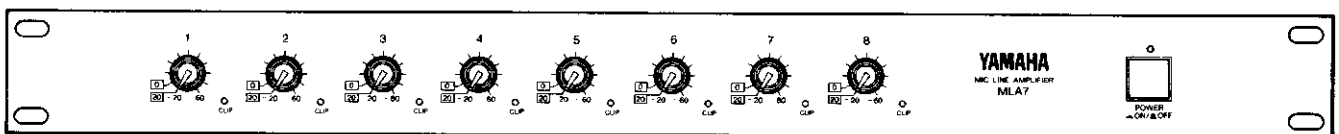


YAMAHA

8-Channel Microphone/Line Amplifier

MLA7

Operation Manual



Congratulations on your acquisition of a Yamaha MLA7 8-channel Microphone/Line Amplifier.

The MLA7 is designed primarily to add top-quality microphone and balance-line input capability to the Yamaha DMP7 Digital Mixing Processor and other equipment which offers only unbalanced line inputs. In addition to offering the very finest electrical performance possible, the MLA7 accepts a broad range of balanced signal levels, providing full compatibility with balanced microphone and line-level input signals. Each of the 8 amplifiers in the MLA7 has a switchable 20-dB pad, a -20 ~ -60 dB gain control, and a phantom power switch which can be used to apply standard +48-volt DC phantom power to appropriate condenser microphones. The outputs are standard +4 dB unbalanced phone jacks which can be directly connected to the inputs on the DMP7 Digital Mixing Processor or other equipment.

Please read this operation manual carefully before operating your MLA7.

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PRECAUTIONS

1. AVOID EXCESSIVE HEAT, HUMIDITY, DUST AND VIBRATION

Keep the unit away from locations where it is likely to be exposed to high temperatures or humidity—such as near radiators, stoves, etc. Also avoid locations which are subject to excessive dust accumulation or vibration which could cause mechanical damage.

2. AVOID PHYSICAL SHOCKS

Strong physical shocks to the unit can cause damage. Handle it with care.

3. DO NOT OPEN THE CASE OR ATTEMPT REPAIRS OR MODIFICATIONS YOURSELF

This product contains no user-serviceable parts. Refer all maintenance to qualified Yamaha service personnel. Opening the case and/or tampering with the internal circuitry will void the warranty.

4. MAKE SURE POWER IS OFF BEFORE MAKING OR REMOVING CONNECTIONS

Always turn the power OFF prior to connecting or disconnecting cables. This is important to prevent damage to the unit itself as well as other connected equipment.

5. HANDLE CABLES CAREFULLY

Always plug and unplug cables—including the AC cord—by gripping the connector, not the cord.

6. CLEAN WITH A SOFT DRY CLOTH

Never use solvents such as benzine or thinner to clean the unit. Wipe clean with a soft, dry cloth.

7. ALWAYS USE THE CORRECT POWER SUPPLY

Make sure that the power supply voltage specified on the rear panel matches your local AC mains supply.

IMPORTANT NOTICE FOR THE UNITED KINGDOM

Connecting the Plug and Cord

IMPORTANT. The wires in this mains lead are coloured in accordance with the following code:

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:

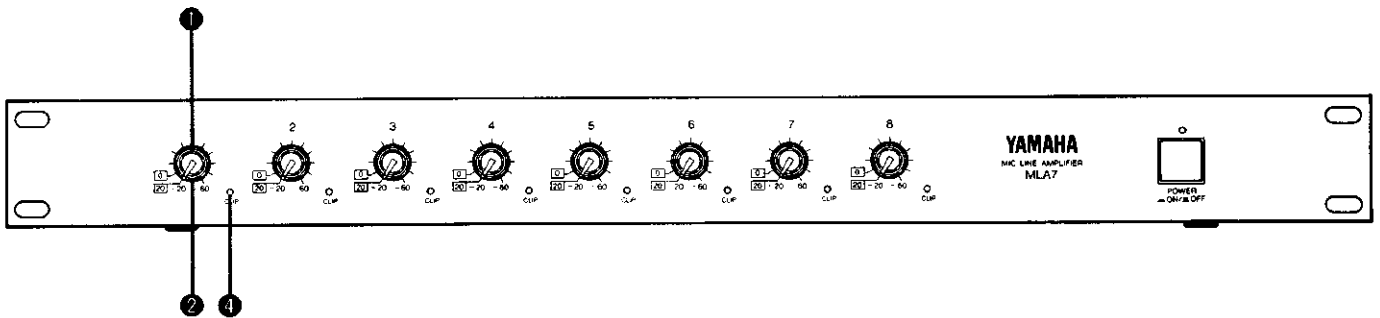
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

