8-Channel Audio Mixer

MXP-290



SONY

A New Compact Sony Audio Mixer with Balanced Inputs/Outputs and a Video Editor Interface

The MXP-29, Sony's most popular audio mixer, has been refined and upgraded especially to benefit production houses. The new MXP-290 audio mixer is fully compatible with professional equipment. It incorporates XLR type connectors for mic inputs as well as for line inputs/outputs and external monitor inputs.

Editor control is another big feature designed into this mixer. When used in Sony's post-production editing system, the channel fader levels, as well as monitor output mute, override, and new preview switcher function can be controlled from the BVE-910 Sony video editor. The mixer has a VCA (Voltage-Controlled Amplifier) in front of each channel fader for editor control of the channel levels. With these functions, seldom found in other mixers in this class, the MXP-290 makes quality audio production for video easier and more efficient than ever before.



CONNECTORS

The rear panel of the MXP-290 is remarkably complete with 8 mic/line inputs, 2 phono inputs (channels 1 & 2), 6 line inputs (channels 3 through 8), 2 sub inputs for extra source connection or echo/effects return, and 2 external monitor inputs. Outputs include 2 stereo line outputs, 2 AUX outputs for echo/effects send, 2 monitor outputs, and a TB output for studio communication.
The mic/line inputs, external monitor inputs and a pair of line outputs are transformerless balanced designs. All others employ phono jacks for unbalanced connections.

CHANNEL CONTROL

To assure high-quality mixing, even with less than ideal source signals, each input channel features precise level and frequency-shaping controls in addition to input select and output assign functions.

Input Selection

A 4-position input selector allows selection of any of the inputs. When set to MIC +48V, this selector automatically provides DC +48V through the XLR type connector for powering a condenser or electret condenser microphone.

Trim Control

The trim control is effective for the balanced mic/line input. It changes the reference input level over a 30dB range, making it possible to accommodate any type of microphone as well as high and low level line inputs. The peak indicator illuminates at approx. 5dB below the clipping level.

Filter and Equalization

The low-cut filter eliminates unnecessary low frequencies below 120Hz. The EQ switch inserts the 3-band equalizer, with individual controls for up to 15dB boost or cut at 100Hz (LOW), 2.8kHz (MID) and 10kHz (HI).

Channel Fader

This fader is used to adjust the corresponding channel's input signal level. It provides a gain margin of 10dB.

Pan-Pot Control

A rotary control permits continuous panning of the input signal between the L and R output channels.

AUX 1 & 2 Level Controls

Each controls the signal level to the respective AUX bus. By using the PRE switch, either pre- or post-fader signals can be sent to AUX 1.

MASTER SECTION

In addition to faders and meters for the outgoing signals, the master section offers a comprehensive monitoring system plus individual level and pan-pot controls for sub inputs 1 and 2.

Faders

The dual master faders allow individual control of CH-1 and CH-2 output signal levels. Those marked AUX functions to adjust the AUX 1 and 2 output levels, independently of each other. The gain margin is 10dB for all faders.

VU Meters

The MASTER VU meters have 15-segment LED indicators which indicate measurements from −20dB to +3dB. The master meters are automatically switched to show the monitor input signal levels when the external monitor button is pressed.

Sub Input Controls

Two channels of sub inputs are directly routed to their own level and pan-pot controls in the master section.

Output Monitoring

All of the line, AUX 1 and 2 outputs can be monitored, either through headphones or external monitor speakers, with the optimum listening level separately adjusted for each.

Pre-Fader Listening

Pre-fader listening to any desired input is possible through headphones simply by pressing the non-lock PFL switch on the respective channel. To do the same through monitor speakers, the PFL switch in the master section must be pressed.

Monitoring of Recorded Results

The external monitor button can be pressed to audition the playback signals from the recorder returned to the mixer via external monitor input jacks.

Talkback

A built-in microphone unit enables talkback to the studio. An exclusive rotary switch controls the level. The monitor speakers are automatically muted when this function is engaged.

EDITOR CONTROL

The following four functions of the MXP-290 can be remote-controlled from the BVE-910 Sony video editor through 15-pin and 25-pin connecting cables. An LED illuminates on the mixer to indicate the editor control mode.

