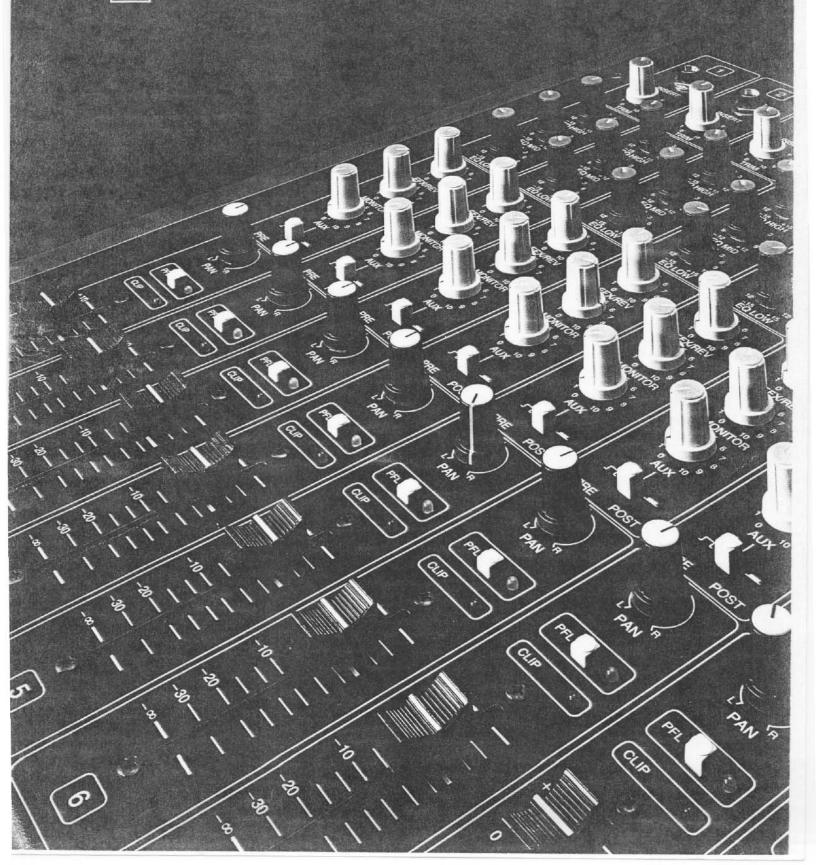
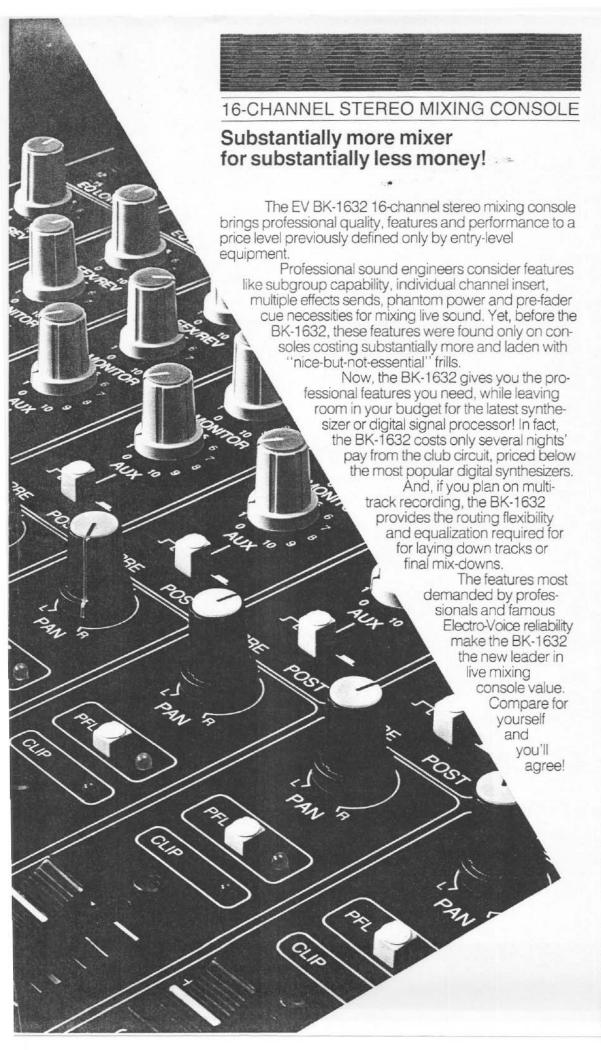
EV 16-CHANNEL STEREO MIXING CONSOLE





# Input Section

Channel Insert Send and return patching for individual channels is accomplished with a single ring-tip-sleeve jack. This space-saving arrangement greatly reduces the "wiring mess" that can occur with separate send and return jacks. The front-panel insert point allows quick repatching of processors during a show. One insert patch cord is included.

