

Soundcraft GB4 Professional Mixing Console

Soundcraft is a Professional audio company known for its high quality, reasonable cost products. Working hard to develop new products, their most recent development is the GB4 Audio Mixing Console. Mounted in a rigid steel chassis, it is built to last. Moreover, because of it's a modular design where each channel is individual, the GB4 is a reliable unit for both fixed installations and use on the road. To further diversify this console, it comes with the option of 12, 16, 24, 32, and 40 channels making it suitable for small, medium, and large churches.



The GB4 is better than its predecessors due to its newly designed features to help better meet your needs. It is capable of creating specifically tailored sub-mixes and delivering them to various speakers and locations. The main L-R channel has four outputs which may also be sent to remote locations or recorders. The mic preamps have been improved to deliver an extremely open frequency response and phase linearity. Also, each channel offers tailored equalization frequencies and there is more flexibility and control with the group selection, routing, and auxiliaries. To make live mixing even easier and smoother, the GB4 has four mute groups which you can specially tailor to your sound needs. Simply program the groups of channels you may want muted occasionally (such as instruments, vocals, or a combination) to provide quick and easy group muting while running the live sound.

As more and more churches are starting to record their own services, mixing consoles need to meet this need. The GB4 is well equipped for this task as it has pre/post-fader switchable direct outputs on every channel and a high quality limiter on the record outputs fed from the L-R channel mix.

Key Features for Soundcraft's GB4:

- Performance improvements with the new GB30 mic. pre-amp
- 4-band precision equalization circuitry
- comes in a 12, 16, 32, and 40 channel frame size
- 8 Auxiliary sends (4 of which are pre/post switchable)
- Talkback facility
- Individually switched 48V phantom power on every mono input channel
- 4 sub groups (paired)
- 4 mute groups
- 12-segment LED audio indicator
- Record output with limiter
- Easy service construction
- 7+4 Output Matrix
- Integral power supply, with an external power supply link option
- All metal TRS jacks and Neutrik XLRs
- Direct outputs on all mono input channels

Mono

Stereo

Mono Input Module:

(mono picture located on Left side of page)

Mic. input: balanced XLR connector which accepts balanced or unbalanced mic signals

Line input: balanced 1/4" jack accepts balanced or unbalanced line level sources (ie: keyboard, guitar..)

+48 Phantom power: individually switchable on each channel

Phase reverse: individually switchable on every channel

Input stage: precision, low noise mic preamps deliver continuously variable gain between 5dB and 60dB

High pass filter: Provides 18dB/Octave attenuation below 100Hz

Insert: The insert point on every channel is pre-EQ, pre-fader.

Direct output: pre/post-fader switchable direct output is available on every mono channel

EQ section: On/Off switchable 4-band equalizer section to provide HF/LF roll off and frequency sweep through Lo-Mid and Hi-Mid frequencies

Auxiliary sends: 8 Auxiliary sends which have flexible pre/post switching; Auxes 1-4 are pre-fader and, under normal operation, are routed to the rotary Aux masters 1-4. In SWAP mode, they are routed to Group faders 1-4 and Group metres 1-4, ideal for monitor mixing applications

Routing: The signal on each fader can be routed to the L-R mix (via the Pan control), the C(mono) bus, and Group(s) 1&2 and 3&4

Pan: Enables odd/even Groups or L-R mix bus to be accessed individually

Solo/PFL: Each channel can be soloed pre-fader, post-EQ to check levels

100mm fader: Provides accurate, consistent control of audio levels

Mastering: A 4-segment LED display on each fader strip provides an instant reference for the signal level on that channel.

