

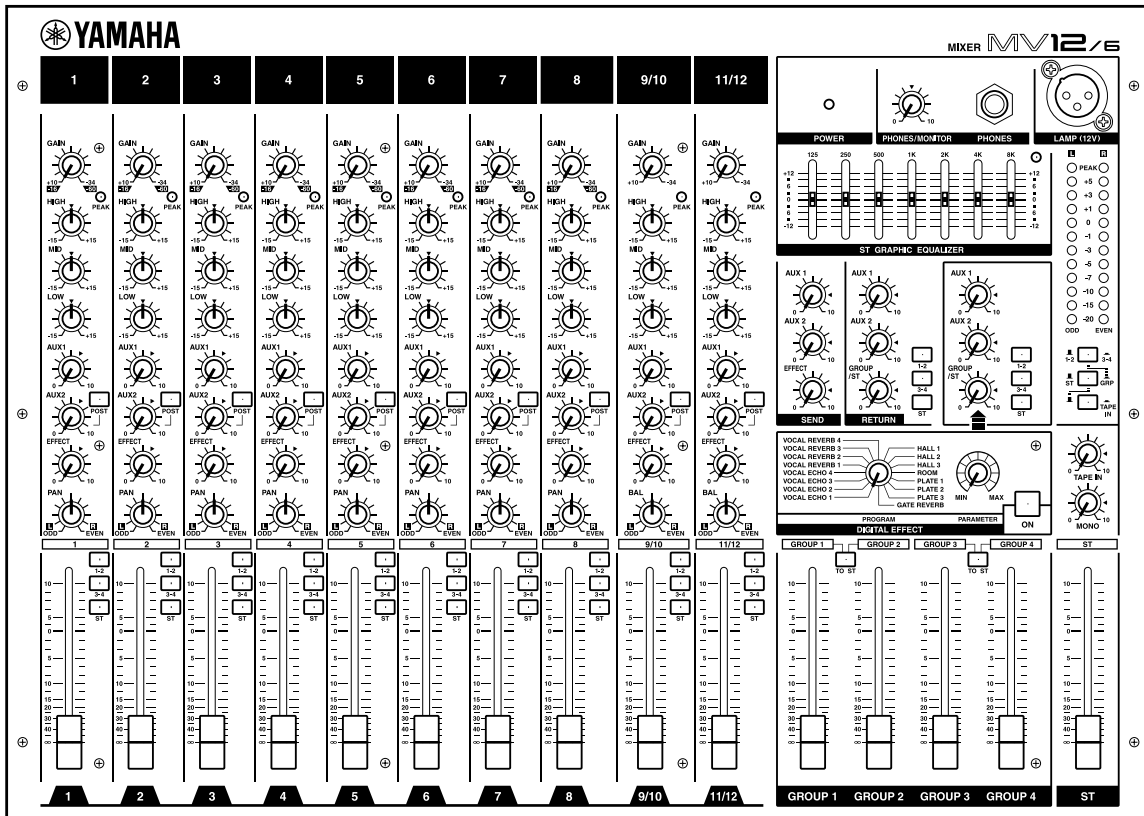


MIXER

MV12/6

Owner's Manual

Thank you for purchasing the YAMAHA MV12/6 Mixer.
The MV12/6 mixer is designed to provide the user with an ideal balance of operability, functionality, and simplicity.
In order to get the most out of your MV12/6 mixer and its functions, and to enjoy years of trouble-free use, please read this Owner's Manual thoroughly and keep it in a safe place for future reference.



Keep This Manual For Future Reference.



FCC INFORMATION (U.S.A.)

1. **IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!** This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.
2. **IMPORTANT:** When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product **MUST** be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.
3. **NOTE:** This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures: Relocate either this product or the device that is being affected by the interference. Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s. In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to coaxial type cable. If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA 90620

The above statements apply **ONLY** to those products distributed by Yamaha Corporation of America or its subsidiaries.

WARNING: THIS APPARATUS MUST BE EARTHED

IMPORTANT

THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE:

GREEN-AND-YELLOW :	EARTH
BLUE :	NEUTRAL
BROWN :	LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured GREEN and YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol \perp or coloured GREEN and YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

* This applies only to products distributed by YAMAHA KEMBLE MUSIC (U.K.) LTD.

Important

Read the following before operating the MV12/6

Warnings

- Do not place a container with liquid or small metal objects on top of this unit. Liquid or metal objects inside this unit are a fire and electrical shock hazard.
- Do not allow water to enter this unit or allow the unit to become wet. Fire or electrical shock may result.
- Connect this unit's power cord only to an AC outlet of the type stated in this Owner's Manual or as marked on the unit. Failure to do so is a fire and electrical shock hazard.
- Do not scratch, bend, twist, pull, or heat the power cord. A damaged power cord is a fire and electrical shock hazard.
- Do not place heavy objects, including this unit, on top of the power cord. A damaged power cord is a fire and electrical shock hazard. In particular, be careful not to place heavy objects on a power cord covered by a carpet.
- If you notice any abnormality, such as smoke, odor, or noise, or if a foreign object or liquid gets inside the unit, turn it off immediately. Remove the power cord from the AC outlet. Consult your dealer for repair. Using the unit in this condition is a fire and electrical shock hazard.
- Should this unit be dropped or the cabinet be damaged, turn the power switch off, remove the power plug from the AC outlet, and contact your dealer. If you continue using the unit without heeding this instruction, fire or electrical shock may result.
- If the power cord is damaged (i.e., cut or a bare wire is exposed), ask your dealer for a replacement. Using the unit with a damaged power cord is a fire and electrical shock hazard.
- Do not remove the unit's cover. You could receive an electrical shock. If you think internal inspection, maintenance, or repair is necessary, contact your dealer.
- Do not modify the unit. Doing so is a fire and electrical shock hazard.
- If lightning begins to occur, turn off the power switch of the unit as soon as possible, and unplug the power cable plug from the electrical outlet.
- If there is a possibility of lightning, do not touch the power cable plug if it is still connected. Doing so may be an electrical shock hazard.

Cautions

- When rack-mounting the unit, allow enough free space around the unit for normal ventilation. This should be: 10 cm at the sides, 15 cm behind, and 15 cm above.
For normal ventilation during use, remove the rear of the rack or open a ventilation hole.
If the airflow is not adequate, the unit will heat up inside and may cause a fire.
- Hold the power cord plug when disconnecting it from an AC outlet. Never pull the cord. A damaged power cord is a potential fire and electrical shock hazard.
- Do not touch the power plug with wet hands. Doing so is a potential electrical shock hazard.

Operating Notes

- Using a mobile telephone near this unit may induce noise. If noise occurs, use the telephone away from the unit.
- XLR-type connectors are wired as follows:
pin 1: ground, pin 2: hot (+), and pin 3: cold (-).
- The performance of components with moving contacts, such switches, rotary controls, faders, and connectors, deteriorates over time. The rate of deterioration depends on the operating environment and is unavoidable. Consult your dealer about replacing defective components.

