MIXING CONSOLE

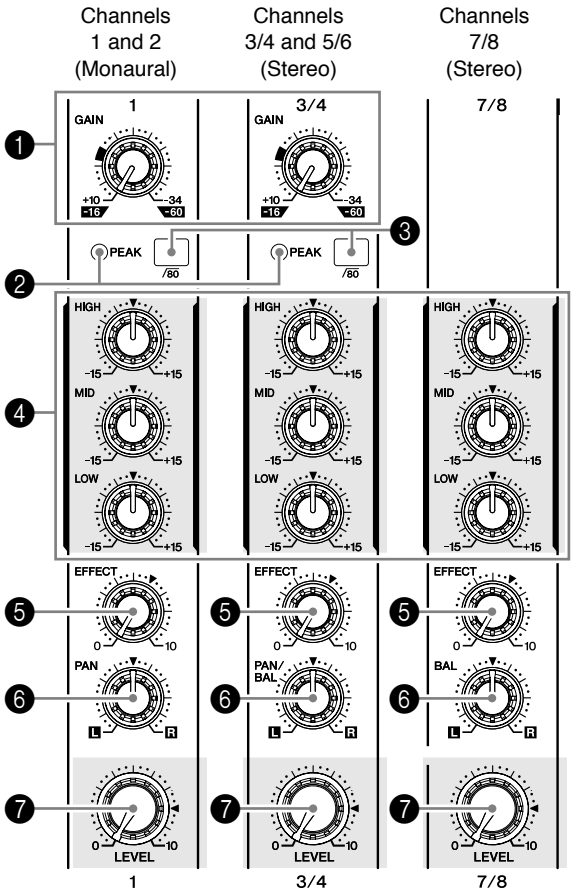
MG8/2FX

YAMAHA

HAMAMATSU, JAPAN

Front & Rear Panels

Channel Control Section



❶ GAIN Control

Adjusts the input signal level. To get the best balance between the S/N ratio and the dynamic range, adjust the level so that the PEAK indicator (❷) comes on only at about maximum input level.

The –60 to –16 scale indicates the MIC input adjustment level. The –34 to +10 scale indicates the LINE input adjustment level.

❷ PEAK Indicator

Detects the peak level of the post-EQ signal, and lights up red when the level reaches 3 dB below the clipping level. For XLR-equipped stereo input channels (3/4 and 5/6), detects both post-EQ and post-mic-amp peak levels, and lights red if either of these levels reaches 3 dB below the clipping level.

❸ /80 Switch (High Pass Filter)

This switch toggles the HPF on or off. To turn the HPF on, press the switch in (▬). The HPF cuts frequencies below 80 Hz. (But note that regardless of the switch setting, the mixer does not apply this HPF to the line inputs of stereo input channels.)

❹ Equalizer (HIGH, MID, and LOW)

This three-band equalizer adjusts the channel's high, mid, and low frequency bands. Setting the knob to the ▼ position produces a flat frequency response. Turning the knob to the right boosts the corresponding frequency band, while turning to the left attenuates the band. The following table shows the EQ type, base frequency, and maximum cut/boost for each of the three bands.

Band	Type	Base Frequency	Maximum Cut/Boost
HIGH	Shelving	10 kHz	±15 dB
MID	Peaking	2.5 kHz	
LOW	Shelving	100 Hz	

❺ EFFECT Controls

Adjusts the level of the signal sent from the channel to the EFFECT bus. Note that the signal level to the bus is also affected by the Channel LEVEL Control. If you are using stereo channels (CHs 3/4, 5/6, 7/8), the signals from the L (odd) and R (even) channels are mixed and then sent to the EFFECT bus.

❻ PAN Control (CHs 1 and 2) PAN/BAL Control (CHs 3/4 and 5/6) BAL Control (CH 7/8)

The PAN control determines the positioning of the channel's signal on the Stereo L and R buses.

The BAL control knob sets the balance between left and right channels. Signals into the L input (odd channel) feed to the Stereo L bus; signals into the R input (even channel) feed to the Stereo R bus.

