SB-704 Four-Channel Switchboard Main Station

Analog Partyline Solutions

Linking People Together

SB-704

Key Features

- Supports up to 55 beltpacks or 10 speaker stations on four channels
- 10 x 4 assignment switching matrix
- Separate short-circuit protection for each channel
- Dual-action electronic momentary/ latching Talk buttons
- Three interruptable IFB channels
- Call signal buttons for each channel
- Global Remote Mic Kill
- Announce output with relay
- Microphone limiting
- Volume controls for each channel
- Visual and audible Tone Alert signaling
- Channel Linking
- External switchable line termination on each channel
- Universal voltage power supply

Encore™ is a 2-wire analog partyline system with intuitive plug-and-play design and superior “Clear-Com Sound” audio quality.

Description

The SB-704 is a 2RU four-channel switchboard main station with programmable front panel buttons, individual channel short-circuit protection, individual channel volume control, a switchboard matrix, and a regulated fail-safe power supply. The SB-704 supports up to 55 beltpacks or 10 speaker stations, or 12 headset stations. The 10 x 4 assignment switching matrix allows up to 10 different groups of stations to be assigned to any one of the four channels.

Audio Sources and Monitoring

The SB-704 accepts five separate program audio sources: four line-level balances inputs and one assignable line-level input. The assignable program input accepts a balanced signal and is designed for monitoring external audio. The four balanced program inputs can be used to create individual program feeds on the intercom channels. The SB-704 can monitor intercom activity on one or all four channels with individual volume level controls. Monitoring intercom activity is possible through a headset.

Talk Selection

The SB-704 has mic pre-amps with limiters and speech-shaping circuits. An individual electronic momentary/latching Talk button is available for each channel. Illuminated dual-action Talk buttons light an LED dimly when latched: blue-color while in standby, amber-color when latched. The latching feature can be disabled. The channels can be accessed separately or simultaneously without tying them together. A selector switch toggles between the headset or microphone. The Talk buttons can also be controlled with a footswitch.

Announce Output

For paging, the SB-704 provides a balanced, line-level output signal to a ¼-inch TRS connector on the rear panel. The front panel Announce button activates the output and the Announce relay. The relay circuit, on a separate ¼-inch TRS connector, is typically used to mute monitors.

Call Signaling

The SB-704 has individual Call buttons with visual call signaling for each channel on the partyline. The visual signal will flash brightly and will emit an audible signal if the remote station operator holds the Call button for more than 2 seconds. The call signaling feature can be programmed to the Talk buttons.

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Remote Mic Kill (RMK)

The SB-704 has a global Remote Mic Kill button that will turn on the microphone talk circuits of all beltpacks on the system, eliminating extraneous noise from the open headset microphones.

Program Input and Interrupt (IFB)

The SB-704 accepts a line-level external program input for monitoring in the headset and/or mixing with intercom audio on up to three of the four channels. When Interrupt is selected, the program signal is interrupted when the Talk button is pressed.

Configuration Panel

The SB-704 has a removable front panel for easy access to the station's configuration switches and trim pots. Clearly labeled and easy to adjust, these controls allow the SB-704 to be configured quickly. When configuration is complete, the front panel can be reattached so it shows only the needed controls.

Power

The SB-702 has a visual indication of power supply conditions. In the event of a short circuit or current overload on a channel, that channel will shut down while the other one continues to operate. As soon as the fault condition is removed, the auto-reset circuitry will restore power to that channel, even under full-load conditions.

Technical Specifications

dBu is an absolute measurement. 0 dBu is referenced to 0.775 volts RMS

Station Capacity

Up to 55 RS-701 beltpacks or 10 speaker stations or 12 headset stations distributed over all channels

Panel Microphone Input

Input Type: Electret
Input Impedance: >=2K
Mic Limiter Threshold: 0dBu ±3dB
Mic Limiter Range: >= 15dB

Headset Microphone Input

Input Type: Dynamic
Input Impedance: >= 1K
Mic Limiter Threshold: 0dBu ±3dB
Mic Limiter Range: >= 15dB

Program Line Input

Maximum Level before Clipping: >= 20dBu
Input Impedance: >= 5K

Headset Output

Load Impedance: >= 8 Output
Impedance: <= 25
Output Limiter Threshold: +5dBu ± 3dB
Maximum Output Level before Distortion: >= 17dBu

Speaker Output

Load Impedance: >= 4
Max Output Level before 1% Distortion: 20dBu ± 2dBu

Party Line Output

Output Noise: < -74dBu
Output Impedance: >10K

Partyline Input

Crosstalk: < -60dB
Max level before Clipping: >= 12dBu
Sidetone Null Capability: > 25dB

Stage Announce/Balanced Line Out

Type: Balanced
Output Impedance: >= 200
Load Impedance: >= 600

IFB/Hot Mic

Type: Unbalanced
Output Impedance: 150
Impedance: >= 600

Frequency Response

Panel Mic - Partyline: 600 - 10KHz ± 3dB
Headset Mic - Partyline: 200 - 12KHz ± 3dB
Headset Mic - Line Out: 200 - 12KHz ± 3dB
Program Input - Partyline: 100 - 17KHz ± 3dB
Program Input - Headset Out: 200 - 10KHz ± 3dB
Program Input - Speaker Out: 300 - 10KHz ± 3dB
Partyline - Headset Out: 200 - 10KHz ± 3dB
Partyline - Speaker Out: 300 - 10KHz ± 3dB

