

MS-4002

Master Station and Power Supply

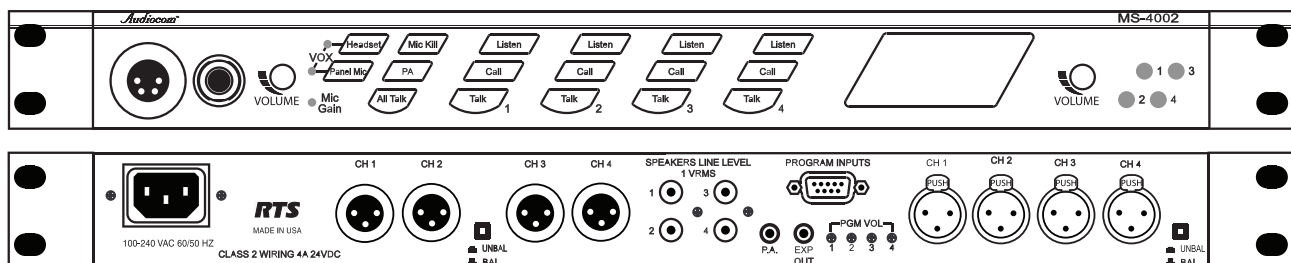


The MS-4002 is a complete 4-channel, balanced audio master station and 3.6 Amp system power supply in a single unit. You simply plug it into any AC power outlet from 100 to 240 volts, add a microphone or headset, connect intercom stations to the back panel, and you're ready to communicate. The MS-4002 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 one (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 RTS MCP-90 series Gooseneck Panel Microphone for talkback. You can also turn off the speaker, 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 (4) 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**

Line Drawings



Specifications

General

Power Requirements:

AC Input: 100-240VAC, 50/60Hz
 Channel Power: 24VDC nominal (18 to 30VDC), 65 to 150mA
 MS-4002 is capable of supplying 3.6A overall

Dimensions: 1.75 in (44.5 mm) high,
 19 in (483 mm) wide,
 10.31 in (261.9 mm) deep

Weight: approximately 4.5lb (2kg)

Environmental Requirements:

Storage: -20°C to 80°C; 0% to 95% humidity, non-condensing
 Operating: -0°C to 50°C; 0% to 95% humidity, non-condensing

Dynamic-mic Headset

Microphone: 50 to 200Ω, dynamic (balanced or unbalanced)
 Headphones: 150 to 600Ω, 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 (+5VDC)
 Nominal Level: -42dBu
 Maximum Level: -25dBu
 Connector Type: IKP12 (MCP-90 series, stereo plug connector)

Program Input

Input Level: 100mV maximum
 Voltage Gain: 25 ±3dB
 Output Level (to intercom channel): 1.0Vrms nominal 2.3Vrms max.
 Input Impedance: 75k
 Common Mode Rejection: >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: 300Ω
 Bridging Impedance: >10kΩ
 Sidetone: -40dB, 35dB adjustable range
 Call Signaling:
 Send: 20kHz ±100Hz, 0.5Vrms ±10%
 Receive: 20kHz ±800Hz, 100mVrms

Mic-Kill Frequency:

Send: 24kHz ±300Hz, 0.5Vrms ±10%
 Detect: 24kHz ±800Hz, 100mVrms
 Noise Contribution: < -70dB
 Common Mode Rejection Ratio: >50dB
 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 +24VDC input
 Pin 3: Intercom audio high and +24VDC input

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

Output Level: 1Vrms ±10%
 Input Impedance: 200Ω
 Bridging Impedance: >10kΩ
 Call Signaling:
 Send: 11 ±3VDC
 Receive: 4VDC 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: +24VDC input
 Pin 3: Intercom audio high

PA Output

Output Level: 235mVrms 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 (1.0Vrms)
 Output Impedance: 1000 Ω nominal
 Frequency Response: 200Hz to 8kHz +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 ±3dB
 Maximum Output: 250mW ±10% into 150Ω, 65mW ±10%
 into 600Ω
 Frequency Response: 200Hz to 8kHz +1/-3dB
 Incoming Call Beep Tone: 2kHz, at the headphones
 Total Harmonic Distortion: Less than 0.2% at 200mW
 Sidetone: 18 ±2dB, adjustable

Order Information

MS-4002 • 4 channel user/main station with 3.6 amp power supply

For ordering information, contact your regional sales representative at:

<http://rtsintercoms.com/us/intercom/contact>

The specification information is preliminary and is subject to change without notification.
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