(1) VCA gain on each channel fader

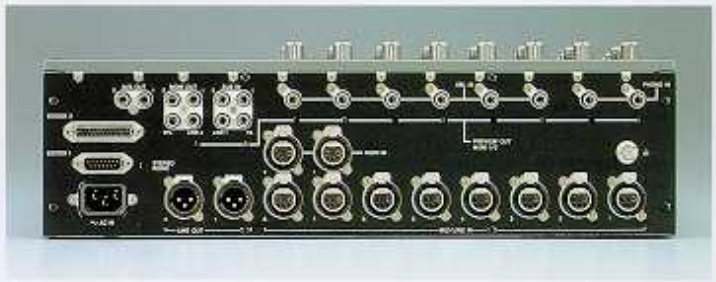
(2) Preview switcher function
In the preview mode, the MXP-290 enables monitoring of the audio outputs of any VTR connected to its LINE IN connectors. This is possible regardless of whether the VTR is used as a recorder or player, making it easy and instant to perform an editing rehearsal in the recorder reassignment application.

(3) Individual override of L and R monitor outputs, using the external monitor inputs

(4) Monitor output mute
When the local switch of any channel is depressed, the VCA of that channel is released from the editor control, so that the channel level control can be operated manually by the fader.

MORE FEATURES

- Connection of up to 8 VTRs in the monaural mode
- Built-in 1kHz oscillator
- Operation on AC
- Easy mounting into a 19" standard rack or a Sony rack for U-matics
- Compact size and panel colors that match Sony video equipment