Input Trim The trim control matches the input preamp gain to the source output for better signal-to-noise performance. A wide adjustment range accommodates microphone and line-level signals without a separate pad switch.

High/Mid/Low EQ The 3-band equalizer provides flexible total control for any instrument or vocal input. The high band has a ±15-dB range, shelving at 10 kHz for adding "sparkle" to the mix. For increased projection or to correct nasal vocals, the peak/dip mid control centers at 3 kHz with a ±12-dB range. The low EQ can add impact or reduce stage rumble with a ±15-dB range, shelving at 100 Hz.

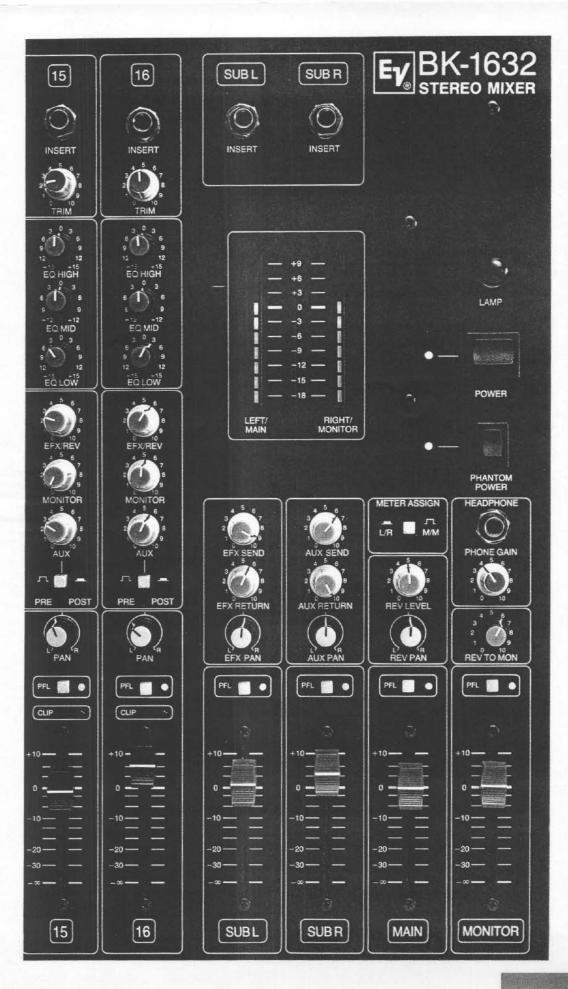
Effects, Monitor and Auxiliary Sends The EFX/REV control sends post-EQ, post-fader signal to the internal spring reverb and/or an external effects processor. The monitor control sends pre-EQ, pre-fader signal for a stage monitor mix. For added flexibility, the auxiliary send is switchable pre- or post-fader and EQ, for monitor or effects applications. This gives you three sends plus the left and right buss, per channel.

Pan Control The pan pot apportions the input signal to the left and right subgroup buses. Besides normal stereo applications, this allows vocal and instrument subgroups for mono sound reinforcement.

PFL Assign Depressing the PFL switch allows pre-fader priority monitoring of the individual channels through the headphone output. This simplifies EQ changes and noise isolation during a live performance. Monitoring status is indicated by an LED.

Clip LED The red LED indicates signal overload, or clipping, at the preamp or equalization section. This helps prevent audible distortion.





# **Output Section**

Subgroup Left and Subgroup Right Send and return patching for subgroups is made with a single ring-tip-sleeve jack. This allows processing for an entire subgroup, like a compressor/ limiter for all vocals.

Level Meters Red-yellow-green LED bars accurately indicate output levels.

Lamp Connector BNC-type socket provides 12.6 V ac for an optional gooseneck lamp.

Effects Send The EFX send controls the output from the effects buss sent to external processors or other feeds.

