line resistance. A reduction in load reduces the loss. Use the largest wire size possible for the smallest loss. 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 the smallest loss.

### ASC-1 WIRING CHECKOUT CHART

RESISTANCE BETWEEN TERMINALS	RESISTANCE DESIRED	POSSIBLE CAUSE OF PROBLEM
1 to 2	> 1 Meg	Line shorted; other than EL-410C/D connected
1 through 22 to chassis	> 1 Meg	Short in wiring
9 to 10 10 to 11 11 to 12 12 to 13 13 to 14 14 to 15 15 to 16 16 to 17 17 to 18 18 to 19 19 to 20 20 to 21	> 1 Meg	Short in wiring
9 to 12 13 to 16 17 to 20 21 to 22	0.2 ohm* (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

> = is greater than, < = is less than.



**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 the decibel loss tables.
7. The wire length includes: The length of the wire from the ASC-1 to the amplifier, the length of the wire from the ASC-1 to the ZC Series of audio cards and back, and the length of the longest audio zone served by the amplifier.
8. If there is no backup amplifier, connect terminals 3 and 4 together. If one backup amplifier is shared by more than one ASC-1, connect all terminal 3s together and leave the terminal 4s unconnected.
9. Required for power limited wiring.

**Figure 4**  
**ASC-1 Wiring Diagram**



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