Features

- The MV12/6 offers 12 input channels that can be mixed into stereo, monaural, or to four group outputs.
- A MONITOR jack offers easy connection to a sub amp for monitoring. It allows monitoring of the main stereo output, TAPE IN input and the signals from groups 1-2, 3-4.
- The mixer is equipped with a highly efficient, built-in digital effects section. The built-in effects allow you to create professional sounding mixes without the need of additional equipment. An EFFECT SEND jack is also supplied to allow the use of external effectors.
- Two AUX SEND/RETURN jacks are provided. Two separate AUX buses can be used as sends for external effectors or a monitor system.
- The mixer supplies phantom power to provide easy connection of condenser microphones that require an external power source.
- The mixer is equipped with INSERT IN, INSERT OUT jacks for input channels 1-4 allowing individual effects to be inserted into individual channels.
- Input Channels 1-8 are equipped with XLR type input jacks. A three-way selector switch allows compatibility with a wide range of sources such as condenser microphones that need an external power source, regular dynamic microphones, line level devices, etc. Input Channels 9-12 are equipped with stereo line input jacks
- The main input and output jacks are also equipped with Euro-block connectors. These connectors facilitate the installation of the mixer as a permanent fixture in halls, etc.
- TAPE IN jacks and REC OUT jacks offer easy connection of tape decks for playback and recording.

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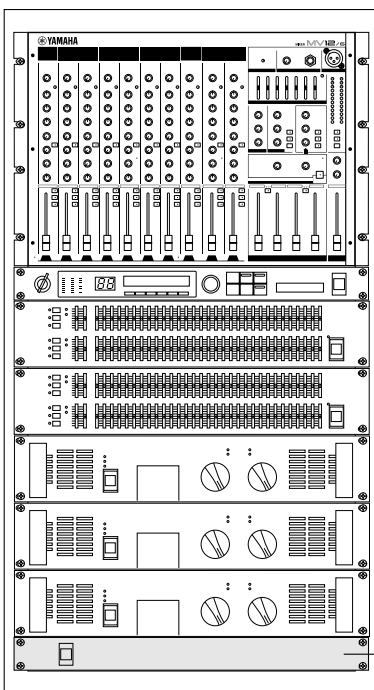
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Caution: When the unit is installed in a rack



The main unit's power switch is located on the rear panel of the unit. When installed in a rack, please use the external power switch on a power distributor, etc.

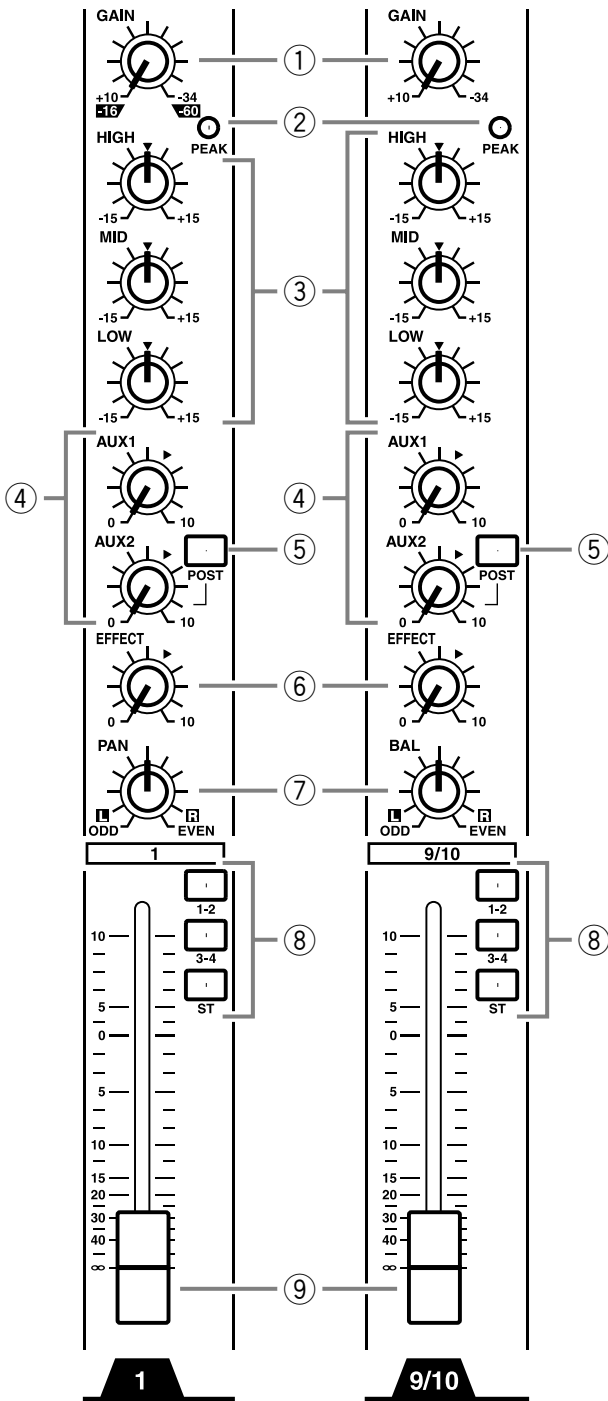
Power distributor, etc.

Front & Rear Panels

Channel Control Section

Channels 1-8
(Monaural)

Channels 9-12
(Stereo)



① GAIN Control

Adjusts the input level of the signal entering the mixer to an optimum level.

To obtain an optimum balance between the S/N ratio and dynamic range, adjust the level so that the PEAK Indicator ② occasionally lights.

-60 to -16 indicates the MIC input adjustment level, -34 to +10 indicates the LINE input adjustment level.

* The Input Select Switch located on the Connector Panel provides settings for the type of mic or device that is connected to the INPUT jack (refer to page 7).

② PEAK Indicator

The indicator detects peaks in the signal after it has passed the EQ.

The indicator will light red when the level reaches +17dB to warn that clipping is imminent.

③ Equalizer

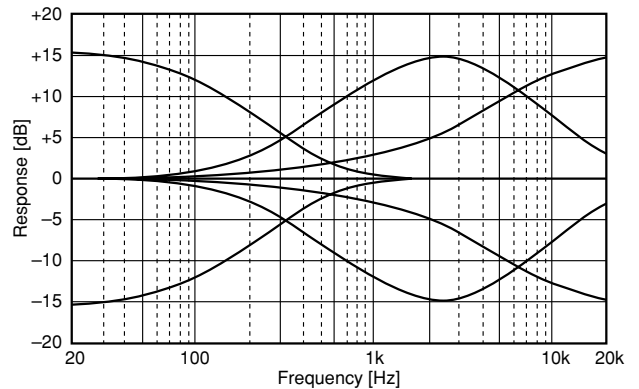
Provides +/-15dB of control over high, mid and low frequency ranges at the center frequencies listed below.

HIGH : 10kHz (shelving)

MID : 2.5 kHz (peaking)

LOW : 100Hz (shelving)

Frequency response will be flat when the knob is positioned at "▼".



④ AUX1, AUX2 Controls

⑤ POST Switch

Individually controls the level of the signal sent from each channel to the AUX1 and AUX2 buses.

The signal taken from before the channel fader is sent to AUX1.

Depending upon the POST switch setting, the signal taken from either before (POST Switch = ■) or after (POST Switch = ▬) the channel fader is sent to AUX2.

When a stereo channel is used, L and R signals are combined and sent to the AUX1 and AUX2 buses.

⑥ **EFFECT Control**

Controls the level of the signal sent from each channel to the EFFECT bus.

This control is located after the channel fader so its level will also be affected by the channel fader setting.

When a stereo channel is used, L and R channel signals are combined and sent to the EFFECT bus.

