

# TELEX TECHNICAL DATA

*Audiocom*<sup>®</sup>

## MS2000 Master Station and Power Supply



### General Description

The MS2000 is a complete 2-channel master station and system power supply in a single unit. You simply plug it into any AC power outlet from 100 to 240 volts, add a microphone or headset, connect intercom stations to the back panel, and you're ready to communicate. It even has both 1-channel and 2-channel connectors, so you don't have to add a separate breakout box if you want to mix 1-channel and 2-channel intercom stations. The MS2000 fits in a standard 19-inch equipment rack and is 1 rack unit high.

### Features

- Speaker Station or Headset Station. Use the built-in speaker for listening and then add an optional Telex EGM Panel Microphone for talkback. Or, turn off the speaker volume, and plug in any of a variety of Telex headsets for more private communication.
- Voice Activated Microphone (VOX). Separate controls adjust the voice activation level for the headset microphone and panel microphone inputs.
- Public Address (PA) Output, with PA key. Use your intercom microphone to talk over a PA system.
- Back-lit Keys: Improves visibility in low-light.
- Incoming Call Indications: Red flashing call light, with beep tone if desired.
- Mic Kill Key: You can turn off all microphones on a channel to quickly clear the channel.
- Program Input for Each Channel. Connect any line-level audio source for monitoring in the speaker or headset, or for routing to the intercom channel. The program audio to the channel can be set to interrupt while the MS2000 operator is talking on the channel.
- Binaural (Stereo) Listening with External Powered Speakers. You can connect external powered speakers and then monitor channel 1 and 2 as separate right and left audio.
- Expandable. Add more channels by connecting optional ES4000A Expansion Stations. Each ES4000A adds four additional channels (up to eighteen channels).
- Clear-Com\* Compatible.

\* Brand names mentioned are the property of their respective companies.

### Specifications

#### General

##### Power Requirements:

AC Input: 100-240 VAC, 50/60 Hz

Channel Power: 24 VDC nominal (12 to 30 VDC), 65 to 150 mA

Dimensions: 1.75" (44.5 mm) high x 19" (483 mm) wide x 10.31" (261.9 mm) deep

Weight: approximately 4.5lb (2 kg)

##### Environmental Requirements:

Storage: -20°C to 80°C; 0% to 95% humidity, non-condensing

Operating: -15°C to 60°C; 0% to 95% humidity, non-condensing

#### Dynamic-mic Headset

Microphone: 50 to 200 ohm, dynamic (balanced or unbalanced)

Headphones: 150 to 600 ohm, monaural

Connector Type: XLR-4M

Pin 1 Microphone low

Pin 2 Microphone high

Pin 3 Headphone high

Pin 4 Headphone low

#### Panel Microphone or Electret-mic Headset

Microphone: 5 kohm, electret (-57 dB)

Headphones: 150 to 600 ohm, monaural

Connector Type: NTRK-8F

Pin 1 Microphone low

Pin 2 Panel microphone high

Pin 3 +12 VDC microphone bias

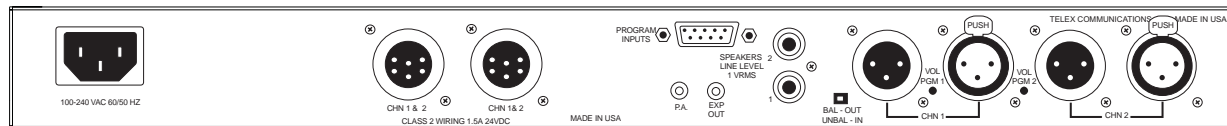
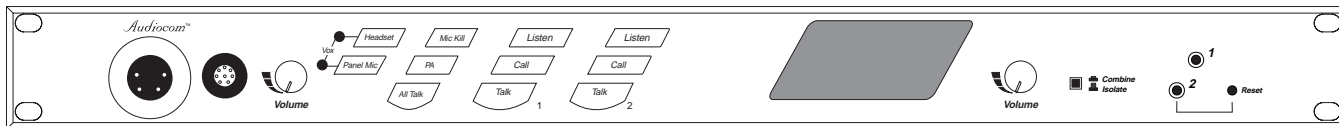
Pin 4 Headset microphone high