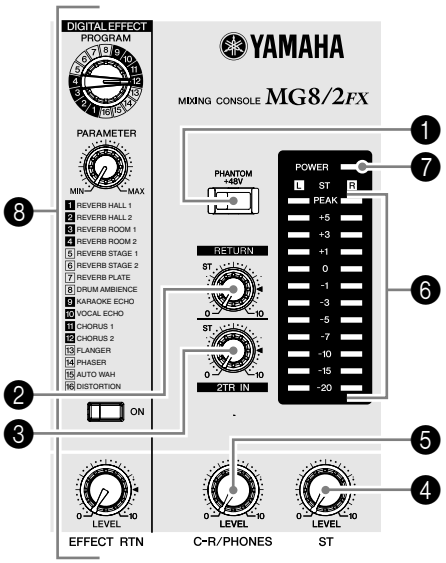
NOTE On channels where this knob provides both PAN and BAL controls: The knob operates as a PAN control if you are inputting through the MIC jack or into the L (MONO) input only, and operates as a BAL control if you are inputting into both L and R inputs.

❼ Channel LEVEL Control

Adjusts the output level of the signal being input to the channel. Use these LEVEL Controls to adjust the volume balance among the various channels.

NOTE To reduce noise, set the LEVEL Control knobs for unused channels all the way to the left (to the minimum setting).

Master Control Section



❶ PHANTOM +48 V Switch

This switch toggles phantom power on and off. If you set the switch on, the mixer supplies power to all channels that provide XLR mic input jacks (CHs 1, 2, 3/4, 5/6). Set this switch on (▬) when using one or more condenser microphones.

NOTE When this switch is on, the mixer supplies DC +48 V power to pins 2 and 3 of all XLR-type MIC INPUT jacks.

⚠

- Be sure to leave this switch off (▄) if you do not need phantom power.
- When tuning the switch on (▬), be sure that only condenser mics are connected to the XLR input jacks (CHs: 1 to 5/6). Devices other than condenser mics may be damaged if connected to the phantom power supply. Note, however, that the switch may be left on without problem when connecting to balanced dynamic microphones.
- To avoid damage to speakers, be sure to turn off amplifiers (or powered speakers) before turning this switch on or off. We also recommend that you turn all output controls (ST Master LEVEL Control, etc.) to minimum settings before operating the switch, to avoid risk of loud noises that could cause hearing loss or device damage.

❷ RETURN Control

Adjusts the level of the signal sent from the RETURN jacks (L (MONO) and R) to the Stereo bus.

NOTE If you supply a signal to the RETURN L (MONO) jack only, the mixer outputs the identical signal to both the L and R Stereo buses.

❸ 2TR IN Control

Adjusts the level of the signal sent from the 2TR IN jack to the Stereo bus.

❹ ST Master LEVEL Control

Adjusts the signal level to the ST OUT jacks.

❺ C-R/PHONES LEVEL Control

Controls the level of the signal output to the PHONES jack and the C-R L and R jacks.

❻ Level Meter

This LED display shows the level of the signal fed to the Stereo bus. The "0" point corresponds to the standard output level. The indicator lights up red when the output hits the clipping level.

❼ POWER Indicator

This indicator lights up when the mixer's power is ON.

❽ DIGITAL EFFECT

• PROGRAM Dial

Selects the internal digital effect to be applied. You can select from 16 effects, as shown in the table.

No	Program	Parameter
1	REVERB HALL 1	REVERB TIME
2	REVERB HALL 2	REVERB TIME
3	REVERB ROOM 1	REVERB TIME
4	REVERB ROOM 2	REVERB TIME
5	REVERB STAGE 1	REVERB TIME
6	REVERB STAGE 2	REVERB TIME
7	REVERB PLATE	REVERB TIME
8	DRUM AMBIENCE	REVERB TIME
9	KARAOKE ECHO	DELAY TIME
10	VOCAL ECHO	DELAY TIME
11	CHORUS 1	LFO FREQ
12	CHORUS 2	LFO FREQ
13	FLANGER	LFO FREQ
14	PHASER	LFO FREQ
15	AUTO WAH	LFO FREQ
16	DISTORTION	DRIVE

• PARAMETER Control

Adjusts the parameter (depth, speed, etc.) for the selected effect.