⑦ **PAN Control (CH1-8)**
BAL Control (CH9-12)

The PAN control knobs set the position within the stereo field of each signal that is sent to the GROUP bus 1-2, GROUP bus 3-4 and STEREO bus L-R.

The BAL control knobs set the balance between left and right channels and assigns the signals that are received at INPUT L (CH9, 11) to GROUP buses 1/3 or STEREO bus L, and the signals received at INPUT R (CH10, 12) to GROUP buses 2/4 or STEREO bus R.

⑧ **GROUP, ST Select Switches**

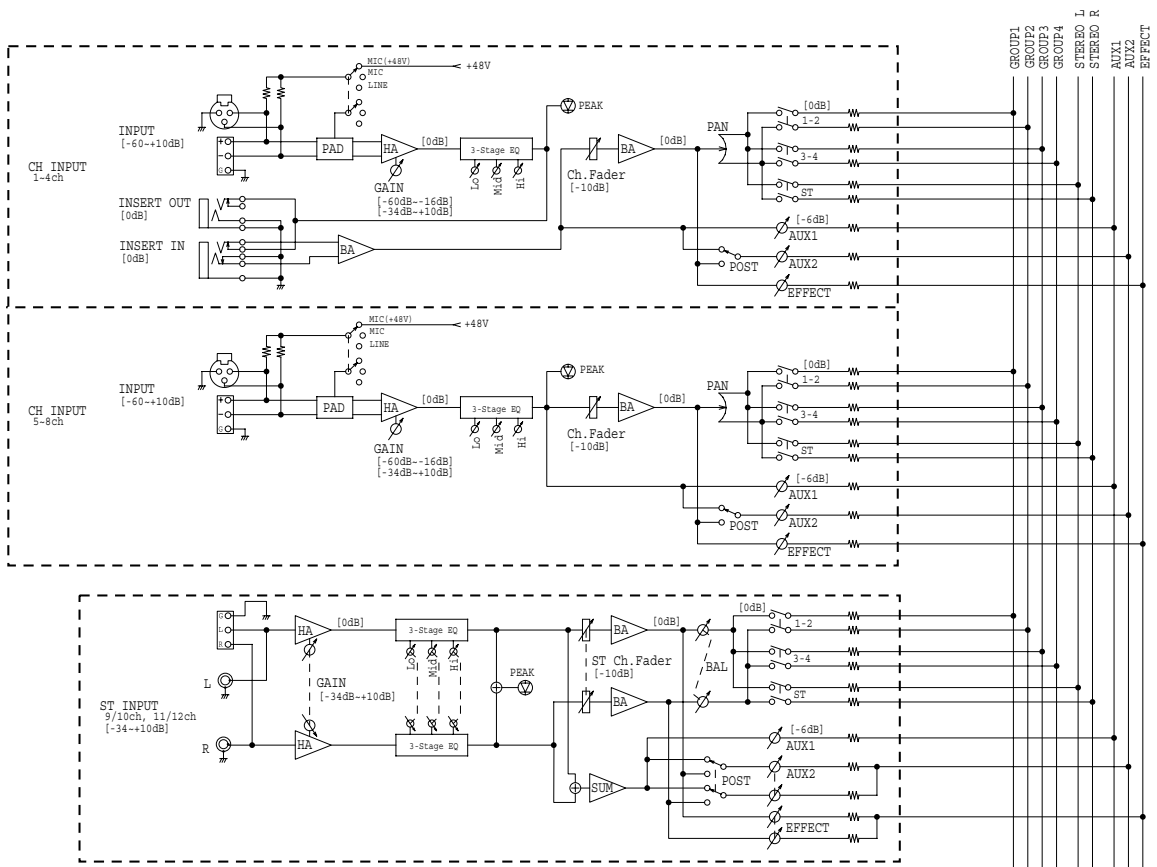
Used to send the signal of each channel to the GROUP bus 1-2, GROUP bus 3-4 and STEREO bus L-R.

When the switch is ON (—), the signal is sent to the relative bus.

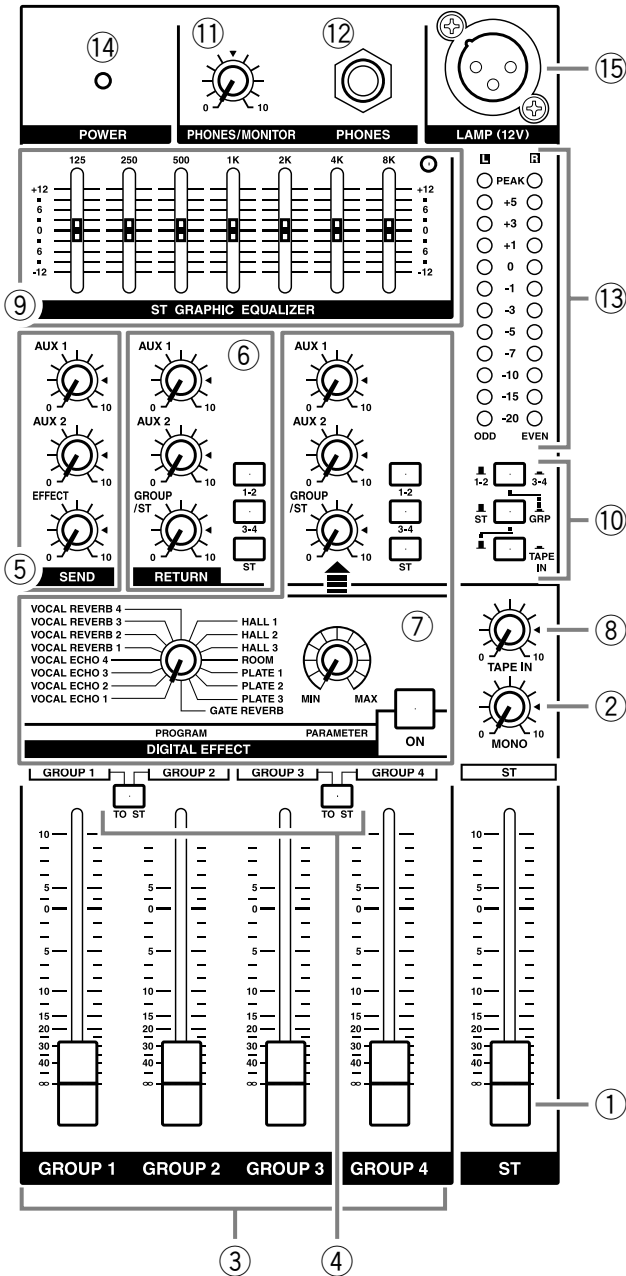
⑨ **Channel Fader**

Controls the output level of the input channel signal and adjusts the volume balance between channels.

* Levels of unused faders should be lowered.



Master Control Section



① **ST Master Fader**

Controls the level of the signal that is sent to the ST OUT jacks.

② **MONO Control**

Controls the level of the signal (the monaural signal that is formed by combining the signals from the STEREO bus) that is sent to the MONO OUT jack.

③ **GROUP 1-4 Faders**

④ **TO ST Switch**

Controls the level of the GROUP 1-4 signals, and sends the signals to their respective GROUP OUTPUT 1-4 jacks.

Also, when the TO ST switch is ON (—), the signals whose levels are controlled by the GROUP faders are also sent to the STEREO bus.

⑤ **SEND**

• **AUX1, AUX2 Controls**

Controls the individual levels of the AUX1 and AUX2 signals that are sent to the AUX1 SEND jack and AUX2 SEND jack.

