

# M A I N S T A T I O N



## SB-800 EIGHT-CHANNEL MAIN SWITCHBOARD STATION

### F E A T U R E S

- Supports up to 100 Remote Stations on 8 channels
- Selectable monitoring system
- Assign channels individually to "cue," "party-line," or private modes
- Tri-color illuminating switches indicate channel modes
- Stage Announce, Visual Signalling, & "All Page"
- Balanced program input, assignable to any or all channels
- Separate intercom, program, and sidetone level controls for headset/speaker
- External speaker jack
- Can be ganged together with other SB-800s for multiple eight-channel systems.
- Circuit-breaker-protected with short circuit indicator and re-set button
- Mic limiter
- Available with gooseneck mic, length-adjustable (1"-12")



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

The SB-800 is an extremely versatile eight-channel main station with a regulated power supply and a selectable monitoring system. It features Clear-Com's excellent speech intelligibility in high- and low-noise environments.

The SB-800 contains a mic preamp with a limiter and a four-watt power amp so it can drive two dynamic headsets/handsets and an external speaker. The station drives a standard Clear-Com headset to levels greater than 110 dB SPL.

The SB-800 provides power for up to 100 remote headset stations or 20 speaker stations.

#### MONITORING SYSTEM

The SB-800 operator assigns each channel to the desired access mode with illuminated lever switches, whose colors indicate what mode each is currently used in. The access modes are-"OUT": for private communication among stations on a channel; SB-800 is cut off from these stations.

"CUE": allows two-way communications between SB-800 operator and all channels in "cue" but those channels cannot communicate with each other. "PARTY LINE": all channels in PL communicate with each other and with the switchboard operator.

The front panel design allows the operator to instantly modify the configuration of an entire intercom system, at all times providing identification of channel assignment, visible even in the dark.

The Monitor Mode switch

determines whether the operator has access to channels assigned to "Cue," "Party Line" or both. The "Auto" monitor mode causes the station operator's headset to switch from all channels in "Cue" to all those in "Party Line," while any channel(s) are assigned to "Party Line." In the "Cue" monitor mode, the operator has access only to those channels assigned to "Cue." In the "Both" mode, the operator has access to all channels except those assigned to "Out."

#### PAGING

The "All Page" button lets the SB-800 operator address all eight intercom channels at once (one way, talk-only). For other paging applications, the SB-800 provides a line-level balanced output to a connector on the rear panel; the front panel's "Stage Announce" (S/A) button activates the output, giving the SB-800 operator access to an external speaker/amp system.

#### SIGNALLING

Visual Signalling attracts the attention of people who've removed their headsets or turned off their speakers. The SB-800 provides a "Call" button for each channel. Pressing one of these buttons signals the stations on the associated channel, no matter what access mode they've been assigned to.

When a remote station sends a Call signal, the lever switch light associated with the station's channel will flash off and on for at least ten seconds, no matter what position the assignment lever is in.

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## SIDETONE

The sidetone control allows the operator to vary the level of his/her own voice as heard in the headset/speaker; lowering its volume helps to suppress acoustic feedback when using an external speaker and gooseneck mic.

## PROGRAM INPUT

The SB-800 accepts a balanced, line-level program input which may be heard in the headset and can be mixed with the intercom audio on any or all channels. Program volume is individually set for each channel with trimpots, and program volume in the SB-800 headset is adjustable on the front panel.

## POWER SUPPLY PROTECTION

The station's power supply is regulated, current-limited, and provides 30 volts at two amperes from a 115V or 230V AC mains supply. The SB-800 is provided with a short indicator and circuit breaker for the 30VDC supply, allowing instant resetting of the power supply once the short is removed.

The SB-800 provides audio termination for the intercom system.

## EASY INTERCONNECTION

The SB-800 connects to the remote stations with standard two-conductor mic cable. The station's rear panel provides eight 3-pin male XLR connectors for the output of the intercom channels.

## GOOSENECK MIC OPTION

As a factory-installed option, the SB-800 is available with a permanently-attached, noise-cancelling electret mic on a gooseneck with adjustable length (up to 12").

## ACCESSORY

### MX-820 8 x 20 Slide Matrix:

A "passive" SB-800 accessory that enables 20 remote stations to be assigned and re-assigned to any of the 8 intercom channels without re-patching of cables. Write-on strips allow user-labelling. 3 1/2" rack-mount, requires no power, easy to install. Front panel provides 20 eight-position slide switches for channel assignments, and push-on terminals for rapid system wiring.

## SPECIFICATIONS

**Circuit Design:** IC amplifiers with solid state switching and signalling circuits. Current limited and short circuit protected.

**MICROPHONE PREAMP**  
Input: Low impedance (1k $\Omega$ ) for 200 $\Omega$  nominal dynamic type  
Input Level: -55dBv nominal -19dBv max before clipping\*  
Limiter Range: 25dB  
Frequency Response: 250-12kHz contoured for enhanced voice intelligibility

**PROGRAM AMP**  
Input Impedance: 100k $\Omega$  balanced, 47k $\Omega$  single-ended  
Input Level: -15dBv nominal, +10dBv max\*  
Frequency Response: 150Hz-18kHz

**POWER SUPPLY**  
Output Voltage: 30vdc, regulated  
Output Current: 2 amperes, maximum  
Protection: Designed to withstand temporary shorts Also includes primary fuse, circuit breaker in DC output, and overvoltage crowbar.  
**HEADPHONE AMPLIFIER:** 2 separate  
Output: Drives any load  $\geq$ 300 $\Omega$  to full output before clipping (+20dBv\*)  
Distortion: <.2% THD 1kHz  
Amplifier Gain (from intercom line): +37dB  
Frequency Response: 150Hz-18kHz

**SPEAKER AMP**  
Output: Drives any load  $\geq$ 8 $\Omega$  to full output  
Distortion: <.5% THD at 1kHz  
Frequency Response: 200Hz-15kHz

**LINE CIRCUITS**  
Type: High impedance, bidirectional (talk & listen) with internally switchable termination

**Audio Level:** -15dBv nominal, 0dBv max before clipping\*  
**Sidetone:** Each channel, including the party line, has an individual adjustment which is factory-set for full null (>30dB)

**MONITORING:** Each channel may be assigned to any of 3 groups (Out, Cue, or Party Line) from which the operator selects the group or combination of groups to communicate with. Talk / Listen functions may be preset for each channel (effective in Cue only).

**SIGNALLING**  
Call Light Sensitivity: 4vdc maximum  
Call Signal Voltage: 11vdc minimum

**STAGE ANNOUNCE**  
Output: 600 $\Omega$  balanced transformerless  
Level: 0dBv nominal\*  
Frequency Response: 250Hz-12kHz, same as mic preamp

**ALL PAGE:** Same characteristics as normal talk signals on intercom lines

**CONNECTORS**  
Headsets: Two 4-pin male XLR type  
Channels: One 3-pin male XLR type  
S/A: 3-pin male XLR  
Program: 3-pin female XLR  
Speaker: 1/4" phone, single circuit

**POWER REQUIREMENTS:** 105-125 or 210-250 VAC, 50-60Hz, 80 watts maximum

**DIMENSIONS:** 19" x 3 1/2" x 13"

**OPERATING TEMPERATURE RANGE:** 0 to 50°C (32-122°F)

Specifications subject to change without notice  
\*0dBv is referenced to 0.775 volts rms.

## SB-800 BLOCK DIAGRAM

