

CLEAR-COM

Portable Intercom Systems

CCX100 SINGLE CHANNEL SYSTEM

The Clear-Com System CCX100 is the only closed-circuit intercommunication system specifically designed for clear two-way communication in the high noise levels encountered in the entertainment business. Designed by experienced sound system engineers, the CCX100 is ideal for coordinating sound, lighting and camera crews at concerts, theaters, TV studios and stadiums or any other situation where a high quality, versatile intercom system is required. Its performance far exceeds telephone-type intercoms, yet its cost is much less than equivalent military or aerospace equipment.

The Main Station of the Clear-Com System CCX100 is the CS-100. The CS-100 houses the power unit and overall system control while operating as an additional intercom station. It is also available in a rack mount version. The rack mount Main Station has the added feature of two headset jacks so that two headsets can be used simultaneously at the Main Station.

Up to 30 Remote Stations (RS-100) are connected to the Main Station by two-conductor shielded mic cable. The lightweight Remote Station easily hooks to the field operator's belt and powers the integrated headset and microphone.

Call lights and buttons are also provided at all stations to cue operators who have removed their headsets.



CCX200 TWO CHANNEL SYSTEM

With the universal compatibility designed into the Clear-Com components, the CCX200 system is ideal in meeting the needs of difficult or unusual situations. The two-channel system affords different crews internal communication — such as light and sound crews — while the director can monitor or talk with both.

Up to 30 Remote Stations can be split on both channels in any combination. This allows the director, and the people at the individual stations, to be in instant contact with any other member of the team. Coordination and selectivity of communication makes the CCX200 flexible as well as precise.

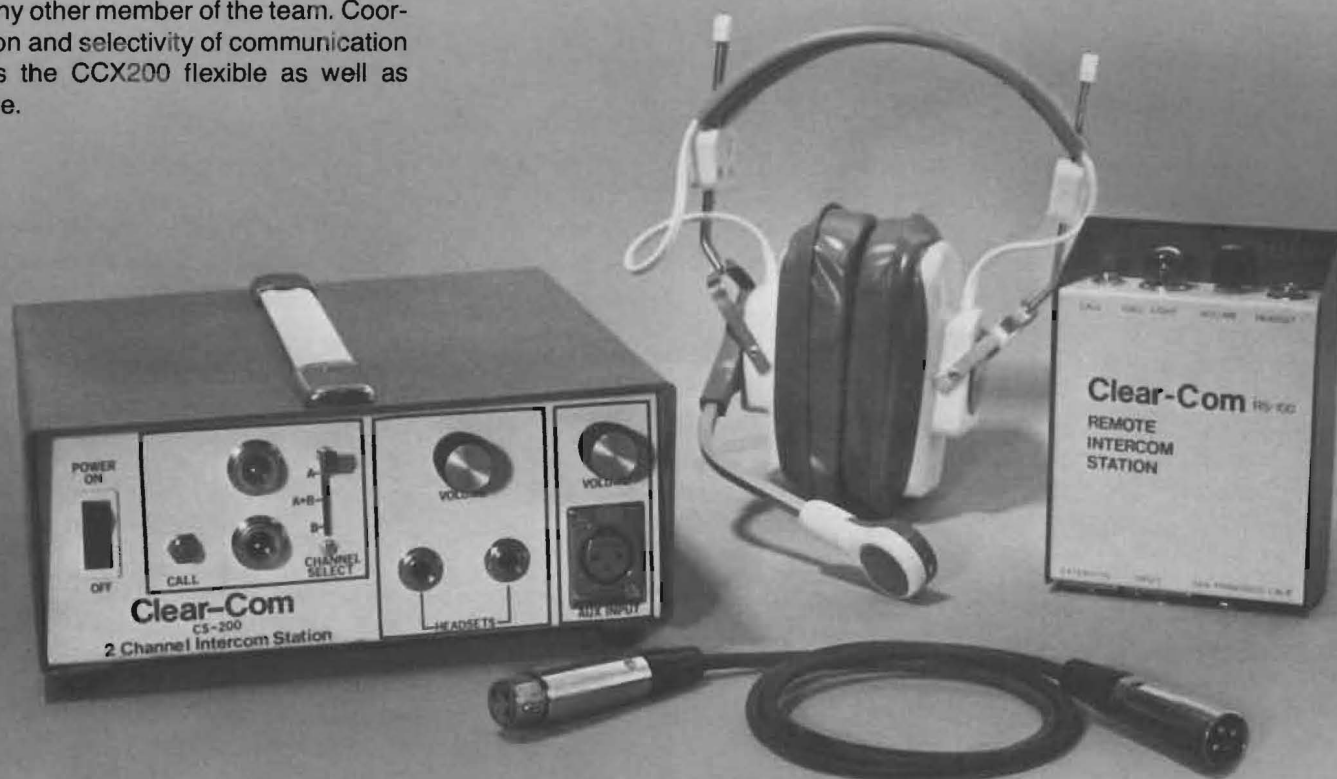
Individual gain controls for each channel allow gain levels to be selected independently. This facility enables the CS-200 to maintain a different number of units per channel.

