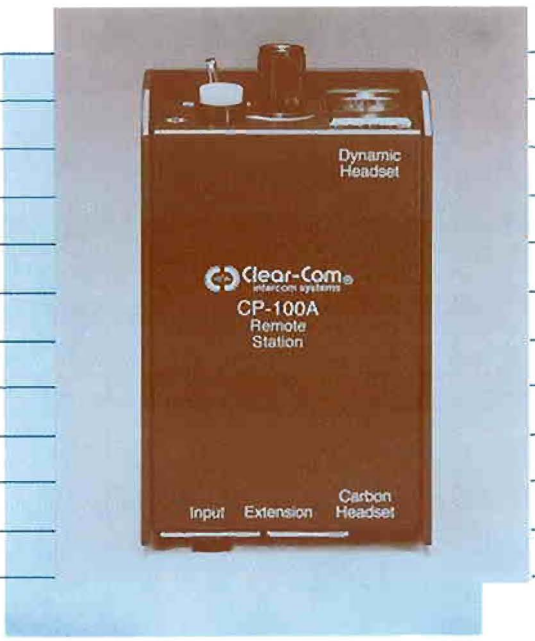
# REMOTE STATION




## CP-100 BELT-PACK

## FEATURES

- Operates with dynamic or carbon headsets
- Headset volume control
- Recessed sidetone adjustment
- Visual "call" signalling
- Combination mic-on/off/call switch
- Powered by Main Station or portable battery pack
- 3-pin, XLR input/extension connectors for convenient daisy-chaining

Clear-Com® intercom systems

## DESCRIPTION

The CP-100 is a portable remote station designed as a belt-pack. Housed in a rugged, 16-gauge aluminum case with matte-black finish, it attaches to the operator's belt with a sturdy spring clip.

The CP-100 accepts either a dynamic or carbon headset, and has the output power to drive a standard Clear-Com headset to a level of 110 dB SPL. It features Clear-Com's excellent speech intelligibility in all high- and low-noise environments. The Headset Volume control allows individual level adjustment.

The recessed, screwdriver-adjustable sidetone control enables the operator to vary the level of his/her own voice heard in the headset, allowing up to 35 dB reduction of acoustical pickup. This ultra-stable sidetone balance need only be set once, and never fluctuates when other stations join or leave the line.

A 3-position toggle switch turns the headset's mic on and off, and also activates the Call Signal lights at stations on the same channel. Signalling attracts the attention of operators who've removed their headsets or turned off their speakers. The CP-100 contains an amber lamp that lights brightly when a Call signal is activated.

Low current drain and high impedance bridging allow as many as 100 belt-packs to be connected over a mile of cable. A 12-32 VDC power supply range lets the CP-100 run from a 12 volt battery pack for ENG/EFP use. Standard two-conductor mic cable interconnects stations.

The improved circuitry of the CP-100 virtually eliminates all hum and noise pick-up from SCR dimmer and AC power sources. The electronics module is field-serviceable and repairable.

### 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. Perfect for ENG, EFP, and other remote applications.

## 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:** 200Ω 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
**Carbon Mic Current:** 10ma nominal

**HEADPHONE AMPLIFIER:**
**Load Impedance Range:** 300-2,000Ω
**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-18kHz (±2dB)

**CONNECTORS:**
**Dynamic Headset:** D4M 4-pin male Switchcraft type
**Carbon Headset:** ¼" 3-conductor phone jack
**Line:** 1-D3M, 1-D3F 3-pin, Switchcraft type

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

**GENERAL**
**Station Bridging Impedance:** >20kΩ (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 enclosure 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 a ¼" 3 conductor phone jack to accept standard carbon mic headset. It shall have a 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 200Ω impedance at a −55dB level. It shall also accept a standard carbon microphone. The power amplifier shall be capable of driving two 600Ω to 2000Ω headsets to a level of +20dBv with less than 0.5% distortion THD. The station bridging impedance shall be greater than 20kΩ over a frequency response of 200Hz to 10kHz. The headphone amplifier frequency response shall be 150Hz to 18kHz ±2dB. The signal-to-noise ratio shall be a minimum of 75dB with an equivalent input noise of −118dB. Power supply RF 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 15 ma. 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 CP-100A.

## CP-100 BLOCK DIAGRAM