Effects Return and Pan The level from external processors sent to the left and right subgroups, via the effects pan pot, is determined by these controls.

Meter Assign Enables metermonitoring of left/right subgroup or main/monitor output levels.

**Phantom Power** Eliminates the need for batteries or external power supply for condenser microphones.

Auxiliary Send The auxiliary send controls the output level of the auxiliary buss. When used pre-fader, this is typically a monitor send. In post-fader, the buss is usually an effects send.

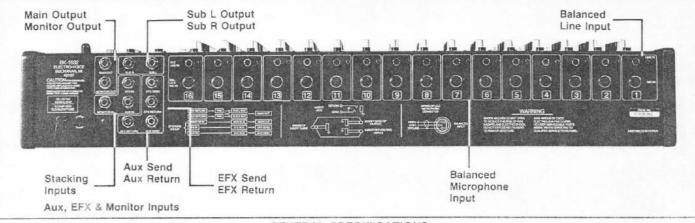
Auxiliary Return and Pan The level from external processors sent to the left and right subgroups, via the effects pan pot, is determined by these controls.

Reverb Level and Pan These controls set the return level of the internal spring reverb sent to the left and right subgroups. The mix sent to the internal reverb is identical to that of the effects send.

Headphone Gain The cue level sent to the headphones jack is determined by this control.

Reverb to Monitor This control sends signal from the internal reverb to the monitor output buss, allowing a "wet" monitor mix.

Sub, Main and Monitor Output Master Faders The left and right subgroup fader controls the output level of the subgroups. The main output controls the level of the mono summed signal from the left and right subgroups. The monitor fader controls the output level of the monitor buss.



#### GENERAL SPECIFICATIONS

#### FREQUENCY RESPONSE -

Mic Input to Any Output, EQ Flat, All Faders Nominal 20-20,000 Hz = 1 dB

# TOTAL HARMONIC DISTORTION -

<0.05% at +4 dBu1, 20-20,000 Hz <0.10% at +20 dBu, 20-20,000 Hz

(20-20,000 Hz with 150-ohm input impedance)

 128 dBu EIN-equivalent input noise, mic input (theoretical minimum noise is - 130 dBu across 150 ohms) - 90 dBu residual at main out (all faders down)

- 90 dBu residual at monitor out

# INPUT CHANNEL EQUALIZATION -

±15 dB shelving at 100 Hz ±12 dB peak/dip at 3 kHz ±15 dB shelving at 10 kHz

#### MICROPHONE INPUTS -

Low impedance, balanced — pin 2 reference positive Maximum input level: +6 dBu (1.5 V) Input impedance at 1 kHz: 4.4 kΩ Common Mode Rejection Ratio, Typical: -65 dB Minimum, 60-10,000 Hz: -50 dB

# LINE INPUTS -

High impedance, balanced tip positive Maximum input level. +24 dBu (12 V) Input impedance: 70 kΩ

#### PEAK INDICATOR THRESHOLD

# MAXIMUM VOLTAGE GAIN ±3 dB -

85 dB — Mic In to Main Out 75 dB — Mic In to Monitor Out 60 dB - Line In to Main Out 50 dB — Line In to Monitor Out 50 dB — Line In to Sub Out 27 dB — Line In to Insert Jack 57 dB — Line In to EFX Send 75 db — Mic In to Sub Out 52 dB — Mic In to Insert Jack 82 dB - Mic In to EFX Send 50 dB - Line in to AUX OUT

#### CROSSTALK -

- 75 dB typical - Adjacent inputs, 1 kHz

-75 dB typical - Input to output, 1 kHz

-50 dB minimum - All combinations, 20-20,000 Hz

#### LAMP CONNECTOR -

BNC connector, 12.6 V ac/0.20 amps maximum

#### PHANTOM POWER -

48 V dc at pins 2 and 3 on mic connector, 3.4 kΩ source resistance

#### LEVEL DISPLAY -

10-Segment LED in 3 dB Steps:

Range: - 18 dB to +9 dB Reference "0": +4 dBu

Response: Full wave, average responding

#### HEADPHONE OUTPUT -

Output: 20 mW into 8 Q

Frequency Response: 50-15 kHz ±2 d8 PFL (pre fader listen): Switchable for all input and output channels

**OUTPUTS** 

AUX SEND Input Channels: Switchable pre- or post-fader and EQ

### DIMENSIONS -

Height: 130 mm (5.125 in.) Depth: 460 mm (18.125 in.) Width: 832 mm (32.75 in.)