The CS-200 is fully compatible with Clear-Com Remote Stations, cable, and all other Clear-Com accessories. It is available in portable (CS-200) and rack-mount (CS-200K) versions.

Double headset jacks on both models of the Main Station allow simultaneous use of two headsets at that Station.

The RS-100 was designed to interface with all Clear-Com Main Stations. It has a self-contained power amp that is current-limiting and short circuit proof. The all steel case houses a potted P.C. board for maximum durability.

The RS-100 power amp supplies enough volume (102 dB) for excellent clarity and intelligibility yet will not cause ear fatigue when used for extended periods. A stainless steel belt clip mounts the lightweight unit on belt or clothing.



FEATURES

The components making up these systems were designed to be completely interchangeable so that any particular mix of equipment will satisfy the user's unique needs for his system.

These features apply to all our systems.

- **Standard Cable.** Standard shielded two-conductor cable is compatible with existing audio lines in most audio/video systems.

- **Call Light Communication.** The audio system is backed up with call lights to cue operators who have removed headsets.

- **Individual Station Control.** Each station has its own volume control.

- **Auxiliary Input.** The Main Station features an auxiliary input connection and separate volume control to allow an additional audio signal, such as program material, to be fed to all stations.

- **System Control.** A Master Gain control on the back of the Main Station enables the Main Station operator to adjust the overall audio level of the system.

- **All-Metal Construction.** Remote Stations are housed in rugged steel cases that will stand up to the rough use they're likely to receive. The Main Station is housed in heavy-gauge aluminum.

- **Solid-State Circuitry.** Solid-state circuitry, potted P.C. boards, and high-quality components ensure dependable service.

- **Mobility.** Any number of Remote Stations — up to a total of 30 — can be connected to the Main Station or to other Remote Stations in any combination. Single cables in excess of 5,000 feet can be used without deterioration in system performance.

- **Flexibility.** Remote Stations can be connected anywhere in the line by extension connectors or the Clear-Com Quadropus™. Two headsets can be plugged into Remote Stations or Main Stations with use of optional Y Cord adaptor.

TECHNICAL SPECIFICATIONS

POWER

Power requirements are 115/230 VAC at a frequency of 50-60 Hz. 1-amp fuse protects unit.

AMPLIFIER: CCX100, CCX200, RS-100

Overall frequency response is 200 Hz to 8 KHz. Noise better than -50 dB relative to maximum output. Produces in excess of 102 dB of sound pressure level (SPL) with one or two Clear-Com Model CC-240 Headsets.

CONTROLS: ALL SYSTEMS

System power on/off switch, power indicator, headset jack, headset volume control, call button, call light, auxiliary input/gain, master gain control.

CCX200

Channel A, B or BOTH selector.

RS-100

Volume control, headset jack, call button, call light.

CONNECTORS:

CCX100 - 200

4 Switchcraft 3-pin connectors on back panel. 3-circuit phone jack for headset on front panel.

RS-100

2-Switchcraft 3-pin connectors.
3-circuit phone jack for headset.

DIMENSIONS:

CS-100

4" x 5" x 9" exclusive of rubber mounts and handle.

CS-200

3½" x 8¼" x 8" exclusive of rubber mounts and handle.

RS-100

5¼" x 3¾" x 1½".

WEIGHT:

CS-100 - 6 lbs.

CS-200 - 6 lbs.

RS-100 - 17 oz.

