

R E M O T E S T A T I O N



MR-102A HEADSET STATION

FEATURES

- Two channels, selectable
- Headset volume control
- Ultra-stable sidetone control
- Visual Call Signalling
- Low current drain & high impedance bridging
- Easy to install & interconnect



DESCRIPTION

The MR-102A is a two-channel headset station that allows selectable communicating in a Clear-Com System. It features excellent speech intelligibility under high- or low-noise conditions.

The MR-102A drives a standard Clear-Com headset to levels greater than 110 dB SPL, and can support two dynamic headsets if connected with a suitable Y-cord. A recessed sidetone control is included in the front panel. It enables the operator to adjust his/her own voice level as heard in the headset. Sidetone level needs to be set just once, if at all, even if other stations join or leave the intercom line.

The station features Visual Call Signalling to attract the attention of operators who have removed their headsets or turned off their speakers.

The MR-102A is mounted on a charcoal-brown, brushed aluminum panel that installs in a standard two-gang outlet box. Only 1-3/4" depth is needed for installation.

The MR-102A connects to the intercom system with standard shielded mic cable (wire run in conduit is also suitable). It provides a clearly-labelled, 5-pin terminal strip for intercom/power input. Bidirectional current

sourcing, high impedance bridging, and low current drain allow as many as 100 MR-102A stations to be connected over one mile of cable, with one Clear-Com Main Station or Power Supply supporting the system. The circuit design virtually eliminates all hum and noise pick-up from SCR dimmer and AC power sources.

SPECIFICATIONS

AMPLIFIER DESIGN

Solid state, integrated circuit amplifiers which include a mic preamp, headset/speaker power amplifier and signalling circuitry. Current limited with short circuit and reverse polarity protection.

MIC PREAMPLIFIER

Frequency Response: 250-12kHz with contoured response to enhance voice intelligibility.

Mic Input: 200 Ω

Mic Preamp Gain: 37dB

Max Input Before Clipping: -34dB*

HEADPHONE AMPLIFIER

Frequency Response: 150-18kHz \pm 2dB

Load Impedance Range: 300-2000 Ω

Output Level: \pm 20dBm, 26 volts p-p @600 Ω

Headset Level: \pm 110dB with standard Clear-Com headsets

Distortion: 0.2% THD at 1kHz

Headphone Amp Gain: 38dB

CONNECTORS

Dynamic Headset: Male D4M, Switchcraft type

Line: 5 screw terminal block

GENERAL

Line Level: -15dBv max.*

Side Tone Adjustment: 35dB null to full on

Signalling Voltage: 11 volts DC on audio line

Call Light Sensitivity: 4 volts

Signal-to-Noise: 75dB*

Equivalent Input Noise: 121dBv*

Station Bridging Impedance: 20 k Ω (200-10kHz)

Voltage Range: 12-32 volts, 28 volts nominal

Power Requirements: 10 ma quiescent, 15 ma talk, 55 ma signalling.

Dimensions: Size: 4.5" (11.3cm) square; 1.75"

(4.38cm) deep. Weight: 7.25 oz (.21kg)

Specifications subject to change without notice

*0 dBv is referenced to 0.775 volts rms.

ARCH/ENG SPECS

The intercom station shall be a wall-mount unit that allows two-way selectable communication on two channels. It shall have all the necessary controls and connectors to interface with a standard Clear-Com System. The intercom shall be mounted on a charcoal brown aluminum panel and shall fit in a standard two-gang outlet box, measuring no more than 1.75" in depth. The station shall provide a channel-select switch on the front panel. It shall have a volume control and an adjustable sidetone circuit. The station shall also incorporate a combination Mic On/Off and "call" switch on the front panel. An amber lamp for identifying call signals shall also be provided. The station shall include a four-pin male XLR-type connector for use with a dynamic headset. It shall provide screw terminals on the rear panel to allow individual signals and power to be brought to the intercom station. The station's electronics shall consist of a mic preamplifier with limiter, power amplifier, and signalling circuit. It shall be current limited and short-circuit-protected, and shall have reverse polarity protection. It shall be field-serviceable and replaceable. The station's preamplifier shall automatically shut off when the station's headset is disconnected. The preamplifier shall have an overall response of 250Hz to 12kHz. The mic preamplifier shall accept a dynamic mic of nominal 200 Ω impedance at a -55dB level. The power amplifier shall be capable of driving 300-2000 Ω headsets to a level of +20dBm with less than 0.2% THD. The station bridging impedance shall be greater than 15k Ω over a frequency response of 200Hz to 10kHz. The headphone amplifier's frequency response shall be 150Hz to 18kHz, \pm 2dB. The signal-to-noise ratio shall be a minimum of 75dB with an equivalent input noise of -121dB. Power supply RF EMI rejection shall be greater than 60dB referenced to the audio line. The station shall operate from a power source of 12-32 volts DC

and shall draw no more than 10 ma quiescent. The dimensions shall not exceed 4.5" square by 1.75" deep, and it shall weigh no more than 7.25 oz. It shall be called a Clear-Com MR-102A.

MR-102A BLOCK DIAGRAM