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

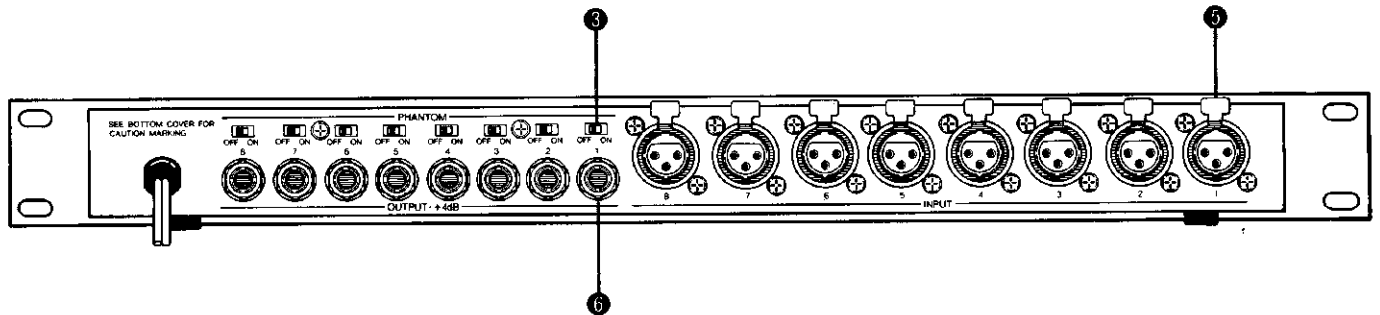
Making sure that neither core is connected to the earth terminal of the three pin plug.

CONTROLS

FRONT PANEL



REAR PANEL



1 GAIN Control

These controls adjust the input sensitivity of each amplifier channel between -60 dB (0.775 mV) and -20 dB (77.5 mV) when the PAD switch is OFF. Continuously variable gain control allows optimum matching with virtually any microphone or line source.

2 PAD Switch

Turning this switch on inserts a 20 -dB pad in the corresponding amplifier's input, bringing the input sensitivity to 0 dB (0.775 V) when the GAIN control is set to -20 dB. The PAD switch should normally be turned ON when receiving line-level input. With the PAD switch ON, the GAIN control covers a -40 dB to 0 dB range rather than the marked -60 dB to -20 dB range.

3 PHANTOM Power Switch

For use with phantom-powered condenser microphones. When a PHANTOM switch is turned ON, a 48 V DC phantom supply voltage is applied to the input connector of the corresponding channel. **MAKE SURE THE PHANTOM POWER SUPPLY IS OFF WHEN NOT USING A PHANTOM-POWERED MICROPHONE!!**

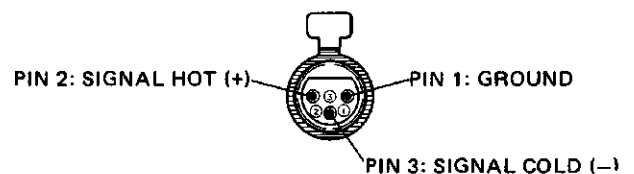
4 Channel PEAK Indicator

These LED peak indicators light when the signal at the corresponding channel reaches a level 3 -dB below clipping. The GAIN controls and PAD switches should be set so that the CLIP LEDs never light more than just briefly on transient peaks.