Max Distortion

Panel Mic - Partyline: <= 0.5%
Headset Mic - Partyline: <= 0.5%
Headset Mic - Line Out: <= 0.5%
Program Input - Partyline: <= 0.2%
Program Input - Headset Out: <= 0.2%
Program Input - Speaker Out: <= 0.5%
Partyline - Headset Out: <= 0.2%
Partyline - Speaker Out: <= 0.5%

Noise

Panel Mic - Partyline: < -65dBu
Headset Mic - Partyline: < -70dBu
Headset Mic - Line Out: < -55dBu
Program Input - Partyline: < -85dBu
Program Input - Headset Out: < -60dBu
Program Input - Speaker Out: < -60dBu
Partyline - Headset Out: < -50dBu
Partyline - Speaker Out: < -50dBu

Max Gain

Panel Mic - Partyline: >= 37dB
Headset Mic - Partyline: 41dB ± 2dB
Headset Mic - Hot Mic Out: 55dB ± 3dB
Headset Mic - Announce Out: 55dB ± 3dB
Program Input - Partyline: >= -16dB
Program Input - Headset Out: >= 18dB
Program Input - Speaker Out: >= 24dB
Partyline - Headset Out: >= 34dB
Partyline - Speaker Out: >= 40dB

Min Gain

Panel Mic - Partyline: <= 25dB

Mains Power

Input Voltage Range: 100 - 240 VAC
Input Frequency Range: 50 - 60 Hz
Input Power: <= 60
VAC Output Voltage: 30 VDC ± 0.5V
Output Current per Channel (Continuous): 1.2 A
Output Current per Channel (Peak): 2 A (Do not exceed the 1.2A rating for more than 2 seconds per 1 minute period)
Short Circuit Recovery Time (1st short): <= 0.5 sec
Short Circuit Recovery Time >= 20 shorts in 20sec): <= 20 sec

Environmental

32 - 122°F (0 - 50°C)

Dimensions

3.5 x 19 x 10.5 in (HxWxD)
(88 x 483 x 267 mm)

Weight

10.9 lbs (4.9 kg)

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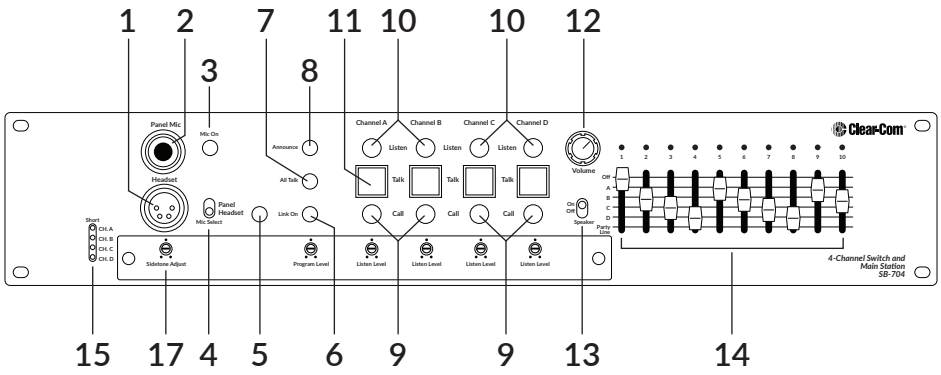
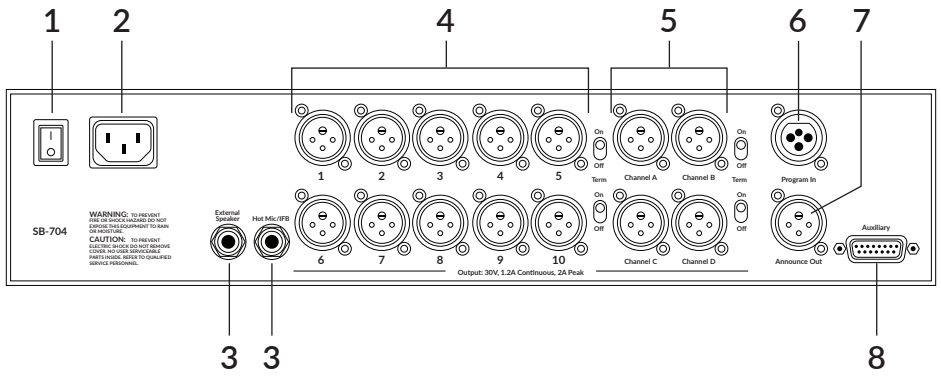
SB-704 Front Panel



SB-704 Back Panel



Legend

Front Panel

1. XLR-4M Headset connector
2. Mic connector
3. Mic On switch
4. Mic Select switch
5. Remote Mic Kill
6. Link button
7. All Talk button
8. Announce button
9. Call button
10. Listen button
11. Talk button
12. Volume control
13. Speaker On/Off switch
14. Assignment Switching Matrix
15. Short Indicator
16. Panel Mic Gain
17. Sidetone Adjust

Back Panel

1. Power On/Off switch
2. Power connector
3. Hot Mic/IFB Output
4. Channel Intercom connectors
5. Channel Termination switches
6. Program In
7. Announce Out
8. AUX connector

Order Code

SB-704