• **EFFECT Control**

Controls the level of the EFFECT bus signal that is sent to the EFFECT SEND jack.

* This control is not related to, and has no effect on the signal that is sent from the EFFECT bus to the built-in digital effects.

⑥ **RETURN**

• **AUX1, AUX2 Controls**

Controls the levels of the signals (mixed, L with R) that are sent to the AUX1 and AUX2 buses from the RETURN L (MONO) and R jacks.

• **GROUP/ST Control**

Controls the level of the signal that is sent from the RETURN L(MONO)/R jacks to the GROUP buses 1-4 and the stereo bus.

• **GROUP, ST Select Switches**

Sends the signal from the RETURN L(MONO)/R jacks to GROUP buses 1-4 and the Stereo bus.

When the switch is ON (—), the signal is sent to its corresponding buses.

* The signal from the RETURN L jack is sent to GROUP buses 1 and 3, and the signal from the RETURN R jack is sent to GROUP buses 2 and 4.

* When only the RETURN L(MONO) jack is used, the same signal is also sent to the STEREO bus L/R and GROUP buses 1-4.

⑦ **DIGITAL EFFECT**

• **PROGRAM Select Switch**

Selects a program from the built-in digital effects.

VOCAL ECHO 1	VOCAL REVERB 1	HALL 1	PLATE 1
VOCAL ECHO 2	VOCAL REVERB 2	HALL 2	PLATE 2
VOCAL ECHO 3	VOCAL REVERB 3	HALL 3	PLATE 3
VOCAL ECHO 4	VOCAL REVERB 4	ROOM	GATE REVERB

• **PARAMETER Control**

Controls parameters (effect level, speed, etc.) of the selected effect program.

• **ON Switch**

Switches the built-in digital effect ON (☐) or OFF (■). When set to OFF, the signal from the built-in effect is not sent.

• **AUX1, AUX2 Control**

Controls the level of the signal that is sent from the built-in digital effects to the AUX1 and AUX2 buses.

• **GROUP/ST Control**

Controls the level of the signal that is sent from the built-in digital effects to GROUP buses 1-4 and the STEREO bus.

• **GROUP, ST Select Switches**

Sends the signal from the built-in digital effects to GROUP buses 1-4 and the STEREO bus.

When the switch is ON (☐), the signal is sent to its corresponding buses.

⑧ **TAPE IN Control**

Controls the level of the signal that is sent from the TAPE IN jack to the STEREO bus.

⑨ **ST GRAPHIC EQUALIZER**

A stereo 7-band graphic equalizer that offers tone adjustment to the signal that is output to the ST OUT jacks.

A +/-12dB boost or cut is provided at each of the frequency bands 125, 250, 500, 1k, 2k, 4k and 8kHz.

⑩ **PHONES/MONITOR Output and Meter Select Switch**

Selects the signal that is sent to the MONITOR jack, PHONES jack and the level meter.

The three switches are used in combination to select TAPE IN, ST, GROUP 1-2 and GROUP 3-4 signals.

Signal	Switch			
	☐ 1-2	☐ 3-4	☐ ST	☐ GROUP
TAPE IN	N/A		N/A	☐ TAPE IN
ST	N/A		☐ ST	☐
GROUP 1-2	☐ 1-2		☐ GROUP	☐
GROUP 3-4	☐ 3-4		☐ GROUP	☐

⑪ **PHONES/MONITOR Control**

Controls the level of the signal that is sent to the MONITOR jack and PHONES jack.

⑫ **PHONES Jack**

This is a stereo phone type jack for connecting a pair of headphones (nominal output/impedance of 3mW/40Ω). Use the ⑩ PHONES/MONITOR output and meter select switch to select the source to be monitored with the headphones.

⑬ **LEVEL Meter**

The LEDs indicate the output level of the signal selected with the PHONES/MONITOR output and Meter Select Switch ⑩. “0” indicates a nominal level, and the PEAK indicator will light when clipping is imminent.

⑭ **POWER Indicator**

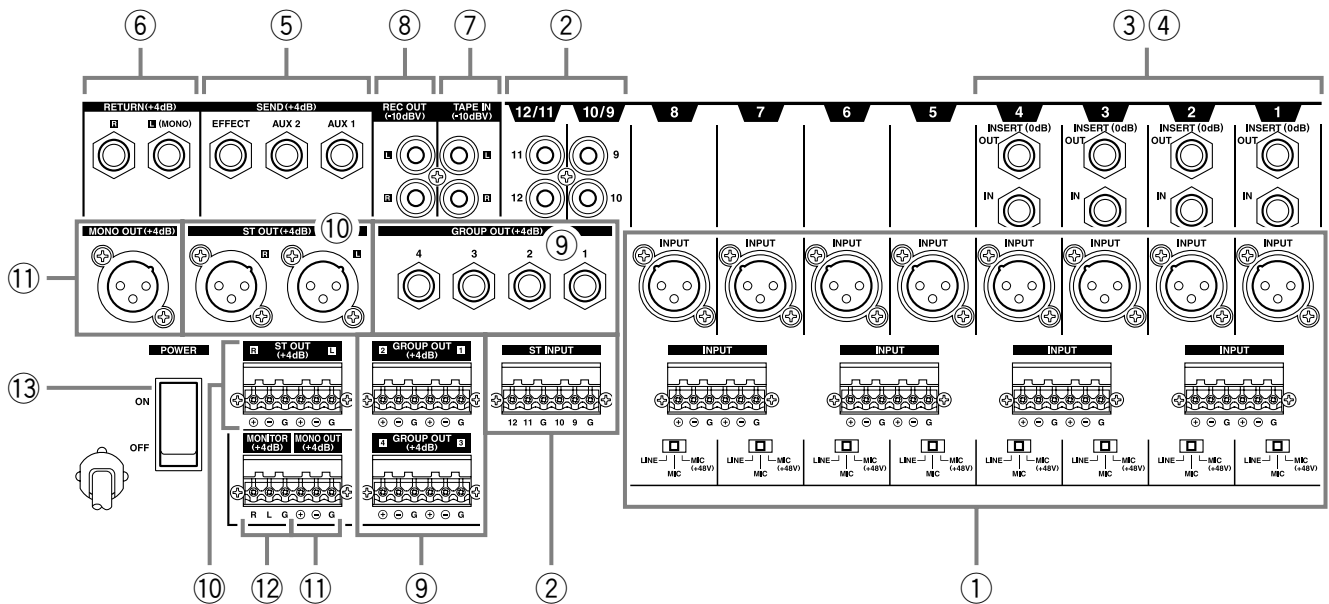
The indicator will light when the main unit’s power is ON.

⑮ **LAMP Connector**

A XLR type lamp (AC or DC12V, 0.5A Max) can be attached here.

Refer to the Block Diagram on page 17.

Connector Panel



① INPUT Jacks (CH 1-8)

Both balanced XLR type and Euro-block connectors are supplied.

- **XLR Type (1:Ground, 2:Hot, 3:Cold)**
- **Euro-block connectors (⊕ : Hot, ⊖ : Cold, G: Ground)**

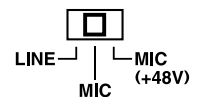
Use Input Select Switch to match the input to the type of mic or device connected to the INPUT jack.