NOTE The mixer saves the last value used with each effect type.
When you change to a different effect type, the mixer automatically restores the value that was previously used with the newly selected effect (regardless of the current position of the PARAMETER Control knob).
These parameter values are retained even after power-off.

• ON Switch

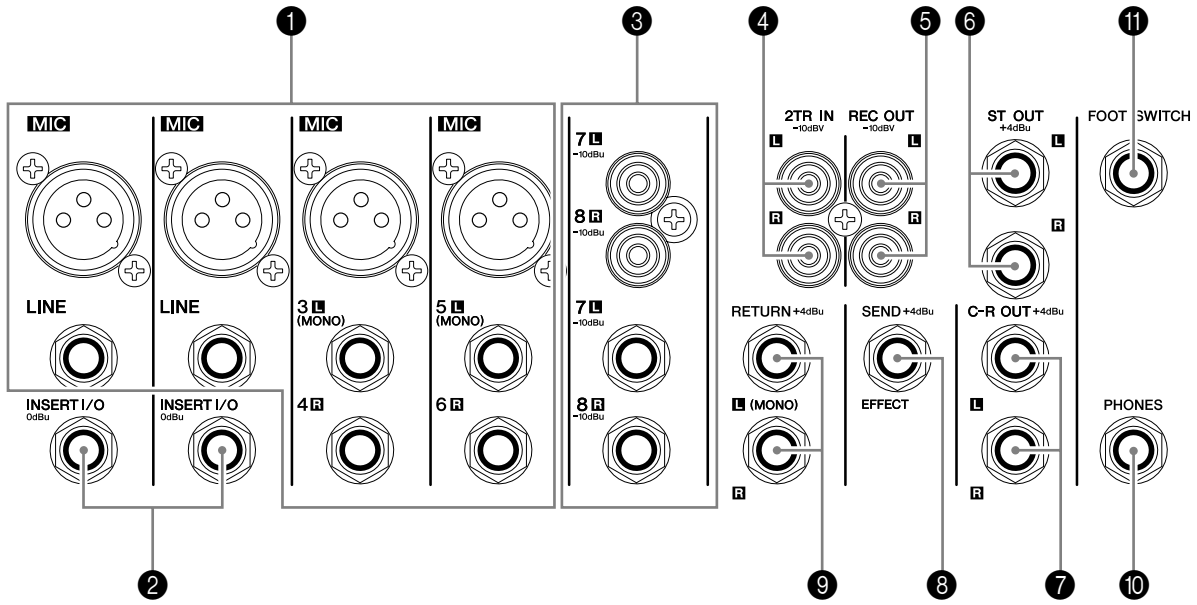
Switches use of the internal effect on or off. The internal effect is applied only if this switch is turned on. The switch lights up orange to indicate that it is on.
With the (separately sold) YAMAHA FC5 foot switch connected, you can use your foot to toggle the digital effects ON and OFF.

NOTE When you turn on the power, the ON switch lights up and the internal effector becomes active.

• EFFECT RTN Control

Adjusts the signal level from the internal digital effector to the STEREO bus.

Input/Output Section



❶ Channel Input Jacks (CHs 1, 2, 3/4, 5/6)

• MIC jacks

These are balanced XLR-type input jacks (1:Ground; 2:Hot; 3:Cold).

• LINE jacks

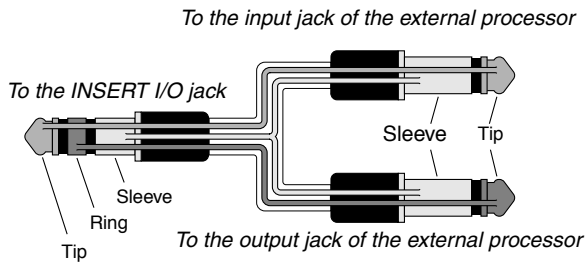
These are balanced phone-type input jacks. You can connect either balanced or unbalanced phone plugs to these jacks.