ACCESSORIES

KING BISCUIT SPEAKER SYSTEM, KB-100



The King Biscuit Speaker System replaces the Remote Station and headset. Its applications include use in reduced noise environments such as control rooms, offices, dressing rooms, etc. where headsets would be awkward. System consists of amp, speaker and hand held mic with anti-feedback circuitry.

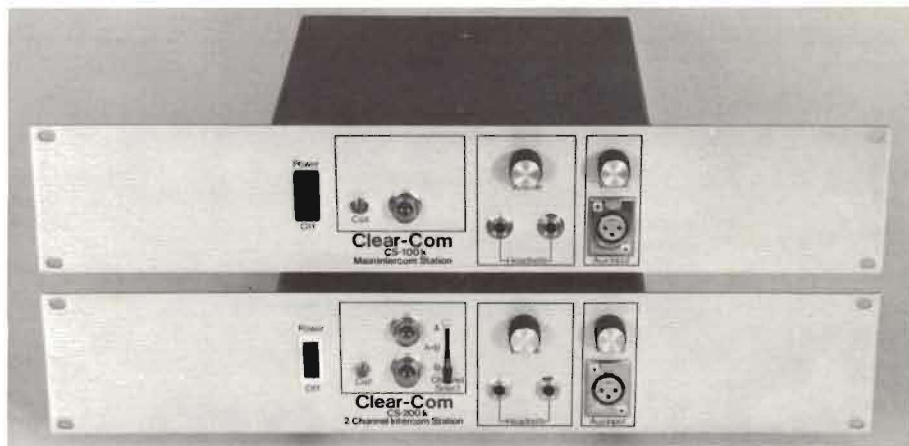
Features:

- 4-inch all-weather speaker.
- 1 watt amplifier.
- Dynamic mic.
- Volume control.
- 2 3-pin connectors.
- Interchanges with any beltpack.

CABLE

The finest microphone cable (Belden 8413) is used. Available in standard lengths with extension connectors. Special lengths made to order.

RACK MOUNT PANEL



This 3½" x 19" x 8" panel offers permanent or semipermanent positioning of Main Stations. Equipment mounted will have six output connectors and two headphone jacks.

SINGLE MUFF HEADSET, CC-75



This headset features a sound-seal ear cushion and dynamic high intensity noise cancelling microphone.

QUADROPUSS™, QP-100



The Quadropuss™ is a custom-designed splitter to branch Remote Stations or a Main Station connection into three additional stations.

Y CORDS

The Y cord attachment allows two headsets to plug into the same jack on a Main Station or Remote Station. Specify YC-50P (Phone Plug) or YC-50S (4-Pin Connector).

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

GENERAL

The intercom system shall be capable of providing clear, two-way communication between a main station and up to 30 remote stations, and among the remote stations. The system shall operate on 115v/230v AC 50/60 AC power. It shall be protected by a 3/4 amp fuse. Remote stations shall be powered by the main station. The frequency response of the system shall be from 250 to 10,000 Hz. Headphone output impedance shall be 600 ohms at a level of +20 dBm. Minimum input impedance shall be 200 ohms at a level of -54 dBm. All circuit boards shall be encapsulated. All units in the system shall be interconnected with two-conductor shielded microphone cable.

CLEAR-COM CS-100 MAIN STATION

The main station shall have (6) "XL" male-type connectors on the rear panel for multiple outputs. The main station shall have a gain control also located on the rear panel. The main station shall have a self-contained current limiting, short-circuit-proof power amplifier. The main station front panel controls shall consist of two (2) tip-ring-sleeve 1/4" phone jacks, a volume control, a signal lamp, and a signal button. The main station shall also have an "XL" female type connector for an auxiliary input with an independent volume control. The main station shall also have an illuminated power on/off switch. Power requirements shall be 115v/230v AC 50/60 Hz protected by a 3/4 amp fuse. The main station shall be constructed of steel and have dimensions of 3.5" high, 8.5" wide, and 9" deep, and shall not weight more than 6 lb 6 oz. It shall be a CLEAR-COM CS-100.

Rack mount option: The main station shall have a standard rack mount front panel 19" wide and not more than 3.5" high. The depth of the unit shall not exceed 9". It shall be a CLEAR-COM CS-100K.

