

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



RS-100A BELT-PACK

F E A T U R E S

- Visual Call Signalling
- Combination Mic-On/Mic-Off/Call switch
- Headset volume control
- Ultra-stable, adjustable sidetone control
- Mic limiter
- Easy interconnection
- Input and extension connectors for convenient loop-through set-up
- Super-rugged and lightweight



D E S C R I P T I O N

The RS-100A is a versatile remote station designed as a belt-pack. Housed in an aluminum chassis backed with a sturdy spring clip, the RS-100A allows talking, listening, and visual signalling on any channel in the Clear-Com System.

The broadcast-standard RS-100A features Clear-Com's excellent speech intelligibility in all high- and low-noise environments. It drives a standard Clear-Com headset to levels greater than 110 dB SPL, and can support two dynamic headsets at once if connected with a Y-cord.

The RS-100A features "automatic headset detection," which mutes the mic preamp when the headset is not plugged in. Therefore, an unused yet on-line belt-pack does not increase background noise. The RS-100A also provides a recessed sidetone control that adjusts the level (from full null to at least 35 dB) of the operator's voice as heard in his or her headset. Sidetone needs to be adjusted just once, if at all, and won't fluctuate when other stations join or leave the intercom system.

The RS-100A features Visual Call Signalling. This attracts the attention of operators who have removed their headsets or turned off their speakers. Setting the belt-pack's toggle switch to the "Call"

position activates the signal circuit at all stations using the same channel(s). The RS-100A has an amber lamp that glows brightly when another operator activates the signal circuit.

Standard 2-conductor shielded mic cable connects the RS-100A to the intercom system. The belt-pack provides two 3-pin, XLR connectors (one male, one female) for input and loop-through extension of the intercom line.

Bidirectional current sourcing and low current drain allow as many as 100 RS-100A belt-packs to operate along one mile of wire with no significant loading effects. The belt-pack has an extended power supply range so that it may be powered by a portable 12-volt battery pack. Audio level never fluctuates, even when other stations join or leave the intercom line. The RS-100A's high-performance circuitry virtually eliminates all hum and noise pick-up from SCR dimmers and AC power sources.

ACCESSORY

BP-10 BATTERY PACK

A portable, belt-worn power pack that operates two Remote Stations for over ten hours. Includes three 9V batteries, on/off switch, and termination switch. Provides 2' mic cable with 3-pin connector for output to remote station.

SPECIFICATIONS

AMPLIFIER DESIGN: Solid-state integrated circuit amplifiers which include a mic preamp, headset power amp and signalling circuitry. Current limited & short circuit proof with reverse polarity protection.

MICROPHONE PRE-AMP:

Microphone Input: 200 Ω dynamic
 Mic Pre-Amp Gain: 37dB
 Maximum Input Before Clipping: -34dBv*
 Mic Pre-Amp Frequency Response: 250Hz-12kHz with a contoured response to enhance voice intelligibility

HEADPHONE AMPLIFIER:

Load Impedance Range: 300-2,000 Ω
 Output Level: +20dBm before clipping
 Headset Level: 110dB SPL with standard Clear-Com headsets

Distortion: 0.1% THD @1kHz
 Amplifier Gain: 40dB
 Frequency Response: 150Hz-16kHz (\pm 2dB)

CONNECTORS:

Dynamic Headset: D4M 4-pin male Switchcraft type
 Line: 1-D3M, 1-D3F 3-pin, Switchcraft type

ENVIRONMENTAL:

Ambient Operating Temperature: 0-60°C, 32-140°F
 Storage: -55-125°C, -62-257°F
 Humidity: 0-90% relative humidity

GENERAL:

Station Bridging Impedance: >20k Ω (200Hz-10kHz)
 Line Level: -15dBv max*
 Side Tone Adjustment: 35dB null to full on
 Signal to Noise: 75dB
 Equivalent Input Noise: -121dBv*
 Power Supply Rejection: >60dB RFI and EMI ref. audio line
 Power Requirements: 10 ma quiescent / 12 ma average talk / 45 ma signaling
 DC Voltage Range: 12-32 Volts (28 volts nominal)
 Dimensions: 2.75" x 4.9" x 1.6"
 (2.9 x 12.4 x 4.1 cm)
 Weight: 14 oz.

Specifications subject to change without notice

*0 dBv is referenced to 0.775 volts rms.

ARCH/ENG SPECS

The intercom station shall be of the belt-pack type. It shall have all the necessary controls and connectors to interface to a standard Clear-Com system. The intercom station shall be constructed of 16 gauge aluminum and shall be supplied with a belt mounting clip. The remote station shall have an adjustable volume control and contain an adjustable side tone circuit. The station shall also incorporate a combination mic on/off and momentary call signal switch on the front panel. A signal lamp for visually identifying in-coming calls shall also be provided. The station shall be supplied with a Switchcraft D4M connector for interconnect to a dynamic headset. It shall have 3-pin XLR (one male and one female) connectors to provide interconnect to the system and provide loop-through convenience. The intercom station electronics shall consist of a mic preamplifier, power amplifier and signalling circuits. It shall be current limited and short circuit proof and shall have reverse polarity protection. It shall be field serviceable and replaceable. The intercom station preamplifier shall automatically shut off when the station's headset is disconnected. The intercom preamplifier shall have an overall response of 250Hz-12kHz contoured to enhance vocal intelligibility. 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 two 300 Ω to 2000 Ω headsets to a level of +20dBv with less than 0.5% distortion THD. The station bridging impedance shall be greater than 20k Ω over a frequency response of 200Hz to 10kHz. The headphone amplifier frequency response shall be 150Hz to 16kHz \pm 2dB. The signal-to-noise ratio shall be a minimum of 75dB with an equivalent input noise of -110dB. Power supply RFI EMI rejection shall be greater than 60dB referenced to audio line. It shall operate from a power source of 12-28 volts and shall draw no more than 10 ma quiescent. The dimensions shall not exceed 2.75" x 4.9" x 1.6" (2.9cm x 12.4cm x 4.1cm). The weight shall be 14oz. It shall be called a Clear-Com RS-100A.

RS-100A BLOCK DIAGRAM