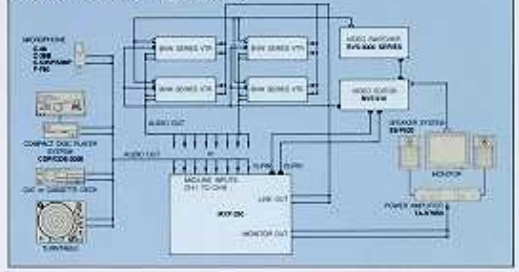


Specifications

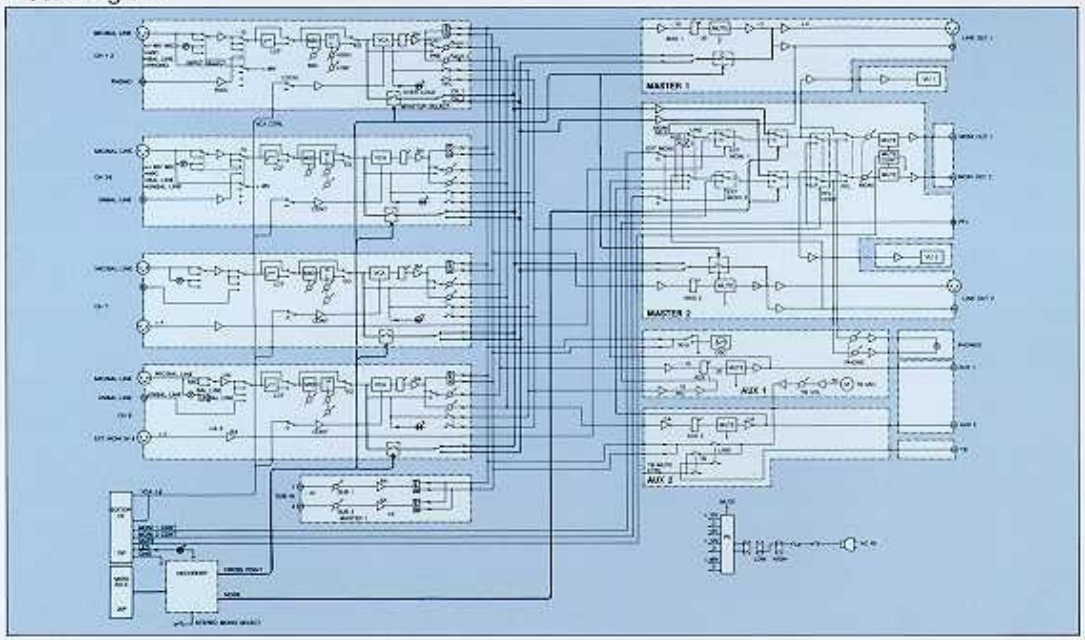
Inputs:	MIC/LINE (8 channels, XLR-3-31 type) −60dBs – −30dBs (−30dBs – 0dBs max.) for MIC, −20dBs – +10dBs (+10dBs – +24dBs max.) for LINE, more than 6k ohms, balanced, trim 0 – −30dB LINE (6 channels, phono) −10dBs (+15dBs max.), more than 47k ohms, unbalanced PHONO (2 channels, phono) −44dBs (−14dBs max.), more than 47k ohms at 1kHz, unbalanced SUB (2 channels, phono) −10dBs (+15dBs max.), more than 8k ohms, unbalanced MONITOR (2 channels, XLR-3-31 type) +4dBs (+24dBs max.), more than 15k ohms, balanced
Outputs:	LINE (2 channels, XLR-3-32 type) +4dBs (+24dBs max.) at 600 ohm load, less than 150 ohms, balanced LINE (2 channels, phono) −5dBs (+15dBs max.) at 10k ohm load, less than 150 ohms, unbalanced AUX (2 channels, phono) −5dBs (+15dBs max.) at 10k ohm load, less than 150 ohms, unbalanced MONITOR (2 channels, phono) −5dBs (+15dBs max.) at 10k ohm load, less than 150 ohms, unbalanced PHONE (2 channels, stereo phone) 10mW at 32 ohm load TB (1 channel, phono) −5dBs (+15dBs max.) at 10k ohm load, less than 150 ohms, unbalanced PFL (1 channel, phono) −5dBs (+15dBs max.) at 10k ohm load, less than 150 ohms, unbalanced
Frequency response:	20 – 20,000Hz $^{+0.5}_{-1.0}$dB
Harmonic distortion:	Less than 0.3% (+4dBs at 1kHz output level)
Equivalent input noise:	MIC: Less than −123dBs (150 ohms terminated, 20 – 20,000Hz) LINE: Less than −80dBs (input shorted, 20 – 20,000Hz)
Residual noise:	Less than −85dBs (master fader OFF) Less than −70dBs (channel fader OFF)
Crosstalk:	More than 70dB (at 10kHz)
Built-in oscillator:	1kHz with less than 3% distortion
Equalizer:	LOW: 100Hz ±15dB MID: 2.8kHz ±15dB HIGH: 10kHz ±15dB
Low-cut filter:	120Hz (−3dB), 12dB/octave
Power requirements:	AC 100 – 120V (for USA and Canada)/ AC 220 – 240V (for the other countries), 50/60Hz
Power consumption:	24W
Operating temperature:	5°C to 45°C (41°F to 113°F)
Dimensions:	Approx. 424(W) x 132(H) x 358(D)mm (16⅞ x 5⅛ x 14⅛")
Weight:	Approx. 7.5kg (16 lb 9 oz)
Supplied accessory:	AC power cable
Optional accessories:	MXBK-201 table kit MXBK-200 rack mount adaptor

Design and specifications subject to change without notice.

Audio/Video Editing System



Block Diagram



A-0738
MKBC006IKYP9406P2-005

Sony Corporation
Printed in Japan ©SONY

MXP-290

8-Channel Audio Mixer



- Suitable for video editing application in broadcast and video post production
- Video editor control over VCA gain, preview switcher and monitor output mute via parallel 15-pin and 25-pin connectors
- Local switchable-channel to disable editor control
- Wide range of inputs: 8 channels of balanced MIC or LINE, unbalanced line (6 channels) and phono (2 channels)
- 30dB trim on microphone and balanced line inputs
- DC 48V external power switch on microphone channel
- 3-band EQ, 2 AUX sends and PFL on each channel
- Two sub-inputs with level and panpot control
- Two external monitor inputs and switch
- Separate L and R master faders
- Two 15-segment VU meters
- 1 kHz test tone oscillator
- Talkback microphone, talkback output and "talk to master" switch
- Headphone amplifier

Supplied Accessory

AC power cable

Optional Accessories

MXBK-200
19-inch Rack Mount Adaptor

MXBK-201
Table Kit