CS-200 2-CHANNEL MAIN STATION

The main station shall have, located on the rear panel, six (6) "XL" male type connectors, three (3) for channel A, and three (3) for channel B. There shall be a separate master gain control for each channel. The main station shall have a self-contained, current-limiting, short-circuit-proof power amplifier.

The main station front panel controls shall consist of two (2) tip-ring-sleeve 1/4" phone jacks, a volume control, a signal button, two (2) signal lamps (one for channel A and one for channel B), and a three (3) position channel-select lever switch. The main station shall also have an "XL" female type connector for an auxiliary input with an independent volume control. The main station shall also have an illuminated power on/off switch. Power requirements shall be 115/230v AC 50/60 Hz protected by a 3/4 amp fuse. The main station shall be constructed of steel and have dimensions of 3.5" high, 8.5" wide, and 9" deep, and shall not weigh more than 6 lbs 6 oz. It shall be a CLEAR-COM CS-200.

Rack mount option: The main station shall have a standard rack mount front panel 19" wide and not more than 3.5" high. The depth of the unit shall not exceed 9". It shall be a CLEAR-COM CS-200K.

CLEAR-COM RS-100 REMOTE STATION

The remote station shall have a self-contained, current-limiting, short-circuit-proof power amplifier. The remote station shall have on the top panel a volume control, a tip-ring-sleeve phone jack, a signal lamp, and a signal button. The remote station shall have a stainless steel belt clip attached to its all-steel painted chassis. The remote station shall have two (2) "XL" type connectors, one male, one female, for connection to the main station or other remote stations. The remote station shall be a CLEAR-COM RS-100.

CLEAR-COM KING BISCUIT KB-100

The King Biscuit shall be a remote station incorporating a hand-held microphone with a push-to-talk switch and 4" weather-proof speaker in a wood enclosure. The controls on the top of the unit shall consist of a volume control, a call button, and a call light. The unit shall have two (2) "XL" type connectors, one male, one female, for station interconnection on the left side of the enclosure, and a microphone mounting clip and a side-tone-adjustment control on the right side of the enclosure. The total dimensions of the unit shall not exceed 6.5" by 6.5" by 6.5" by 4.5", exclusive of the controls and the microphone. The weight of the unit shall not exceed three (3) pounds. It shall be a CLEAR-COM KB-100.

HEADSETS

The following specifications shall apply to all headsets furnished with the system.

The headset shall have two (2) sound-seal ear cushions and a high-intensity, noise cancelling microphone. A microphone on/off switch shall be incorporated with the microphone boom. The weight of the headset shall not exceed 16 oz. It shall be a CLEAR-COM CC-240. (Optional headset: The headset shall have one sound seal air cushion and a high-intensity, noise-cancelling microphone. The weight of the headset shall not exceed 14 oz. It shall be a CLEAR-COM CC-75.) The length and angle of the microphone boom shall be adjustable.

WARRANTY

A full one-year warranty unconditionally guarantees all components of Clear-Com Systems against defective parts or faulty workmanship.



Clear-Com Division of Lumiere Productions, Inc.
759 Harrison Street, San Francisco, CA 94107 (415) 989-1130

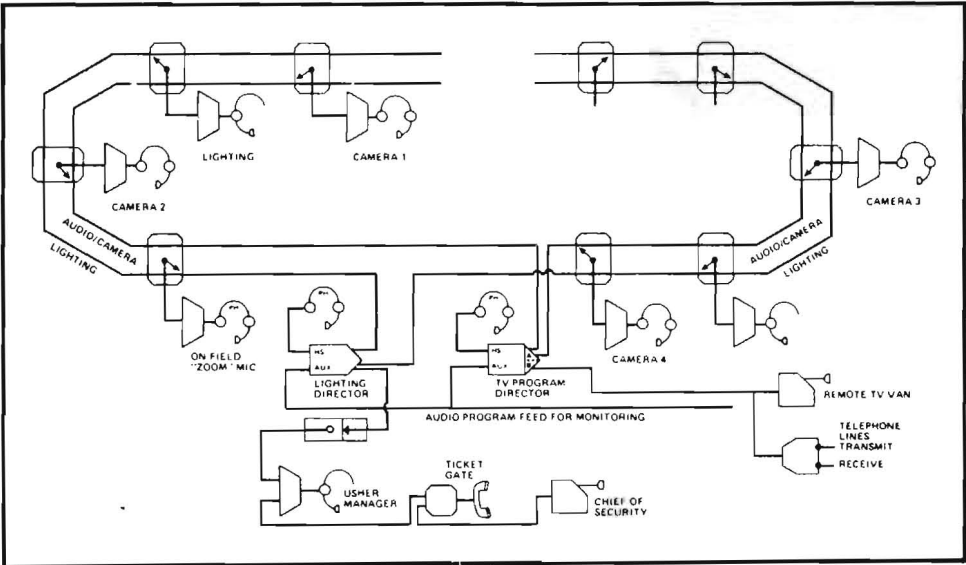
Clear-Com is specifically designed for clear, two-way communication through the high noise levels often encountered in entertainment and industrial environments.