• MIC (+48V)

Allows the connection of condenser mics, etc. Phantom power (DC +48V) is supplied to the No. 2 and No. 3 pins of the XLR jack and to the ⊕/⊖ pins on the Euro-block connector.

* When phantom power is not used, make sure that the Input Select Switch is set to any position other than MIC (+48V).

- **MIC:** Compatible with 50-600Ω microphones.
- **LINE:** Compatible with 600Ω line level devices.



② ST INPUT Jacks (CH 9-12)

Both unbalanced RCA phono type stereo line input jacks and unbalanced Euro-block connectors are supplied. Both types are compatible with 600Ω line level devices.

③ INSERT IN Jacks (CH 1-4)

④ INSERT OUT Jacks (CH 1-4)

These are input/output jacks that are positioned between the equalizer and fader of the Input Channel. The INSERT IN jacks are balanced phone type jacks with a nominal input/impedance of 0dB/600Ω. The INSERT OUT jacks are impedance balanced phone type jacks with a nominal output/impedance of 0dB/10kΩ. These jacks can be used to connect a graphic equalizer, compressor, noise filter, etc.

⑤ SEND Jacks**• AUX1, AUX2**

These are impedance balanced phone type output jacks with a nominal output/impedance of +4dB/600Ω. The AUX1, 2 bus signals are output from their respective jacks. These jacks can be used to send the signal to monitor system such as a cue-box.

• EFFECT

This is an impedance balanced phone type output jack with a nominal output/impedance of +4dB/600Ω.

The signal from the EFFECT bus is output from this jack. This jack can be used to send the signal to an external effector, etc.

⑥ RETURN L (MONO), R Jacks

These are unbalanced phone type line input jacks with a nominal input level/impedance of +4dB/600Ω.

The signal received by this jack is sent to GROUP buses 1-4, the STEREO bus and AUX1, AUX 2 buses.

Normally these jacks are used to receive the return signal from an external effector such as reverb, delay, etc. but they can also be used as auxiliary stereo inputs. When only the L(MONO) jack is connected, the same signal is sent to both the R and L jacks as a monaural signal.

⑦ TAPE IN (L, R) Jacks

These are line input jacks for monitoring an external DAT recorder or CD player. The signal that is received by these jacks is sent to the stereo bus. In this case, the TAPE IN control is used to adjust the input level. It is also possible to monitor directly from the MONITOR jack or PHONES jack by using the PHONES/MONITOR output and the Meter Select Switch (Master Control Section) to make the appropriate selection.

⑧ REC OUT (L, R) Jacks

With an external DAT recorder or cassette recorder connected to these jacks, you can record the same signal that is sent from the ST OUT jacks.

The signal sent from these jacks is not affected by the ST Master Fader or Graphic EQ settings. Make recording level adjustments on the recording device.

⑨ GROUP OUT (1-4) Jacks

Sends the signal from the GROUP 1-4 buses. These jacks are used to connect to the input jack on an MTR or an external mixer.

Two types of jacks are provided; balanced phone type and Euro-block connectors.

• Phone type (Tip: Hot, Ring: Cold, Sleeve: Ground)

Nominal output/impedance +4dB/600Ω

• Euro-block connector (⊕ : Hot, ⊖ : Cold, G: Ground)

Nominal output/impedance +4dB/600Ω

⑩ ST OUT (L, R) Jacks

These jacks deliver the stereo output of the mixed signal and are connected to a power amplifier, etc. that drives the main speakers.

The output can also be used for recording of the signal with the level of the signal being controlled by the ST Master Fader.

Two types of jacks are provided; balanced XLR type and Euro-block connectors.

• XLR type (1: Ground, 2: Hot, 3: Cold)

Nominal output/impedance +4dB/600Ω

• Euro-block connector (⊕ : Hot, ⊖ : Cold, G: Ground)

Nominal output/impedance +4dB/600Ω

⑪ **MONO OUT Jack**

This signal is the monaural mix of the STEREO bus's stereo signal. Its level is controlled with the MONO control.

Two types of jacks are provided; balanced XLR type and Euro-block connectors.

- **XLR type (1: Ground, 2: Hot, 3: Cold)**
Nominal output/impedance +4dB/600Ω
- **Euro-block connector (⊕ : Hot, ⊖ : Cold, G: Ground)**
Nominal output/impedance +4dB/600Ω

⑫ **MONITOR (L, R) Jacks**

This is an unbalanced Euro-block connector output jack for connecting a monitor system, etc. with a nominal output/impedance of +4dB/10kΩ.

Use the PHONES/MONITOR output and meter select switch (Master Control Section) to select the source to be monitored.

⑬ **POWER Switch**

When the switch is in the ON position, the unit is powered.

When turning the power ON, first turn on the mixing console, then turn on the power amp or powered speakers that are connected to the mixer.

Also, when turning the power OFF, turn off the power amp or powered speakers before turning off the mixing console.

Connector polarity

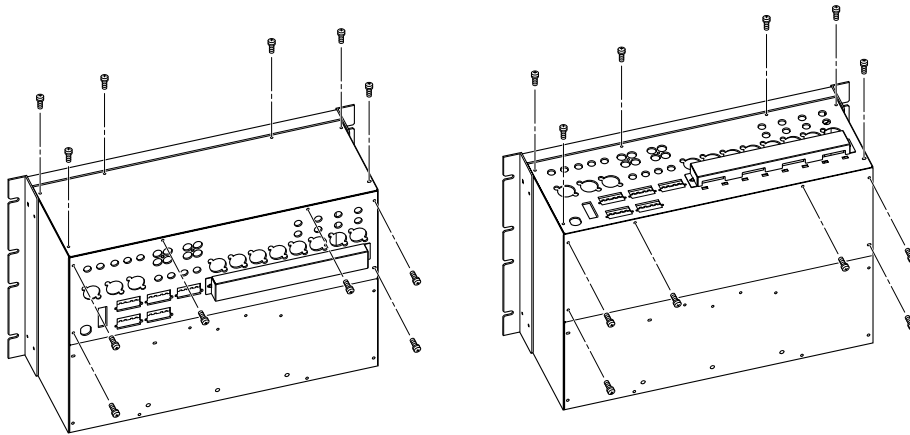
INPUT, ST OUT, MONO OUT	Pin 1: ground Pin 2: hot (+) Pin 3: cold (-)	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>INPUT</p> </div> <div style="text-align: center;"> <p>OUTPUT</p> </div> </div>
INSERT IN, INSERT OUT, GROUP OUT, AUX 1/AUX 2/EFFECT SEND	Tip: hot (+) Ring: cold (-) Sleeve: ground	
PHONES	Tip: L Ring: R Sleeve: ground	
RETURN	Tip: hot Sleeve: ground	

■ **Changing the connector panel's location.**

The mixer allows attachment of the connector panel to either the rear or to the top-side of the mixer to provide optimum location of the connectors when installing the unit.

The connector panel is attached on the rear of the unit when it is shipped from the factory.

Remove the screws as shown in the illustration to change the location to the top-side.