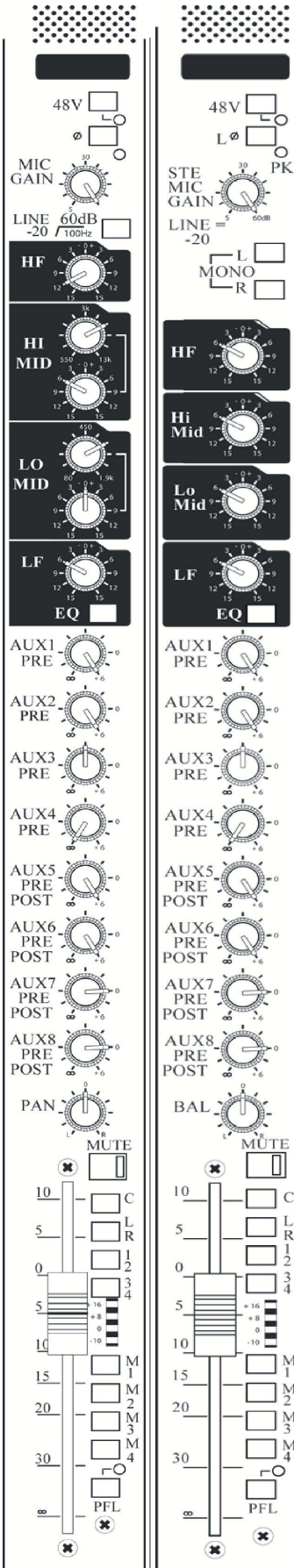
Stereo Input Module:

(stereo channel picture located on right)

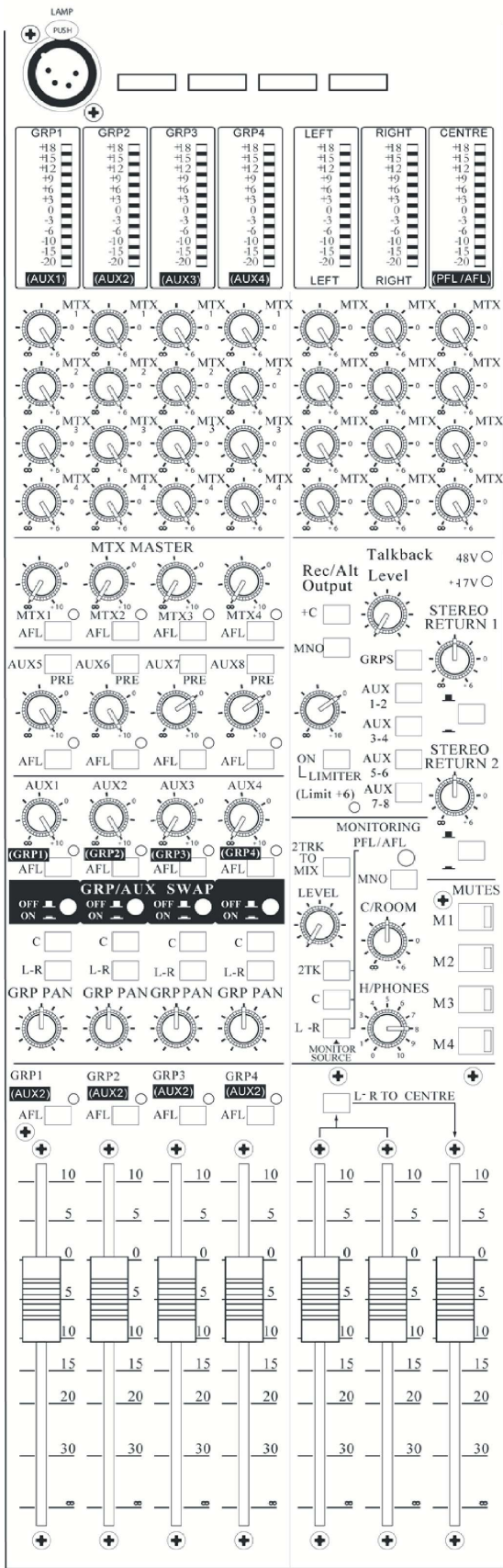
There are two stereo inputs to allow the connection of stereo sources or to use as a sophisticated effects returns.

Connection: Each channel is equipped with both balanced jacks and XLR pairs. The left or right input can be selected, if required, as a single, mono source to be routed to both paths. Alternatively, both the left and right signals can be mono-summed.

EQ section: The 4-band equalizer section provides HF/LF roll off and fixed-frequency Lo-Mid and Hi-Mid boost/attenuation.