#### NET WEIGHT -

16.8 kg (37.0 lb)

# POWER REQUIREMENT -

25 Watts Maximum

Available for 95-130 volts, 60 Hz

# LINE LEVEL INPUTS

MAXIMUM LEVEL	INPUT IMPEDANCE		MAXIMUM1 LEVEL	MINIMUM LOAD	INTERNAL IMPEDANCE
+20 dBu	100 kΩ	Main	+20 dBu	600 €	50 Ω
+20 dBu	100 kΩ	Monitor	+20 dBu	600 €	50 Ω
_	≥15 kΩ	Left Sub	+20 dBu	600 Ω	50 Ω
+ +40 dBu	16 κΩ	Right Sub	+20 dBu	600 Ω	50 Ω
+29 dBu	10 kΩ	Left Insert	+20 dBu	600 Ω	50 Ω
_	≥15 kΩ	Right Insert	+20 dBu	600 Ω	50 Ω
Input-Channel Insert* +20 dBu +5 dBu	1.8 k Flat EQ 1 k Max. Boost EQ	EFX Send	+20 dBu	600 Ω	50 Ω
		Input-Channel Insert	+20 dBu	2000 Ω	100 Ω
20 4011		Aux Out	+20 dBu	600 Ω	50 Ω
	10 KL1	1 0 dBu is 0.775 upite PMS			
	+ 20 dBu + 20 dBu + 20 dBu + 20 dBu + 29 dBu + 20 dBu + 5 dBu + 29 dBU	LEVEL         IMPEDANCE           + 20 dBu         100 kΩ           + 20 dBu         100 kΩ           -         ≥15 kΩ           + 40 dBu         16 kΩ           + 29 dBu         10 kΩ           -         ≥15 kΩ           + 20 dBu         1.8 k Flat EQ           + 5 dBu         1 k Max.           Boost EQ	LEVEL         IMPEDANCE           +20 dBu         100 kΩ         Main           +20 dBu         100 kΩ         Monitor           -         ≥15 kΩ         Left Sub           + 40 dBu         16 kΩ         Right Sub           +29 dBu         10 kΩ         Left Insert           -         ≥15 kΩ         Right Insert           +20 dBu         1.8 k Flat EQ         EFX Send           +5 dBu         1 k Max.         Input-Channel Insert           +29 dBU         10 kΩ	LEVEL         IMPEDANCE         LEVEL           + 20 dBu         100 kΩ         Main         + 20 dBu           + 20 dBu         100 kΩ         Monitor         + 20 dBu           -         ≥ 15 kΩ         Left Sub         + 20 dBu           + 40 dBu         16 kΩ         Right Sub         + 20 dBu           + 29 dBu         10 kΩ         Left Insert         + 20 dBu           -         ≥ 15 kΩ         Right Insert         + 20 dBu           + 20 dBu         + 20 dBu         + 20 dBu         + 20 dBu           + 5 dBu         1 k Max. Boost EQ         Input-Channel Insert         + 20 dBu           + 29 dBU         10 kΩ         + 20 dBu         + 20 dBu	LEVEL         IMPEDANCE         LEVEL         LOAD           +20 dBu         100 kΩ         Main         +20 dBu         600 Ω           +20 dBu         100 kΩ         Monitor         +20 dBu         600 Ω           -         ≥15 kΩ         Left Sub         +20 dBu         600 Ω           +40 dBu         16 kΩ         Right Sub         +20 dBu         600 Ω           +29 dBu         10 kΩ         Left Insert         +20 dBu         600 Ω           +20 dBu         18 k Flat EQ         FSX Send         +20 dBu         600 Ω           +20 dBu         1 k Max, Boost EQ         Input-Channel Insert         +20 dBu         600 Ω           +29 dBU         10 kΩ         4ux Out         +20 dBu         600 Ω



Electro-Voice a MARK IV company

600 Cecil Street, Buchanan, Michigan 49107

8234 Doe Avenue, Visalia, California 93291 Electro-Voice Div., 345 Herbert Street Gananoque Ontano • Electro-Voce S.A.
Keltanstrasse 5. CH-2563 IPSACH. Switzerland

