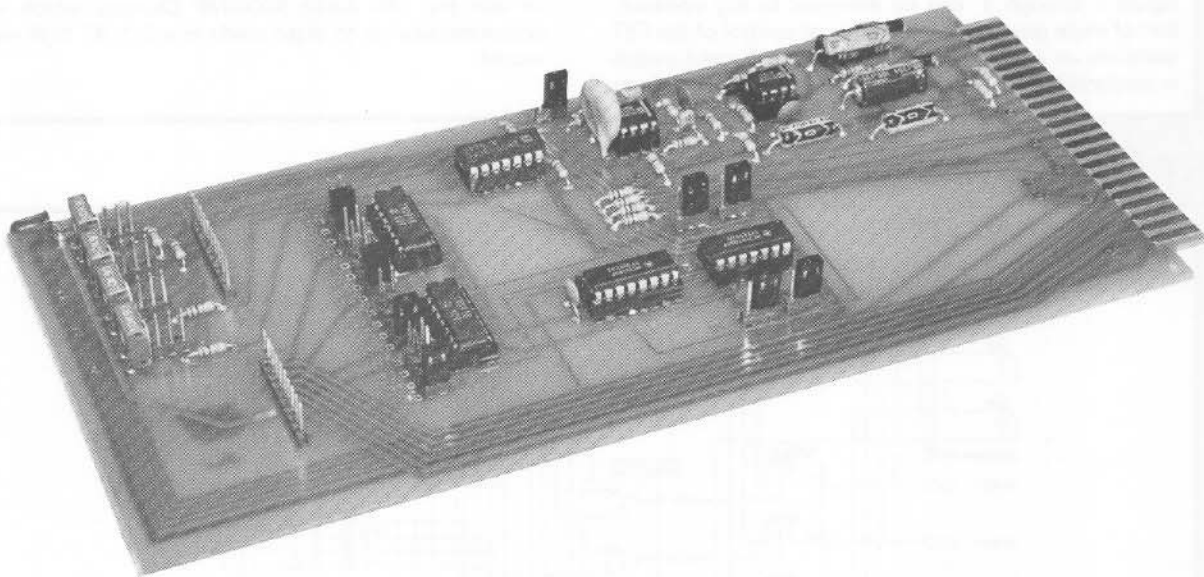


TM

# USI AUDIO

## 3081-SA Eight Input Summing Amplifier for DME-3000 System



### Product Data

- Mixes eight isolated, unbalanced line level inputs
- Inputs 1-4 feature internal or external level control
- Inputs 5-8 are routed directly to the mixing buss
- Muting feature with four mute groups and "normally on" and "normally muted" mute settings
- LED for indication of overload at the outputs
- Jumper to set overall gain for the card at 0 dB or +10 dB
- For use with the USI Audio DME-3000 Series modules and chassis

#### Specifications:

##### Input Impedance

(Inputs 1-4) 10K $\Omega$  - 50K $\Omega$   
Depending upon input pot setting

(Input 5-8) 10K $\Omega$

##### Output Level (Balanced Out)

+22 dBm 600 $\Omega$  load  $\pm$ 12VDC  
+25 dB 10K $\Omega$  load  
+24 dBm 600 $\Omega$  load  $\pm$ 15 VDC  
+26 dB 10K $\Omega$  load