NOTE Where an input channel provides both a MIC jack and a LINE jack, you may use either one of these jacks but you may not use both at the same time. Please connect to only one of these jacks on each channel.

❷ INSERT I/O Jacks (CHs 1 and 2)

These are unbalanced phone-type input/output jacks. Each of these jacks is positioned between the equalizer and Channel LEVEL Control of the corresponding input channel. These jacks can be used to independently connect these channels to devices such as graphic equalizers, compressors, and noise filters. These are TRS (tip, ring, sleeve) phone jacks that support bidirectional operation.

NOTE Connection to an INSERT I/O jack requires a special separately-sold insertion cable such as illustrated below.



⚠ The signal output from the INSERT I/O jacks is reverse-phased. This will not be a problem if connecting the jack to an effector. If using the jack to output to an external device, however, please be aware of possible phase conflicts with other signals.

❸ Channel Input Jacks (CH 7/8)

Each of these channel pairs can be used to input a stereo source signal. For each pair, the odd-numbered channel inputs the L signal, and the even-numbered channel inputs the R signal.

Each channel offers a choice of two jack types: phone jack and RCA pin jack. All of these jacks are unbalanced.

NOTE Where a channel provides both a phone jack and an RCA pin jack, you may use either one of these jacks but you may not use both at the same time. Please connect to only of these jacks on each channel.

❹ 2TR IN Jacks

These are unbalanced RCA-pin input jacks. Use these jacks when you want to connect a stereo sound source (CD, DAT, etc.) directly to the mixer for monitoring.

NOTE You can adjust the signal level using the 2TR IN control in the Master Control section.

❺ REC OUT (L, R) Jacks

These are unbalanced RCA-pin output jacks. These jacks output the mixed signal whose level is controlled by the ST Master LEVEL Control. You use these jacks, for example, to connect to an external recorder.

❻ ST OUT (L, R) Jacks

These are impedance-balanced phone-type output jacks. These jacks output the mixed signal whose level is controlled by the ST Master LEVEL Control. You use these jacks, for example, to connect to the power amplifier driving your main speakers.

❼ C-R OUT Jacks

These are impedance-balanced phone-type output jacks. These jacks output the mixed signal whose level is controlled by the C-R/PHONES LEVEL Control. You use these jacks, for example, to connect to the monitor system.

❽ SEND Jacks

• EFFECT

This is an impedance-balanced phone-type output jack that outputs the signal from the EFFECT bus.
You use this jack, for example, to connect to an external effector.

❾ RETURN L (MONO), R Jacks

These are unbalanced phone-type input jacks. The signal received by these jacks is sent to the Stereo bus. These jacks are typically used to receive a return signal from an external effector (reverb, delay, etc.).

NOTE These jacks can also be used as an auxiliary stereo input. If you connect to the L (MONO) jack only, the mixer will recognize the signal as monaural and will propagate the identical signal on both L and R jacks.

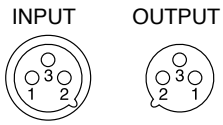
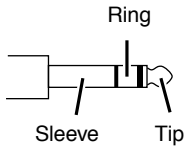
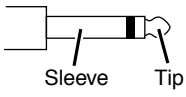
❿ PHONES Jack

Connector for headphones. This is a balanced phone-type output jack.

⓫ FOOT SWITCH Jack

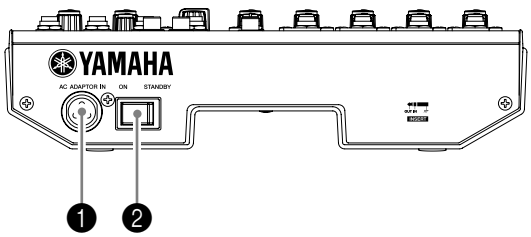
This phone input jack can connect to the (separately sold) YAMAHA FC5 foot switch. With the foot switch connected, you can use your foot to toggle the digital effects ON and OFF.