A typical Clear-Com system is made up of one Main Station, and up to 40 Remote Stations with Headsets. Stations may be separated by up to 5000 feet with standard microphone cable. The Main Station acts as both a power supply for the system and as an intercom station. One or two HEADSETS can be plugged directly into the Main Station. Alternately, when an intercom station is not needed at the central location, a Model PS-3000 Power Supply can be substituted for the Main Station. Several types of Remote Stations are available for fixed or portable operation. Any of these Remote Stations can be used with any of the Main Stations to custom create a single or multiple-channel system for your specific application; some typical systems are shown.

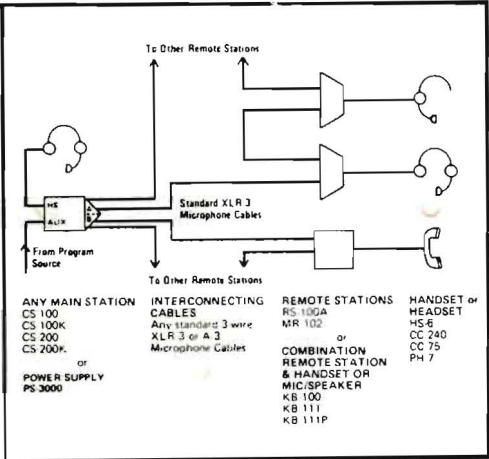
Applications include theatres, auditoriums, performing arts centers, factories, etc. . . anywhere a clear, reliable intercom is needed. In entertainment, for example, Clear-Com is ideal for coordinating lighting, sound and camera crews. In industrial applications, Clear-Com makes

possible hands-free, private communication between management, test, production and shipping departments. Because Clear-Com utilizes headsets with noise-cancelling dynamic mics, sound attenuating earphones, and a specially contoured wide frequency response

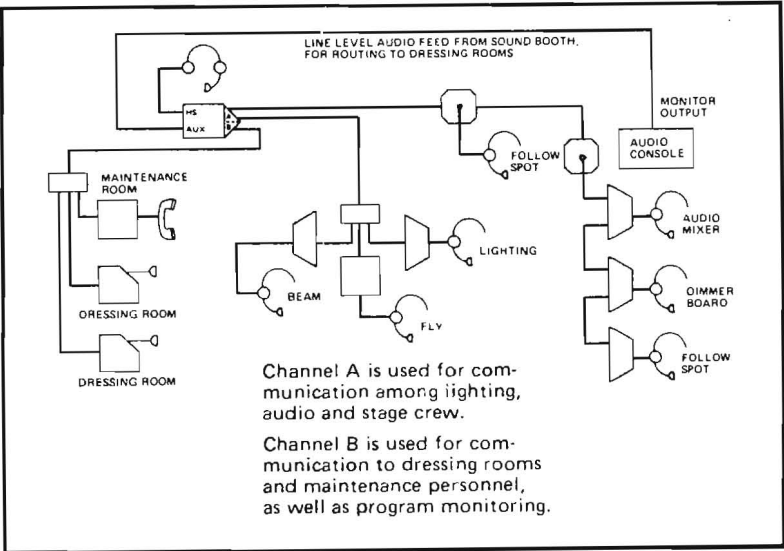
amplifier, messages can be heard at a comfortable listening level, even when the ambient noise is in excess of 120dB SPL. Where additional freedom of motion is desirable, and privacy is not critical, remote units with speakers and mics may be used.