Group Section:



Group outputs: A balanced XLR output is provided for each Group

Insert points: Pre-fade insert points are provided on jack connectors

Group Metering: Four 12-segment peak reading bar graph metres display Group (or Aux 1-4 in SWAP mode) output levels

Output Matrix: The output matrix routes the Groups and Main L, R, and C (mono) signals to four matrix (balanced jack) outputs which can feed to remote locations

Matrix assignment: Four rotary dials are assigned to each Group to allow Group signal to be sent to the four output Matrices

Matrix masters: The level of each Matrix output (balanced jack) on the rear panel is controlled by a rotary dial; each Matrix also has a button for AFL.

Auxiliary masters: Each of the eight Auxiliary (balanced jack) outputs located on the rear panel is assigned to eight corresponding rotary dials to control the level; each Auxiliary also has a button for AFL

Group/Aux SWAP: A push button is assigned to each of the first four Auxiliaries allowing the Aux 1-4 master rotary dials and the Group faders to be interchanged. Note: The 12-segment peak reading bar graph metres display the signal assigned to each Group fader (ie: display Groups 1-4 under normal condition; display Auxes 1-4 in SWAP mode)

Routing: The signal to each Group fader can be routed to either the L-R mix (via the Pan control) or the C (mono) bus.

100mm Group faders: 10dB of extra gain above the zero mark is provided smoothly and accurately. Each Group is also equipped with AFL.

Master Section:

Connections: The L-R mix and C(mono) bus outputs are balanced XLR with jack insert points. The L-R output mix is also provided on two pairs of balanced jack outputs and one pair of RCA/phono outputs. In addition, a balanced XLR input is provided to allow a talkback mic to be connected; the RCA/phono output is useful for 2-track devices (ie: Tape/DAT record)

Metering: Three 12-segment Peak reading bar graph metres display L-R and C (mono) bus output signals.

Matrix assignment: Individual rotary dials can route the four Group masters and the Left, Right, and C(mono) buses to any of the four matrix outputs.

Talkback: There are four push buttons to route the talkback signal to the Groups, Aux 1&2, Aux 3&4, Aux 5&6, and Aux 7&8. A rotary dial controls the talkback level.

Stereo Returns: Two returns (unbalanced jacks on rear) are provided, each with its own rotary dial to control the level and a push button to control where it is routed. Stereo Return 1 can be routed to either L-R or Group 1&2; Stereo Return 2 can be routed to either L-R or Group 3&4.

Rec/Alt Output: This record output consists of two channels (L&R) with an RCA/Phono jacks and a 1/4" jacks. It has two pushbuttons, the C switch feeds the C(mono) signal to both L&R channels, the MONO switch sums both the left and right channels together. Also provided is a limiter with a pushbutton to activate ON/OFF and an LED indicator to show when the limiter is active.

Monitoring: The "2TK" inputs, C(mono) bus, or L-R mix can be selected for the control room outputs and headphones. Rotary dials control the levels. The "2TK" inputs can also be added to the L-R mix via the "2TK to mix" button.

Dimensions:

Frame Size	Width	Height	Depth	Weight
12 Channel	730mm (28.73")	169mm (6.65")	656mm (25.85")	20kg (44.1lbs)
16 Channel	842mm (33.13")	169mm (6.65")	656mm (25.85")	22kg (48.5lbs)
24 Channel	1065mm (41.93")	169mm (6.65")	656mm (25.85")	27kg (59.5lbs)
32 Channel	1300mm (51.17")	169mm (6.65")	656mm (25.85")	32kg (70.5lbs)
40 Channel	1523mm (59.96")	169mm (6.65")	656mm (25.85")	37kg (81.6lbs)

Technical Data:

Noise

Measured RMS, 22Hz to 22kHz Bandwidth

Mic E.I.N. @ unity gain, 150W source impedance	-128dBu
Mix Output, 40 inputs routed to mix	<-82dBu
Group Outputs	<-83dBu
Aux Outputs	<-80dBu
Matrix Outputs	<-89dBu

Crosstalk (@1kHz, typical)

Input Channel Mute	<-97dB
Input Fader cut-off	<-95dB
Pan isolation	<-77dB
Mix route isolation	<-97dB
Group route isolation	<-97dB
Adjacent channel crosstalk	<-99dB
Group to Mix	<-89dB
Aux Send pots offness (typical)	<-84dB
Matrix Send pots offness (typical)	<-89dB

Frequency Response

Mic/Line Input to any output, 20Hz - 20kHz	<1dB
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THD + N