Pin 5 Headphone high

Pin 6 Headphone low

Pin 7 No connection

Pin 8 No connection



### Program Input

Input Level: 100mV maximum  
 Voltage Gain: 25 ±3 dB  
 Output Level :1.0 Vrms nominal, 2.3 Vrms maximum  
 Input Impedance: 75 kohm  
 Common Mode Rejection: Greater than 50 dB  
 Connector Type: DB9F  
 Pin 1 Ground  
 Pin 2 Program 1 input low  
 Pin 3 Program 2 input low  
 Pin 4 NC  
 Pin 5 NC  
 Pin 6 Program 1 input high  
 Pin 7 Program 2 input high  
 Pin 8 NC  
 Pin 9 NC

Connector Type: One XLR-3M and XLR-3F pair, wired in parallel, for each channel

Pin 1 Common  
 Pin 2 +24 VDC input  
 Pin 3 Intercom audio high

### Intercom Channels, Balanced Mode (Back panel switch set to BAL)

Output Level: 1 Vrms nominal  
 Input Impedance: 300 ohms  
 Bridging Impedance: greater than 10,000 ohms  
 Sidetone: -40 dB, 35 dB adjustable range  
 Call Signaling:  
 Send: 20 kHz ±100 Hz, 0.5 Vrms ±10%  
 Receive: 20 kHz ±800 Hz, 100 mVrms  
 Mic-Kill Frequency:  
 Send: 24 kHz ±300 Hz, 0.5 Vrms ±10%  
 Detect: 24 kHz ±800 Hz, 100 mVrms  
 Noise Contribution: less than -70 dB  
 Common Mode Rejection Ratio: greater than 50 dB  
 Connector Type: One XLR-3M and XLR-3F pair, wired in parallel, for each channel  
 Pin 1 Common  
 Pin 2 Intercom audio low and +24 VDC input  
 Pin 3 Intercom audio high and +24 VDC input

### PA Output

Output Level: 235 mVrms nominal  
 Connector Type: 1/8-inch Stereo Phone Jack  
 Tip: PA output high  
 Ring: Not used  
 Sleeve: Common

### Speaker Output

Output Level: 0 dB nominal (1.0 Vrms)  
 Output Impedance: 1000 ohms nominal  
 Frequency Response: 200 Hz to 8 kHz +1/-3dB  
 Connector Type: RCA Phono Jack  
 Tip: Speaker output high  
 Sleeve: Common

### Expansion Input /Output

Type: 2.0 mm stereo phone jack  
 Tip: Talk output  
 Ring: Listen input  
 Sleeve: Common

### Headphone Amplifier

Voltage Gain: 30 ±3 dB  
 Maximum Output: 250 mW ±10% into 150 ohms, 65 mW±10% into 600 ohms  
 Frequency Response: 200 Hz to 8 kHz +1/-3db  
 Incoming Call Beep Tone: 2 kHz, at the headphones  
 Total Harmonic Distortion: Less than 0.2% at 200 mW  
 Sidetone: 18 ±2 dB, adjustable

### Panel Microphone Amplifier

Voltage Gains:  
 Mic to CHN; 25±3 dB, before limiting  
 Mic to Headphone; adjustable, 45 dB ±10% maximum, into 150 ohms  
 Mic to PA; 15 ±3 dB, 235 mVrms ±10%  
 Frequency Response: 200 Hz to 8 kHz +1/-3dB  
 Total Harmonic Distortion: Less than 0.2% at CHN output  
 VOX Range: -75 to -30 dB, -60 dB factory set

### Intercom Channel, Unbalanced Mode (UNBAL position)

Output Level: 1 Vrms ±10%  
 Input Impedance: 150 ohms  
 Bridging Impedance: greater than 10,000 ohms  
 Call Signaling:  
 Send: 11 ±3 VDC  
 Receive: 4 VDC minimum

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