



MS-4002

Master Station and Power Supply

The MS-4002 is a complete 4-channel, balanced audio master station and 4-amp 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. The MS-4002 is now equipped with an Advanced programming Mode on the front panel, eliminating the need for internal DIP switches. It also has a feature that automatically senses the type of headset attached to the unit, either dynamic or electret. The MS-4002 fits in a standard 19-inch equipment rack and is 1 rack unit high. The MS-4002 is Clear-Com[™] compatible, with the ability to run in unbalanced mode.

Features

Auto-Sensing Headset Connector

The MS-4002 has a built-in autosensing headset connector that will determine automatically whether a dynamic or electret headset is connected to the system.

Speaker Station or Headset Station

Use the built-in speaker for listening and add an optional Telex[®] MCP-90 series Gooseneck Panel Microphone for talk-back. You can also turn off the speaker volume, and plug in a headset for 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 MS-4002 operator is talking on the channel.

Listening with External Powered Speakers

You can connect external powered speakers and then monitor channels 1, 2, 3 and 4.

Expandable

Add more channels by connecting optional EMS-4001 Expansion Stations. Each EMS-4001 adds four additional powered channels (up to twenty channels).

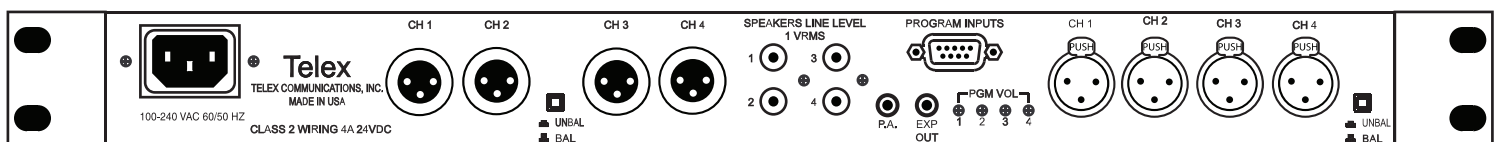
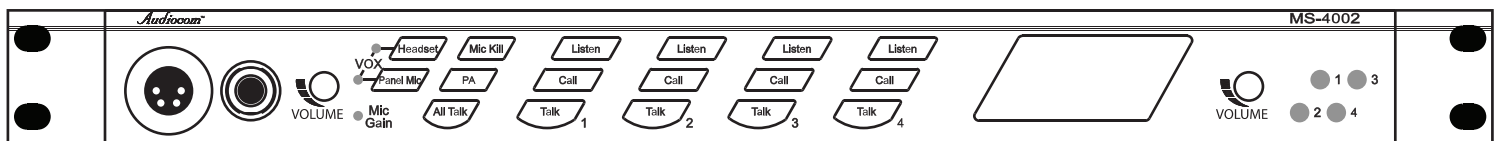
Instantaneous Auto-Reset

Instantaneous Auto Reset (IAR), the newest technology in performance and safety, which uses a revolutionary new circuitry that dynamically monitors line fault conditions. Then, when the fault is removed, automatically brings individual power supply channels up.

Clear-Com[™] Compatible

Can run in unbalanced mode.

Line Drawings



MS-4002 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

MS-2002 is capable of supplying 2 amps overall

Dimensions: 1.75" (44.5 mm) high, 19" (483 mm) wide, 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 Input

Microphone Type: Electret condenser

Power: Phantom (+5 VDC)

Nominal Level: -42 dBu

Maximum Level: -25 dBu

Connector Type: IKP12 (MCP-90 series, stereo plug connector)

Program Input

Input Level: 100mV maximum

Voltage Gain: 25 ±3 dB

Output Level (to intercom channel) :1.0 Vrms nominal, 2.3 Vrms max.

Input Impedance: 75 kohm

Common Mode Rejection: Greater than 50 dB

Connector Type: 9-pin female D-sub (DE9S)

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

Intercom Channels, Balanced Mode (Both Back Panel and internal switches (BAL/UNBAL) must be set to same setting)

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 (permits "loop-thru" connection).

XLR-3 Balanced Configuration Pinouts

Pin 1: Common

Pin 2: Intercom audio low and +24 VDC input

Pin 3: Intercom audio high and +24 VDC input

Intercom Channel, Unbalanced Mode (Both Back Panel and internal switches (BAL/ UNBAL) have to be set to same setting)

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

Connector Type: Uses same connectors as for balanced mode, above, but with pinouts modified by BAL/UNBAL switch on back panel as follows:

XLR-3 Unbalanced Configuration Pinouts

Pin 1: Common

Pin 2: +24 VDC input

Pin 3: Intercom audio high

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

Contact Information

Telex® Communications, Inc.
12000 Portland Avenue South
Burnsville, MN 55337
Telephone: (800) 392-3497
Fax: (800) 323-0498

Form Number: 38110-426
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Ordering Information

MS-4002

4 channel user/main station with 4.0 amp power supply

Catalog Number: 90007799000

This specifications information is preliminary and is subject to change without notification. Brand names mentioned are the property of their respective companies.