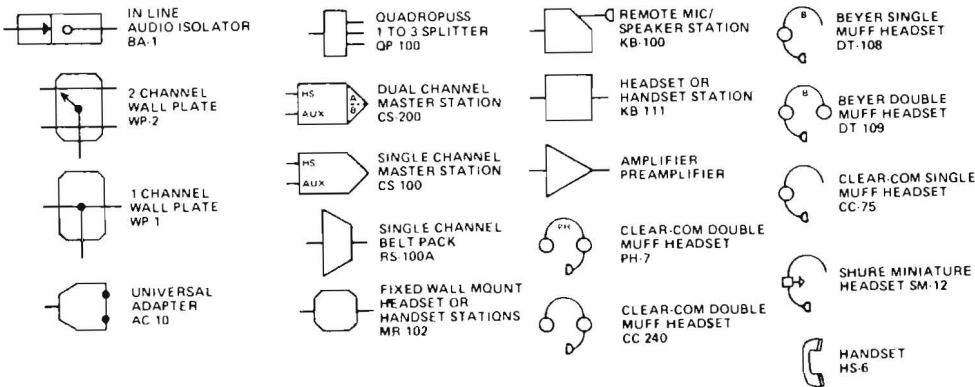
Typical Coliseum Intercom System



Clear-Com Equipment Applications General System Design



Typical Theatre Intercom System



We offer these symbols for assistance in designing your own system.

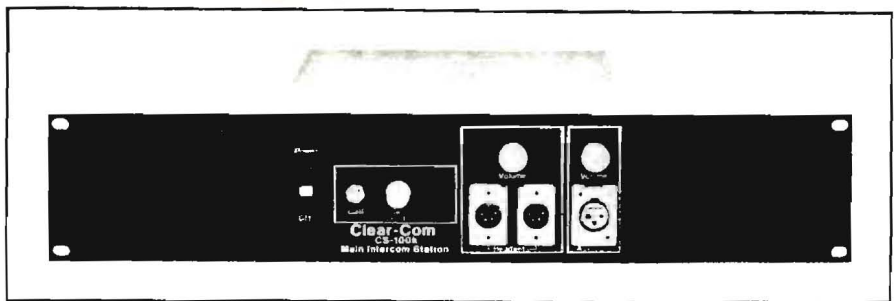
Symbols courtesy of Filmways Audio Services.

Specifications on page 4

**CS-100 Single Channel Main Station**

The CS-100 is a single channel portable or fixed MAIN STATION. It includes:

- POWER SUPPLY** for up to 40 REMOTE STATIONS.
- INTERCOM STATION** with two **HEADSET CONNECTORS**.
- HEADSET VOLUME CONTROL** affects the Headset earpiece only, not the mic.
- AUXILIARY INPUT** for a line-level program or music source.
- AUXILIARY VOLUME CONTROL** affects the level of the Aux Input only.
- CALL Button** activates Call lights on all intercom stations connected to the same channel.
- CALL Light** turns on when your station is being signaled.
- REMOTE CONNECTORS** (6 in parallel) are for incoming Remote Station cables.
- MASTER GAIN CONTROL** sets the overall system volume.

**CS-100K Rack Mount Single Channel Main Station**

The CS-100K is a single channel MAIN STATION with a black anodized front panel made for 19" rack mounting. The CS-100K's functions and features are identical to the CS-100.

**CS-200 Dual Channel Main Station**

The CS-200 is a dual-channel fixed or portable MAIN STATION. It is ideal for a theatre setup since a director or producer can talk to a sound crew on Channel A or a lighting crew on Channel B or to both crews (Channel A + B) at the same time. Yet the two channels remain separate so that the sound crew and lighting crew cannot talk to each other. The CS-200 includes:

POWER SUPPLY for up to 40 REMOTE STATIONS. (REMOTE STATIONS can be distributed as needed between the two channels.)

INTERCOM STATION with two **HEADSET CONNECTORS**.

HEADSET VOLUME CONTROL controls HEADSET only, not mic

CHANNEL SELECT SWITCH allows HEADSET access to either or both intercom channels.