Mic sens. -30dBu, +20dBu at all outputs @1kHz	<0.006%
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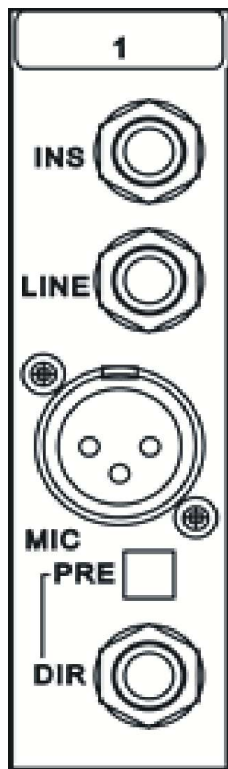
CMRR

Typical @ 1kHz	80dB
Input & Output Max Levels	
Mono & Stereo Mic Inputs	+15dBu
Mono & Stereo Line Inputs	+30dBu
Stereo Returns & Insert Returns	+20dBu
Any output	+20dBu
Nominal Operating Level	0dBu
Headphone Power	2x250mW into 200 W

Input & Output Impedances

Mic Inputs	2k W
Line Inputs and Stereo Returns	10k W
Input channels Insert Return	5k W with EQ in, otherwise 3k W
Mix, Group, Aux, Matrix & Direct outputs	150 W
Insert sends	75 W
Recommended Headphone Impedance	50 - 600 W

Connections:



Mono Connection Rear View:

INSERT (1/4" TRS Jack)

Tip Return Signal
Ring Send Signal
Sleeve Ground

LINE INPUT (1/4" TRS Jack)

Tip Signal Hot
Ring Signal Cold
Sleeve Ground

MIC INPUT (3 pin female XLR)

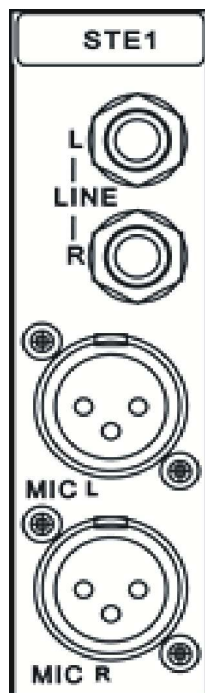
Pin 1 Ground
Pin 2 Signal Hot
Pin 3 Signal Cold

DIRECT OUTPUT (1/4" TRS Jack)

Tip Signal Hot
Ring Ground
Sleeve Chassis

The DIRECT OUTPUT is normally post fader. Pressing the PRE button switches it to pre-EQ, pre-mute, pre-fader.

Stereo Connection Rear View:



MIC INPUT LEFT and RIGHT (3 pin female XLR)

Pin 1 Ground
Pin 2 Signal Hot
Pin 3 Signal Cold

LINE INPUT LEFT and RIGHT (1/4" TRS Jacks)