Connector Polarities

MIC INPUT	Pin 1: Ground Pin 2: Hot (+) Pin 3: Cold (–)	
LINE INPUT (monaural channels), ST OUT, C-R OUT, EFFECT *	Tip: Hot (+) Ring: Cold (–) Sleeve: Ground	
INSERT I/O	Tip: Output Ring: Input Sleeve: Ground	
PHONES	Tip: L Ring: R Sleeve: Ground	
RETURN, LINE INPUT (stereo channels)	Tip: Hot Sleeve: Ground	

* These jacks will also accept connection to monaural phone plugs. If you use monaural plugs, the connection will be unbalanced.

Rear Section



❶ AC ADAPTOR IN Connector

Connects to the included PA-10 power adaptor (see page 5).

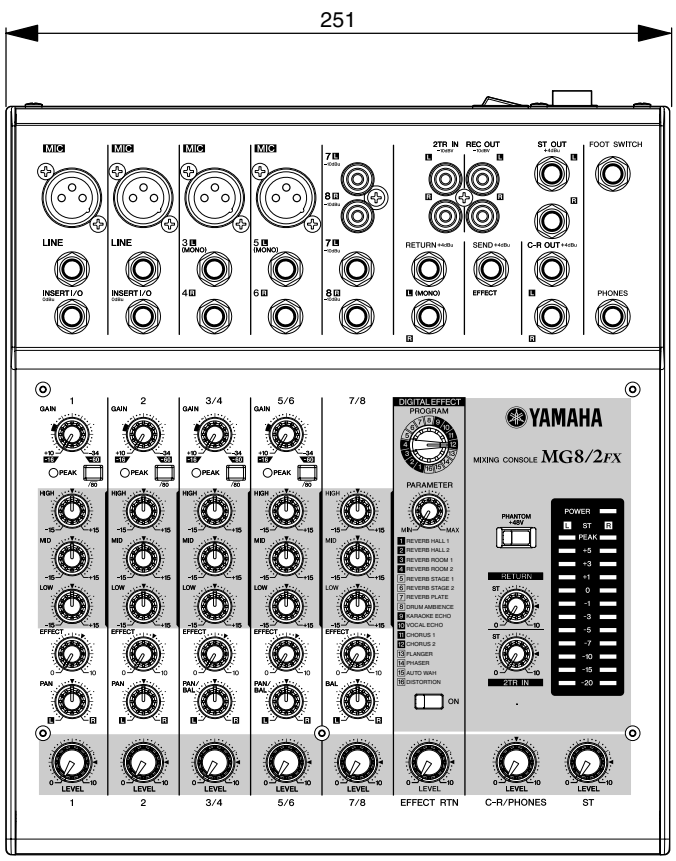
Use only the PA-10 adaptor included with this mixer. Use of a different adaptor may result in fire or electric shock.

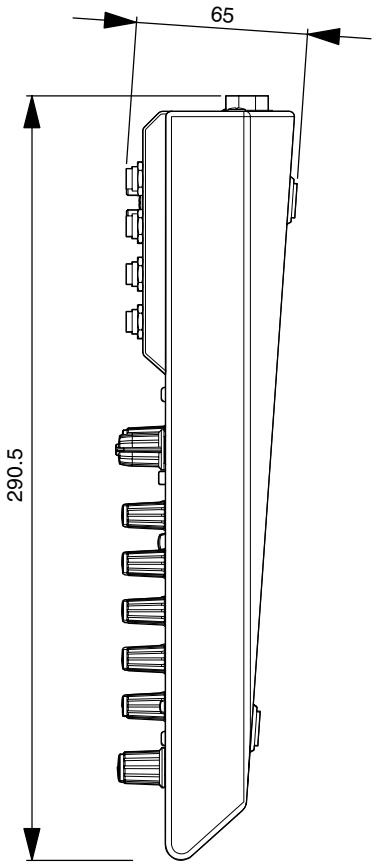
❷ POWER Switch

Use this switch to set mixer power to ON or STANDBY.

