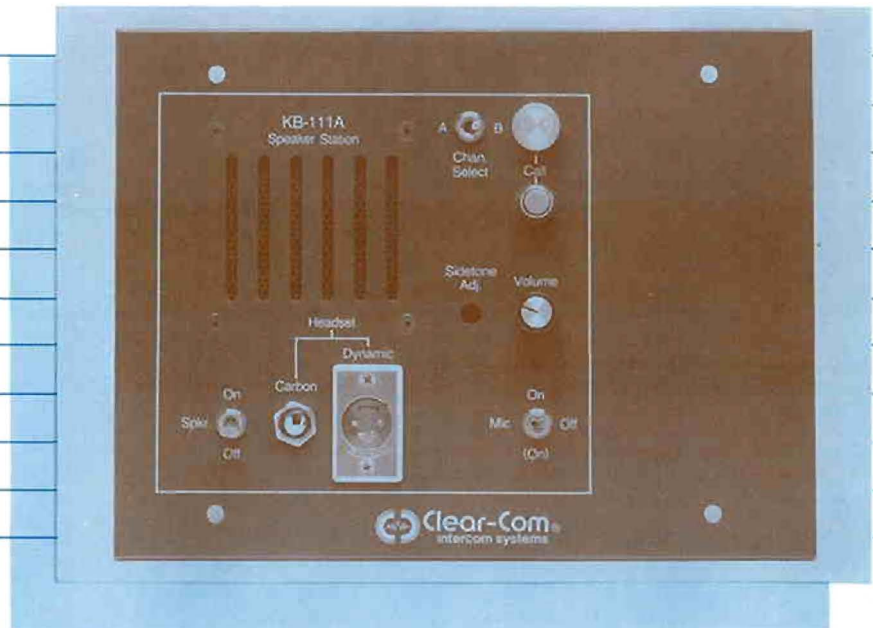


# R E M O T E   S T A T I O N



## KB-111A TWO-CHANNEL SPEAKER STATION

### F E A T U R E S

- Allows selectable two-channel communicating
- Wide frequency response speaker with on/off switch
- Intercom volume control
- Operates with carbon or dynamic headsets
- Mic on/off switch and adjustable sidetone
- Visual Call Signalling
- Portable or permanent installation



### D E S C R I P T I O N

The KB-111A is a broadcast-standard, remote speaker station that allows talking and/or listening on either of two channels in a Clear-Com System.

Compatible with all Clear-Com intercoms, the KB-111A features excellent speech intelligibility in high- and low-noise environments. The wide frequency response speaker delivers crisp sound pressure levels, high enough to be heard in the noisiest surroundings.

The KB-111A operates with a carbon headset or a dynamic headset/telephone-style handset. 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 the suitable "Y" cord). The KB-111A's speaker can be turned off when private conversation via the headset is desired; alternately, a mic on/off switch is provided to let the KB-111A function as a "listen-only" or remote page station.

The KB-111A contains a recessed sidetone control, which allows the operator to vary the level of his/her own voice as heard in the headset/speaker. Sidetone control also suppresses acoustic feedback when using the speaker.

The KB-111A features Visual Call Signalling; the Call button allows you to attract the attention of operators who've removed their

headsets or turned off their speakers. The KB-111A's amber Call lamp illuminates when another operator (using the same channel) sends a Call signal.

The KB-111A is a custom-mounting station; its no-glare charcoal-brown, aluminum front panel installs in a cut-out in a wall, console, or rack, or inside a 6" x 8" Nema Type 1 box.

Standard mic cable connects the KB-111A to the intercom system; wire run in conduit is also suitable. The station provides a clearly-labelled, 5-pin terminal strip for interconnection behind the front panel.

Bidirectional current sourcing and low current drain allow as many as 20 KB-111A stations (powered by one Main Station/Power Supply) along one mile of wire with no significant loading effects. New circuit design virtually eliminates all hum and noise pick-up from SCR dimmer and AC power sources.

### ACCESSORY

#### P-Box

For portable use, the KB-111A installs in the Clear-Com P-Box, a sturdy, lightweight aluminum enclosure with a sloped front, walnut sides, and carry strap (allows one channel only). Provides 3-pin input and extension connectors.