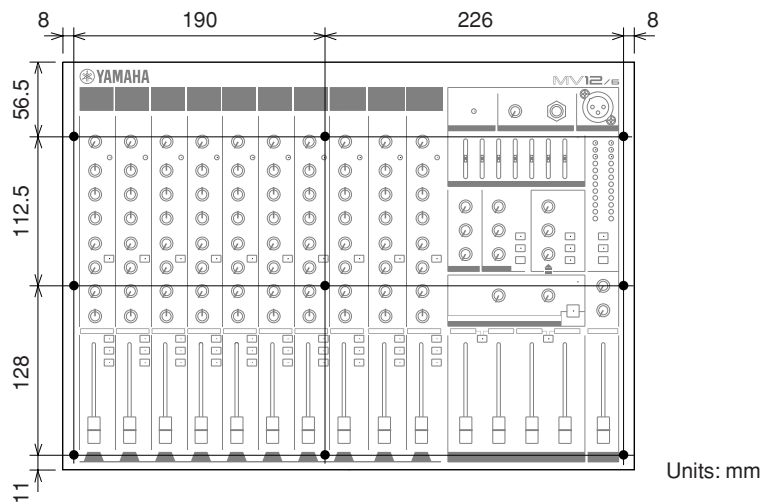
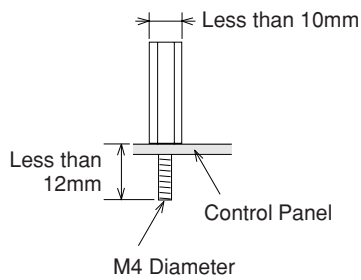


Please do not perform this operation yourself.

■ **Attach a protector cover**

Use the nine screw holes located on the control panel to attach a protector cover as shown below.

Please use M4 diameter screws with a length of 12mm or less.



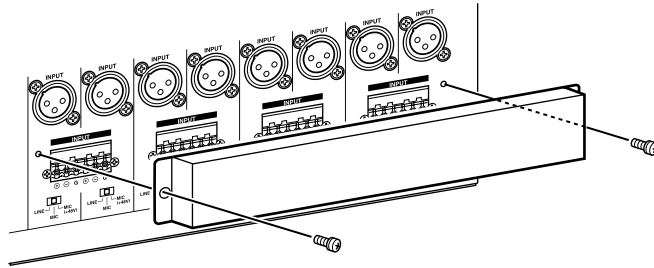
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About the Accessories

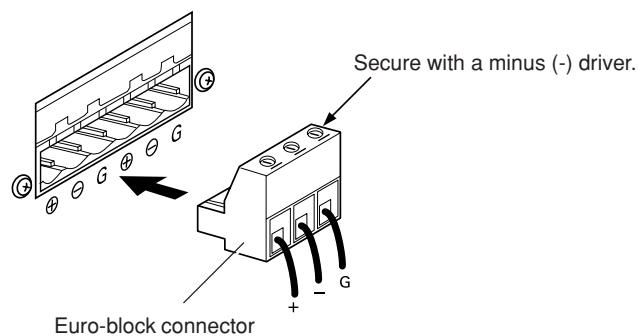
Euro-block Connectors

If you decide to use Euro-block connectors, please use the supplied connectors and attach as shown in the illustration below.

- ① Turn the POWER switch OFF.
- ② Loosen the screws holding the cover in place and remove the cover.



- ③ Attach the Euro-block connectors.



1. If the hole for the wire is closed, turn the screw on the top of the connector to the left to open.
2. Insert the wires according to the jack's pole display, and turn the upper screw to the right to secure the wire.
3. Connect the Euro-block connector to the mixer's jack.

- ④ Replace the cover and re-attach it in its original location.

Caution: Electric shock may occur if the Euro-block connectors are used without the cover attached.

Feet

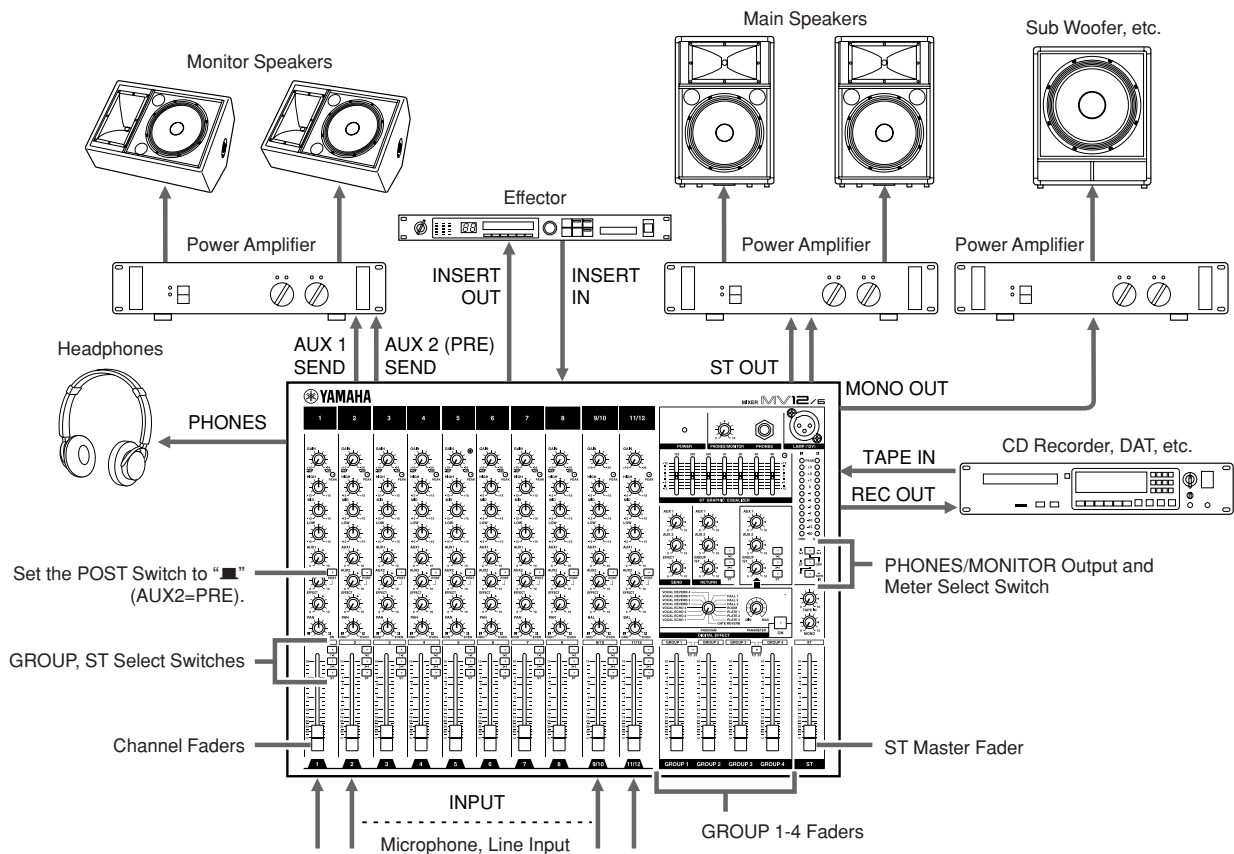
Four rubber feet are supplied with the mixer.

According to the orientation that the device is installed, attach the rubber feet to the surface that is at the "bottom" of the mixer.

After wiping any dust and grime on the surface of the mixer, remove the adhesive's protective cover on the top of the feet and attach to the mixer.