Note that trace current continues to flow while the switch is in the STANDBY position. If you do not plan to use the mixer again for a long while, be sure to unplug the adaptor from the wall outlet.

Dimensional Diagrams





Unit: mm

Specifications

■ Electrical Characteristics

	Conditions	MIN	TYP	MAX	UNIT
Total Harmonic Distortion (MIC to ST OUT)	(THD+N) 20 Hz - 20 kHz @+14dBu 10k ohms (CH1, 2) with Signal input CH LEVEL Control and ST Master LEVEL Control at nominal level			0.1	%
Frequency Response (MIC to ST OUT)	20 Hz - 20 kHz @+4 dBu 10k ohms with GAIN control at minimum level	–3	0	1	dB
Hum & Noise (20 Hz - 20 kHz) Rs=150 ohms, Gain=Maximum, Sensitivity=–60 dBu, Hum & Noise are measured with a –6 dB/octave filter @12.7 kHz;equivalent to a 20 kHz filter with infinite dB/octave attenuation.	Equivalent Input Noise (CH1, 2)			–128	dBu
	Residual Output Noise (ST OUT)			–100	dBu
	ST Master Control at nominal level and all CH LEVEL Control at minimum level. (ST OUT)			–87 (91 dB S/N)	dBu
	All CH EFFECT Control at minimum level and all CH LEVEL at minimum level. (EFFECT SEND)			–85 (89 dB S/N)	dBu
	ST Master Control and one CH LEVEL Control at nominal level. (CH1, 2) (ST OUT)			–64 (68 dB S/N)	dBu
Maximum Voltage Gain PAN/BAL : panned hard left or hard right.	CH MIC INPUT to CH INSERT OUT		60		dB
	CH MIC INPUT to ST OUT		76		dB
	CH MIC INPUT to REC OUT		64.2		dB
	CH MIC INPUT to EFFECT SEND		70		dB
	ST CH MIC INPUT to ST OUT		76		dB
	ST CH LINE INPUT to ST OUT		50		dB
	ST CH LINE INPUT to EFFECT SEND		41		dB
	ST CH INPUT to ST OUT		26		dB
	RETURN to ST OUT		12		dB
	2TR INPUT to ST OUT		23.8		dB
Crosstalk (1 kHz)	Adjacent inputs			–70	dB
	input to output			–70	dB
Monaural/Stereo Input GAIN Control	variable range		44		dB

Where 0 dBu = 0.775 V

■ General Specifications

Monaural/Stereo CH High Pass Filter	80 Hz 12 dB/octave
Monaural/Stereo CH Equalization Turn over /roll-off frequency of shelving, 3 dB below maximum variable level	±15 dB (Max. Variation) HIGH: 10 kHz (shelving) MID: 2.5 kHz (peaking) LOW: 100 Hz (shelving)
Internal Digital Effect	16 programs, Parameter control
	FOOT switch (ON/OFF)
Phantom Power	Supplied when Phantom +48 V switch is ON. (XLR-type input jacks)
Monaural/Stereo Input PEAK Indicator	On each channel: red indicator lights if post-EQ signal (on ST channels, if either post-EQ signal or post-mic-amp signal) comes within 3 dB of the clipping level.
Level Meters	Two 12-points LED level meters [ST (L, R)] Peak point: red indicator +5, +3, +1, 0: yellow indicators –1, –3, –5, –7, –10, –15, –20: green indicators
Included Accessories	Power adaptor (PA-10)
Options	Microphone-stand adaptor (BMS-10A), Footswitch (FC5)
Power Consumption	25 W
Dimensions (W × H × D)	251 mm × 65 mm × 290.5 mm
Weight	1.8 kg