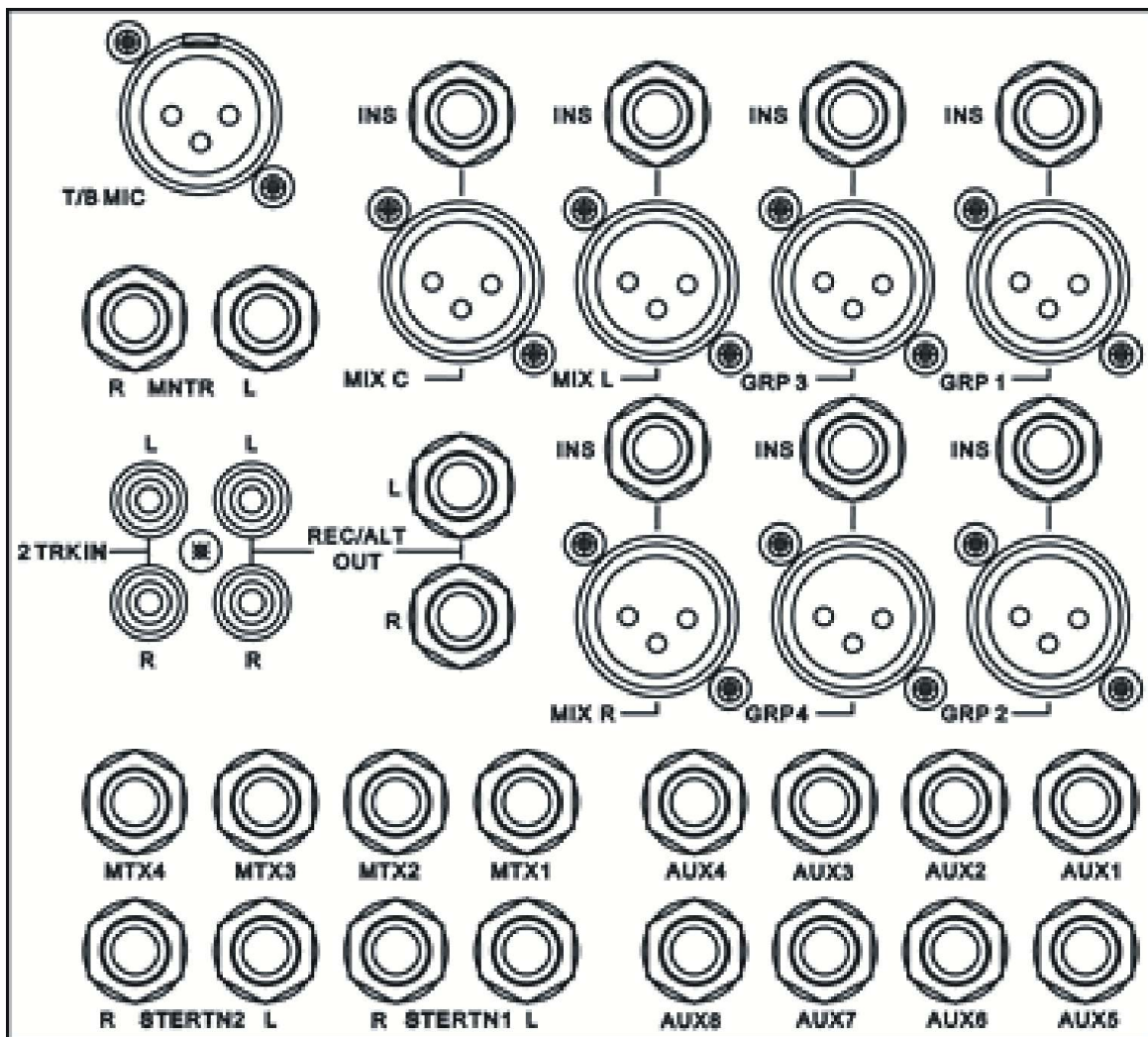
Tip Signal Hot
Ring Signal Cold
Sleeve Ground

T/B MIC (3-pin female XLR)

Pin 1 Ground
Pin 2 Signal Hot
Pin 3 Signal Cold

MIX L, R & C OUTPUTS (3-pin male XLRs)

Pin 1 Chassis
Pin 2 Signal Hot
Pin 3 Gnd



Master Section Rear View:

MIX L, R & C INSERT POINTS (1/4" TRS Jacks)

Tip Return Signal
 Ring Send Signal
 Sleeve Chassis

L & R MONITOR OUTPUTS (1/4" TRS Jacks)

Tip Signal
 Ring Gnd
 Sleeve Chassis

GROUP 1-4 OUTPUTS (3-pin male XLRs)

Pin 1 Chassis
 Pin 2 Signal Hot
 Pin 3 Gnd

GROUP 1-4 INSERT POINTS (1/4" TRS Jacks)

Tip Return
Ring Send
Sleeve Chassis

AUX 1-8 OUTPUTS (1/4" TRS Jacks)

Tip Signal
Ring Gnd
Sleeve Chassis

MATRIX 1-4 OUTPUTS (1/4" TRS Jacks)

Tip Signal
Ring Gnd
Sleeve Chassis

REC/ALT OUTPUTS (1/4" TRS Jacks and RCA Phonos)

JACK

Tip Signal
Ring Gnd
Sleeve Chassis

PHONO

Centre Signal
Screen Chassis

2-TRACK INPUTS (RCA Phono)

Centre Signal
Screen Chassis

STEREO RETURN 1 & 2 INPUTS (1/4" TRS Jacks)

Tip Signal Hot
Ring Signal Cold
Sleeve Chassis