Applications

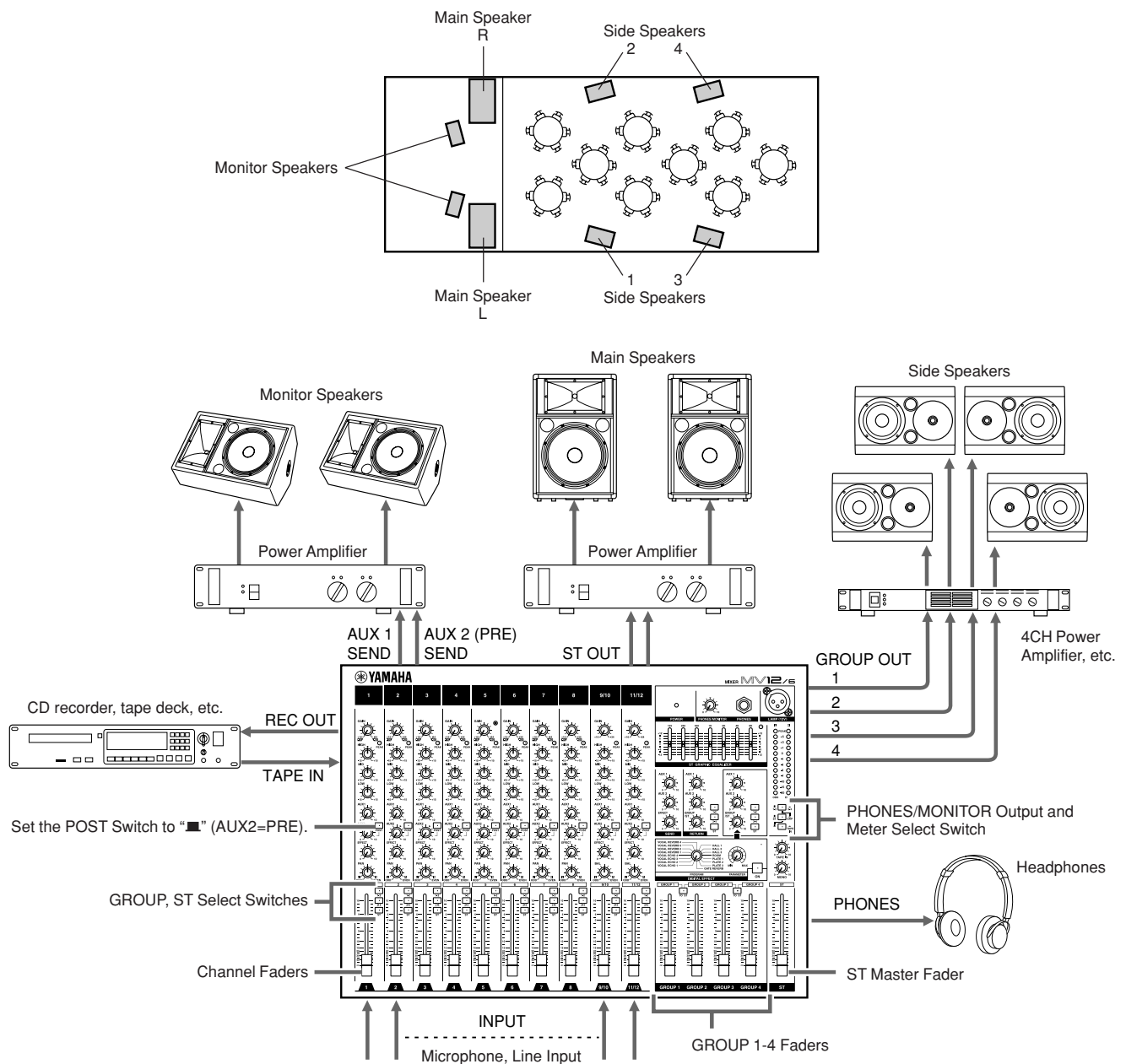
Example 1) Basic Setup



Procedure

- ① Connect line input devices or microphones to the INPUT jacks and connect a power amp, that is connected to the main speakers, to the ST OUT Jacks.
- ② Use the GAIN Control on each channel to adjust the level of the input signal from the device or microphone that is connected to the input channel (refer to page 3), and use the Channel Fader to adjust the level of the output signal that is sent to the Master Section. Basically, you should set the Channel Fader close to the "0" position.
- ③ Press each channel's "ST" GROUP, ST Select Switch.
- ④ Use the ST Master Fader to adjust the level of the signal sent to the power amplifier. Basically, you should set the Master Fader close to their "0" position.
- ⑤ Use the volume control(s) on the power amp to adjust the volume of the speakers.
If necessary, use a monitoring device (a pair of headphones, monitor speakers, etc.).

Example 2) Banquet Room Setup Using Independent Speakers



Procedure

- ① Connect line input devices or microphones to the INPUT jacks and connect a power amp, that is connected to the main speakers, to the ST OUT Jacks. Also, connect a 4CH Power Amplifier, etc. that drives the side speakers to the GROUP OUT (1-4) Jacks.
- ② Use the GAIN Control on each channel to adjust the level of the input signal from the device or microphone that is connected to the input channel (refer to page 3), and use the Channel Fader to adjust the level of the output signal that is sent to the Master Section. Basically, you should set the Channel Fader close to the "0" position.
- ③ Press the "ST", "1-2", "3-4" GROUP, ST Select Switches on each channel.
- ④ Use the ST Master Fader and the GROUP 1-4 Faders to adjust each signal's output level that is sent to the power amp. The fader's "0" position is an average level.
- ⑤ Use the volume control on the power amp to adjust the speaker's volume.
If it is necessary, use monitor devices (a pair of headphones, monitor speaker, etc.) or recording devices.

Supplement

Specifications

■ General specifications

Frequency response (CH MIC INPUT to ST, GROUP OUT/AUX, EFFECT SEND)	20Hz—20kHz +1dB, -3dB @+4dB, 600Ω (INPUT GAIN Control at minimum level)	
Total harmonic distortion (CH MIC INPUT to ST, GROUP OUT/AUX, EFFECT SEND)	<0.1% (THD+N) @+14dB, 20Hz—20kHz, 600Ω	
Hum & Noise (Rs=150Ω, 20Hz—20kHz, INPUT GAIN Control=Max., Input Sensitivity=-60dB) * Measured with 12.7kHz, -6dB/oct. low pass filter. (Equivalent to 20kHz, -∞dB/oct. filter.)	-128dB	Equivalent input noise
	-95dB	Residual output noise
	-64dB (68dB S/N)	ST OUT: Master fader and one channel fader at nominal level, channel assign switch ON.
	-90dB (94dB S/N)	ST OUT: Master fader at nominal level, all channel assign switches OFF, all GROUP to ST switches OFF.
	-90dB (94dB S/N)	GROUP OUT: Master fader at nominal level, all channel assign switches OFF.
	-84dB (88dB S/N)	AUX SEND, EFFECT SEND: Master level control at nominal level, all channel send controls at minimum level.
Maximum voltage gain	60dB INPUT (MIC) to INSERT OUT 84dB INPUT (MIC) to GROUP OUT 84dB INPUT (MIC) to ST OUT (CH to ST) 94dB INPUT (MIC) to ST OUT (GROUP to ST) 76dB INPUT (MIC) to AUX1 SEND, AUX2 SEND (PRE) 86dB INPUT (MIC) to AUX2 SEND (POST), EFFECT SEND 58dB INPUT (LINE) to ST OUT (CH to ST) 58dB ST INPUT to ST OUT (CH to ST)	
Monaural input gain control	44dB variable	
Stereo input gain control	44dB variable	
Crosstalk at 1kHz	-70dB adjacent input -70dB input to output (CH INPUT)	
Input channel equalization	±15dB Maximum HIGH 10kHz shelving MID 2.5kHz peaking LOW 100Hz shelving * Turn over/Roll off frequency of shelving: 3dB below maximum variable level.	
Monaural and stereo input peak indicators	Red: Each channel, when the level of the post EQ signal for each channel exceeds +17dB the indicator will light.	
Level meters	12 points LED x2	
Graphic equalizer	7 bands (125, 250, 500, 1k, 2k, 4k, 8kHz) ±12dB Maximum	
Internal digital effect	16 types	
Phantom power	+48V (balanced) : Supplied at the Input Select Switch = MIC(+48V) position	
Lamp connector	XLR type (Lamp Compatibility: AC or DC12V, 0.5A Max)	
Power supply/Power consumption	USA and Canadian: 120V AC 60Hz, 50W General: 230V AC 50Hz, 50W	
Dimensions (W x H x D)	482 x 308 x 192 mm (7U Rack Mount Size)	
Weight	9.0kg	
Accessories	3 pin Euro-block connectors: 18 Feet: 4	