Where 0 dBu = 0.775 V

■ Input Specifications

Input Connector	Gain	Input Impedance	Appropriate Impedance	Sensitivity*	Nominal Level	Max. Before Clipping	Connector Specifications
MIC INPUT (CH 1, 2)	–60	3 kΩ	50–600 Ω mic	–72 dBu (0.195 mV)	–60 dBu (0.775 mV)	–40 dBu (7.75 mV)	XLR-3-31 type (balanced)
	–16			–28 dBu (30.9 mV)	–16 dBu (123 mV)	+4 dBu (1.23 V)	
LINE INPUT (CH 1, 2)	–34	10 kΩ	600 Ω line	–46 dBu (3.88 mV)	–34 dBu (15.5 mV)	–14 dBu (155 mV)	Phone jack (TRS) (balanced [T: hot; R: cold; S: ground])
	+10			–2 dBu (0.616 V)	+10 dBu (2.45 V)	+30 dBu (24.5 V)	
ST CH MIC INPUT (CH3(L)/CH4(R), CH5(L)/CH6(R))	–60	3 kΩ	50–600 Ω mic	–72 dBu (0.195 mV)	–60 dBu (0.775 mV)	–40 dBu (7.75 mV)	XLR-3-31 type (balanced)
	–16			–28 dBu (30.9 mV)	–16 dBu (123 mV)	–10 dBu (245 mV)	
ST CH LINE INPUT (CH3(L)/CH4(R), CH5(L)/CH6(R))	–34	10 kΩ	600 Ω line	–46 dBu (3.88 mV)	–34 dBu (15.5 mV)	–14 dBu (155 mV)	Phone jack (unbalanced)
	+10			–2 dBu (0.616 V)	+10 dBu (2.45 V)	+30 dBu (24.5 V)	
ST CH INPUT (CH7(L)/CH8(R))		10 kΩ	600 Ω line	–22 dBu (61.6 mV)	–10 dBu (245 mV)	+10 dBu (2.45 V)	Phone jack (unbalanced); RCA pin jack
CH INSERT IN (CH 1, 2)		10 kΩ	600 Ω line	–20 dBu (77.5 mV)	0 dBu (0.775 V)	+20 dBu (7.75 V)	Phone jack (TRS) (unbalanced [T: out; R: in; S: ground])
RETURN (L, R)		10 kΩ	600 Ω line	–12 dBu (195 mV)	+4 dBu (1.23 V)	+24 dBu (12.3 V)	Phone jack (unbalanced)
2TR IN (L, R)		10 kΩ	600 Ω line	–26 dBV (50.1 mV)	–10 dBV (316 mV)	+10 dBV (3.16 V)	RCA pin jack

Where 0 dBu = 0.775 V and 0 dBV= 1 V

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

■ Output Specifications

Output Connectors	Output Impedance	Appropriate Impedance	Nominal Level	Max. Before Clipping	Connector Specifications
ST OUT (L, R)	150 Ω	10 kΩ line	+4 dBu (1.23 V)	+20 dBu (7.75 V)	Phone jack (TRS) (impedance balanced [T: hot; R: cold; S: ground])
EFFECT SEND	150 Ω	10 kΩ line	+4 dBu (1.23 V)	+20 dBu (7.75 V)	Phone jack (TRS) (impedance balanced [T: hot; R: cold; S: ground])
CH INSERT OUT (CH 1, 2)	150 Ω	10 kΩ line	0 dBu (0.775 V)	+20 dBu (7.75 V)	Phone jack (TRS) (unbalanced [T: out; R: in; S: ground])
REC OUT (L, R)	600 Ω	10 kΩ line	–10 dBV (316 mV)	+10 dBV (3.16 V)	RCA pin jack
C-R OUT (L, R)	150 Ω	10 kΩ line	+4 dBu (1.23 V)	+20 dBu (7.75 V)	Phone jack (TRS) (impedance balanced [T: hot; R: cold; S: ground])
PHONES	100 Ω	40 Ω phone	3 mW	75 mW	Stereo phone jack

Where 0 dBu = 0.775 V and 0 dBV= 1 V

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European models
Purchaser/User Information specified in EN55103-1 and EN55103-2.
Inrush Current: 3A
Conforms to Environments: E1, E2, E3 and E4

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