## 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 $\Omega$

Mic Preamp Gain: 37dB

Max Input Before Clipping: 34dB

### HEADPHONE AMPLIFIER

Frequency Response: 100-18kHz  $\pm 2$ dB

Load Impedance Range: 8 $\Omega$ -2k $\Omega$

Output Level: +20dBV\*, 26v p-p at 100 $\Omega$

Headset Level: > 110 dB SPL with standard Clear-Com headsets

Speaker Level: > 98dB SPL at 3 feet

Speaker Type: 3" round, 16 $\Omega$

Power Output: 2 watts into 8 $\Omega$

Distortion: 0.5% THD at 1kHz

Headphone Amp Gain: 38dB

### CONNECTORS

Headset: Male D4M, Switchcraft type

Line: 5 screw terminal block

### GENERAL

Line Level: -15dBV max\*

Sidetone 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: 121dB

Station Bridging Impedance: < 20k $\Omega$  (200-10kHz)

Power Requirements: 20 ma quiescent, 60 ma

average talk, 60 ma signalling, 200 ma short circuit.

Voltage Range: 12-32 volts, 26 volts nominal.

Dimensions: 8.6" x 6.5" x 3.25" deep

218mm x 165mm x 83mm deep

Specifications subject to change without notice

\*0 dBV is referenced to 0.775 volts rms.

## ARCH/ENG SPECS

The intercom station shall be a custom-mounting, 5/32" aluminum panel painted charcoal-brown. It shall be a two-channel intercom speaker station with front panel connectors for carbon and dynamic headsets. The intercom shall have the necessary provisions for interfacing to the standard Clear-Com system. It shall have a 5-screw terminal strip on the PC Board for intercom signal and power to be brought to the station. The intercom shall be able to mount inside a 6" by 8" Nema Type 1 electrical box. The intercom's speaker shall be a 3" round, 16 $\Omega$  type. The intercom's controls shall include an intercom volume adjustment, a channel select switch, momentary Call signal button and Call signal lamp, a mic on/off/momentary-on switch, a speaker on/off switch, and a recessed sidetone adjustment. The intercom electronics shall consist of a mic preamplifier, power amplifier and signalling circuit. The intercom 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 headset is disconnected. The intercom bridging impedance shall be greater than 12k $\Omega$  over a frequency of 200Hz to 10kHz. The intercom shall use no transformers for connecting to the intercom line. The frequency response and impedance of the intercom shall not change as other stations join or leave the system. The intercom shall have an adjustable sidetone circuit that will allow up to 35dB null of sidetone. The mic preamplifier shall have an overall response of 250Hz-12kHz, contoured to enhance speech intelligibility. The intercom shall accept a standard carbon headset or a dynamic headset with a nominal 200 $\Omega$  impedance. -55dB mic and earphones from 8 to 2000 $\Omega$ . The headset/speaker power amplifier shall have a response of 100Hz to 18kHz,  $\pm 2$ dB. It shall deliver a level of > 110dB SPL with 0.5% distortion. The power amplifier shall be capable of delivering 2 watts into 8 $\Omega$ . The speaker shall be capable of a maximum level of 98dB at 3 feet. The signal-to-noise ratio shall be 75dB with an equivalent input

noise of -121dB. Power supply RF EMI rejection shall be greater than 60dB referenced to the audio line. It shall operate from a power source of 12-32 volts DC and shall draw no more than 25 ma quiescent. The dimensions shall not exceed 8.6" x 6.5" x 3.25" deep. The weight shall not exceed 1.6 lbs. It shall be called a Clear-Com KB-111A.

The intercom station shall also be convertible to a single-channel portable type. It shall have the same specifications and functions as above. The intercom shall be housed in a portable, sloped-front enclosure constructed of .050 cold-rolled steel, with a carry strap and rubber feet. It shall have two 3-pin, XLR-type connectors, one male and one female, for input and extension of the intercom line. The enclosure shall be called a Clear-Com P-Box.

## KB-111A BLOCK DIAGRAM