© Electro-Voice, Inc. 1987 • Litho in U.S.A. • Form 2682

Electro-Voice engineering continually improves existing products, as well as creating new ones. Thus specifications given in this brochure are subject to change without nutice. For complete specifications consult the appropriate Engineering Data Sheet

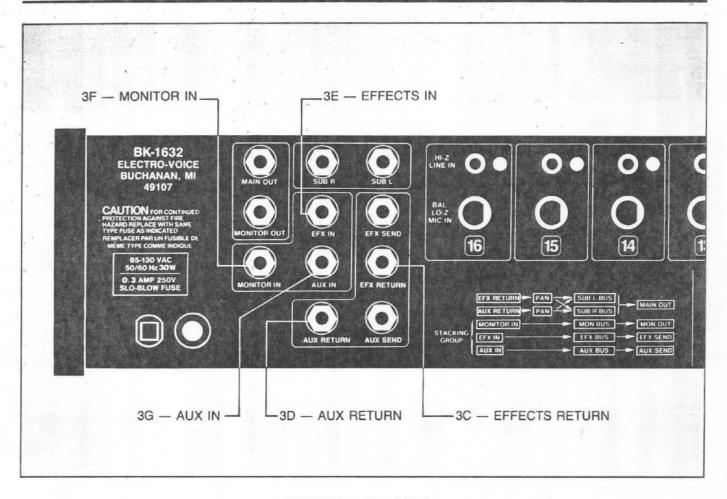


FIGURE 3 — Input Jacks

# 3C. EFFECTS RETURN

The EFX RET jack accepts line level input signals which can be set with the EFX RET level and the EFX PAN front panel controls. This jack may be used as a stacking input or a second auxiliary input.

# 3D. AUX RETURN

The AUX RETURN jack is used for signals to be fed to the subgroup buses. The signal is controlled by the AUX RETURN and AUX PAN front panel functions. The AUX RETURN is part of the "stacking group".

# 3E. EFFECTS IN

The EFX IN jack will put line level signals directly onto the effects bus. Crosstalk and buffering pro-

tection are provided by the input circuit, signal level is controlled by the external source. The EFX IN is part of the "stacking group"

# 3F. MONITOR IN

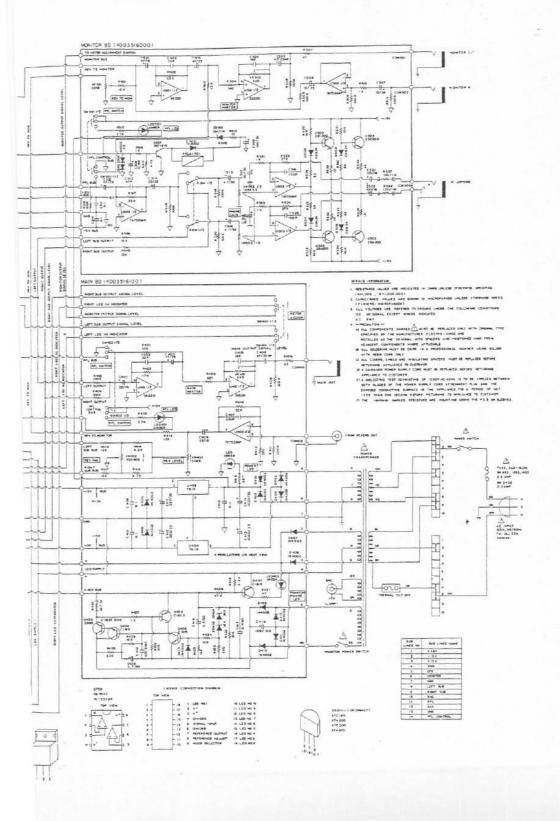
The MONITOR IN jack will put signals directly onto the MONITOR bus. Crosstalk and buffering protection are provided by the input circuit; signal level is controlled by the external source. The MONITOR IN is part of the "stacking group"

#### 3G. AUX IN

The AUX IN jack will put signals directly onto the AUX bus. Crosstalk and buffering protection are provided by the input circuit; signal level is controlled by the external source. The AUX IN is part of the "stacking group"

# SECTION 7.0

# 7.0 SCHEMATIC



# 6.0 SCHEMATIC