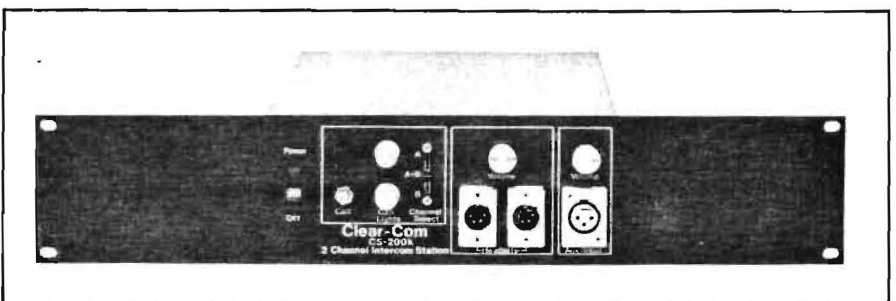
AUXILIARY INPUT

AUXILIARY VOLUME CONTROL

Single **CALL Button** individual **CALL Light** for each intercom channel – CALL Button activates CALL Light on all intercom stations on the channel selected by the CHANNEL SELECT SWITCH.

6 REMOTE CONNECTORS - three for intercom Channel A, three for intercom Channel B.

2 MASTER GAIN CONTROLS - one for intercom Channel A, one for intercom Channel B.

**CS-200K Rack Mount Dual Channel Main Station**

The CS-200K is a dual channel MAIN STATION with a black anodized front panel made to mount in a standard 19" electronic equipment rack. The CS-200K's functions and features are identical to the CS-200.

PS-3000 Power Supply

The PS-3000 is a single channel rack mount power supply designed to function in place of a standard MAIN STATION when there is no need for an intercom (HEADSET) station at the central location. The PS-3000 is fully regulated and short circuit protected and includes:

ILLUMINATED POWER SWITCH

LED SHORT CIRCUIT INDICATOR

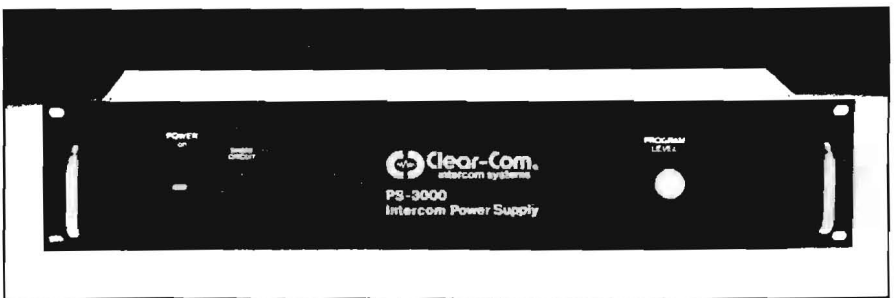
PROGRAM LEVEL CONTROL

MASTER GAIN CONTROL

AUXILIARY INPUT

4 REMOTE CONNECTORS for up to 40 REMOTE STATIONS.

INTERNAL CROWBAR CIRCUIT to protect REMOTE STATIONS



PS-10 Power Supply

PRELIMINARY DATA



FEATURES

Powers all existing Clear-Com
12 remote station capacity
Front panel remote connection
LED short circuit indicator
Circuit breaker protection
Four remote station outputs
Master Gain switch
Heavy duty construction
Portable or 3 1/2" rack mount

SPECIFICATIONS

Audio Line Impedance: 200 ohms nominal
Power Supply Output: 28 Volts DC @ 0.6 amps.
Power Requirements: 115/230 volts AC.
Dimensions: 7-1/4" x 6-3/4" x 3-3/8"
Weight: 4 lbs. 8 oz.

DESCRIPTION

The Clear-Com PS-10 power supply provides a low-cost approach to powering a small intercom system. Compatible with all Clear-Com products, the PS-10 powers up to 12 remote stations. Master Gain switch allows user to adjust system volume for high or low noise conditions. Four output connectors on the rear panel provide connections to remote stations. A convenient front panel connector is provided for the Director or Stage Manager's intercom station. The PS-10 is circuit-breaker protected from damage due to faulty cables. Short circuits are indicated by an illuminated LED. Constructed of heavy gauge aluminum, the PS-10 is offered in both portable or rack mounted versions. The rack mounted version is a PS-10K.



Clear-Com[®]
intercom systems

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