**Frequency Response** 20 Hz - 50 kHz,  $\pm$ 0.5 dB  
at Max output, 600 $\Omega$  load

**Mute Level** -85 dB @ 1kHz

**Harmonic Distortion** <0.09% @ +20 dBm and  
600 $\Omega$  load

**Signal to Noise** -80 dB (-120 dBm E.I.N.)  
@ +20 dBm and 600 $\Omega$

**Dimensions** 4.25" x 9.375" x 0.75"  
(10.8cm x 23.8cm x 1.9cm)

**Power Requirements**  $\pm$ 12-15 VDC  
30 mA @  $\pm$ 12VDC Max  
35 mA @  $\pm$ 15VDC Max

**Net Weight** 0.31 lbs. (0.14 kg)

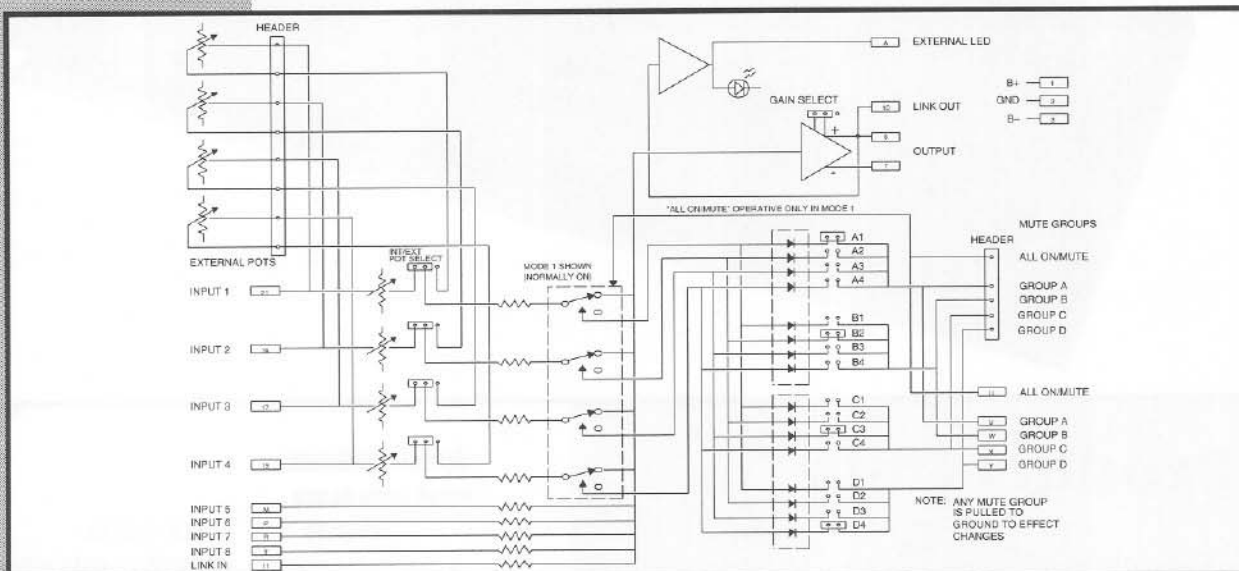
**Shipping Weight** 1 lbs. (0.45 kg)

## Description

The USI Audio Model 3081-SA is a multipurpose audio processor designed for use in custom audio applications. It provides high performance in a cost effective package which can be fabricated into a system with minimum shop and field labor. The Model 3081-SA provides up to 8 unbalanced isolated inputs combined to a single balanced output. Inputs 1 through 4 are provided with trim pots on the front of the card for level control. Additionally, the level of these inputs may be controlled by external pots individually assigned by jumpers on the card. Inputs 5 through 8 sum without individual level control. The unit provides four mute groups as well as a master on/mute. Each of the inputs 1 through 4 can be assigned to any combination of mute groups to allow external control of the FET switches on each input. Additionally, each input switch is assignable through a jumper to allow either a "nor-

mally on" state or a "normally muted" state. The mute groups are initiated by a closure to ground either from the rear screw terminals or an onboard pin block for use with a front control panel. The 3081-SA includes a LED peak indicator that lights when overload occurs at the outputs. In addition, the unit includes terminals to accommodate a remote LED. Gain may be set via a jumper to either unity or +10 dB to compensate for consumer equipment interfacing. The main output is differentially balanced and includes link in and link out connections to allow combining of cards. The unit is designed to be used as either a stand alone card with edge connectors installed within a rack or enclosure, or with the USI Audio 3000-MF Chassis, which will accommodate up to eight cards in a 5 1/4" high rack mount.

## Block Diagram



## Architect's and Engineer's Specifications

The card shall be a general purpose audio summing amplifier with facilities for page priority muting. It shall provide eight unbalanced inputs summed to a single differentially balanced output. The card shall include input and output connections for linking multiple cards together. Four of the inputs shall be attenuated from either on board trim pots, or from externally connected trim pots. The remain four inputs shall be routed directly to the summing buss without attenuation. The card shall provide a muting circuit encompassing the four attenuatable inputs. There shall be four different mute groups to which any or all of the four inputs can be

assigned. Additionally, each of the four inputs shall be assignable to a "normally on" state or a "normally off" state. Activation of the muting circuit will take place when any the four mute control lines corresponding to the four mute groups is shorted to ground. The mute control lines can be accessed from a edge pin of the card or from a terminal block on the card. The card shall include an LED to indicate overload at the output. There shall be a jumper to select between unity and +10 dB gain. The card shall function as a stand-alone unit or with the USI Audio 3000-MF Chassis. The card shall be the USI Audio Model 3081-SA.