For European Model
Purchaser/User Information specified in EN55103-1 and EN55103-2.
Inrush Current: 10A
Conformed Environment: E1, E2, E3 and E4

0dB=0.775Vrms

■ Input Specifications

Input connectors	Input Select Switch	GAIN Control	Input impedance	Nominal impedance	Input level			Connector type
					Sensitivity *1	Nominal	Max. before clipping	
INPUT (1-8)	MIC (+48V) MIC	-60	3k Ω	50-600 Ω mics & 600 Ω lines	-80 dB (0.078mV)	-60 dB (0.775mV)	-40 dB (7.75mV)	XLR-3-31 type *2 Euro-block connector *2
	LINE	-34			-54 dB (1.55mV)	-34 dB (15.5mV)	-14 dB (155mV)	
	MIC (+48V) MIC	-16			-36 dB (12.3mV)	-16 dB (123mV)	+4 dB (1.23V)	
	LINE	+10			-10 dB (245mV)	+10 dB (2.45V)	+30 dB (24.5V)	
ST INPUT (L, R) (9/10, 11/12)		-34	10k Ω	600 Ω lines	-54 dB (1.55mV)	-34 dB (15.5mV)	-14 dB (155mV)	RCA phono jack *3 Euro-block connector *3
		+10			-10 dB (245mV)	+10 dB (2.45V)	+30 dB (24.5V)	
RETURN (L, R)			10k Ω	600 Ω lines	-12 dB (195mV)	+4 dB (1.23V)	+20 dB (7.75V)	Phone jack (TRS) *3
TAPE IN (L, R)			10k Ω	600 Ω lines	-26 dBV (50.1mV)	-10 dBV (316mV)	+10 dBV (3.16V)	RCA phono jack *3
INSERT IN (1-4)			10k Ω	600 Ω lines	-20 dB (77.5mV)	0 dB (0.775V)	+20 dB (7.75V)	Phone jack (TRS) *2

*1 Input sensitivity: the lowest level that will produce the nominal output level when the unit is set to maximum gain.

*2 XLR type connector, Euro-block connector, phone jack (TRS) (T=Hot, R=Cold, S=Gnd): balanced type.

*3 RCA phono jack, Euro-block connector, phone jack (TRS) (T=Signal, R=Gnd, S=Gnd): unbalanced type.

• 0dB=0.775Vrms, 0dBV=1Vrms

■ Output Specifications

Output connectors	Output impedance	Nominal impedance	Output level		Connector type
			Nominal	Max. before clipping	
ST OUT (L, R), MONO OUT	150 Ω	600 Ω lines	+4 dB (1.23V)	+24 dB (12.3V)	XLR-3-32 type *1 Euro-block connector *1
AUX SEND (1, 2) EFFECT SEND	75 Ω	600 Ω lines	+4 dB (1.23V)	+20 dB (7.75V)	Phone jack (TRS) *2
GROUP OUT (1-4)	150 Ω	600 Ω lines	+4 dB (1.23V)	+24 dB (12.3V)	Phone jack (TRS) *3 Euro-block connector *1
MONITOR (L, R)	470 Ω	10k Ω lines	+4 dB (1.23V)	+20 dB (7.75V)	Euro-block connector *4
INSERT OUT (1-4)	600 Ω	10k Ω lines	0 dB (0.775V)	+20 dB (7.75V)	Phone jack (TRS) *2
PHONES	100 Ω	40 Ω phones	3mW	75mW	ST phone jack (TRS) *5
REC OUT (L, R)	600 Ω	10k Ω lines	-10 dBV (316mV)	+10 dBV (3.16V)	RCA phono jack *6

*1 XLR type connector, Euro-block connector: balanced type.

*2 Phone jack (TRS) (T=Hot, R=Cold, S=Gnd): impedance balanced type.

*3 Phone jack (TRS) (T=Hot, R=Cold, S=Gnd): balanced type.

*4 Euro-block connector: unbalanced type.

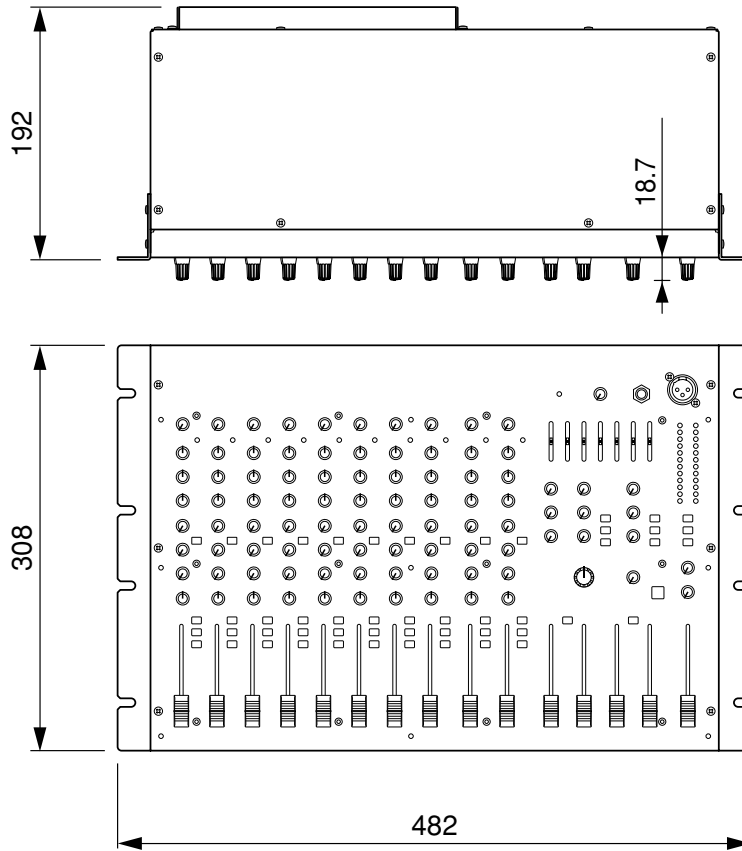
*5 ST phone jack (TRS) (T=L, R=R, S=Gnd): unbalanced type.

*6 RCA phono jack: unbalanced type.

• 0dB=0.775Vrms, 0dBV=1Vrms

Specifications are subject to change without prior notice.

Dimensions



Units: mm

Block and Level Diagrams