CONNECTORS

5 INPUT Connectors

The input connectors to each amplifier channel are XLR-31 types wired as follows:



The inputs should be used with $50 - 250$ ohm balanced microphones or 600 ohm balanced lines.

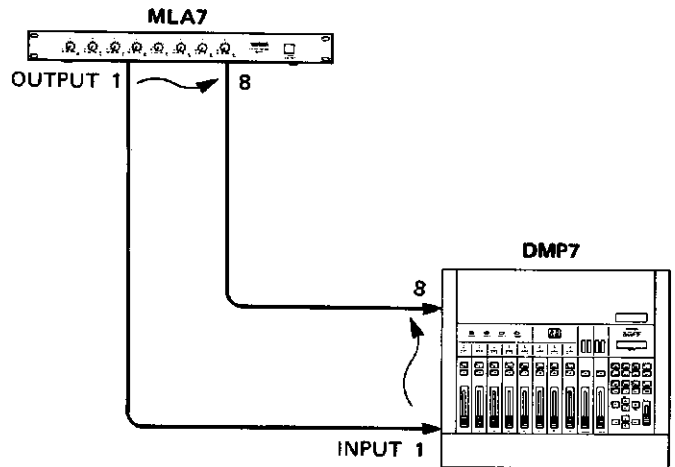
6 OUTPUT Connectors

The output connectors are standard monaural $1/4$ " phone jacks. The nominal output level from these jacks is $+4$ dB, with a maximum level of $+20$ dB before clipping begins. The outputs should drive 10 k-ohm or higher load impedances.

USING THE MLA7 WITH THE DMP7 DIGITAL MIXING PROCESSOR

Outputs 1 – 8 from the MLA7 should be connected directly to the corresponding inputs 1 – 8 on the DMP7 with phone plug ↔ phone plug cables. Since the nominal output level of the MLA7 is +4 dB, set all input gain controls on the DMP7 (the trimmers located above the DMP7's input jacks) to their "+4" positions.

The +4 dB line level between the outputs of the MLA7 and inputs of the DMP7 means that the connecting cables could be several meters in length with virtually no degradation of signal quality, but it is more practical and convenient to use very short connecting cables and mount the MLA7 and DMP7 together in the same rack.



GENERAL SPECIFICATIONS

Total Harmonic Distortion	Less than 0.1%, 20Hz ~ 20kHz @ +4dB into 10 k-ohms.
Frequency Response	+1, -3dB, 20Hz ~ 20kHz @ +4dB into 10 k-ohms.
Hum and Noise (20Hz ~ 20kHz, 150-ohm termination)	-128dBu equivalent input noise, PAD 0 GAIN control max. -87dBu equivalent input noise, PAD 20 GAIN control min.
Maximum Voltage Gain	64dB CH IN to CH OUT.
Crosstalk	-70dB at 1kHz/10kHz, adjacent channels

Power Requirements	
U.S. & Canadian models	120V (105 – 130V) AC, 60Hz
General model	110 – 120/220 – 240V AC, 50/60Hz
Power Consumption	
U.S. & Canadian models	20W
General model	20W
Dimensions (W x H x D) 480 mm x 45.5 mm x 231.6 mm (18-7/8" x 1-3/4" x 9-1/8")	
Weight	3.25 kg (7.2 lbs)

*0dB is referenced to 0.775V RMS.

*Specifications subject to change without notice.

• INPUT SPECIFICATIONS

	CONNECTION		ACTUAL LOAD IMPEDANCE	FOR USE WITH NOMINAL	SENSITIVITY** (AT MAX. GAIN)	INPUT LEVEL		CONNECTOR
	PAD	GAIN				NOMINAL	MAX. BEFORE CLIP	
INPUT	OFF (0dB)	-60dB	4k ohms	50 ~ 250 ohm Microphones or 600 ohm Lines	-60dBμ (0.775mV)	-60dBμ (0.775mV)	-44dBμ (4.88mV)	XLR-3-31 type (Balanced)
		-20dB			-20dBμ (77.5mV)	-4dBμ (488mV)		
	ON (20dB)	0dBμ (775mV)			+16dBμ (4.88V)			

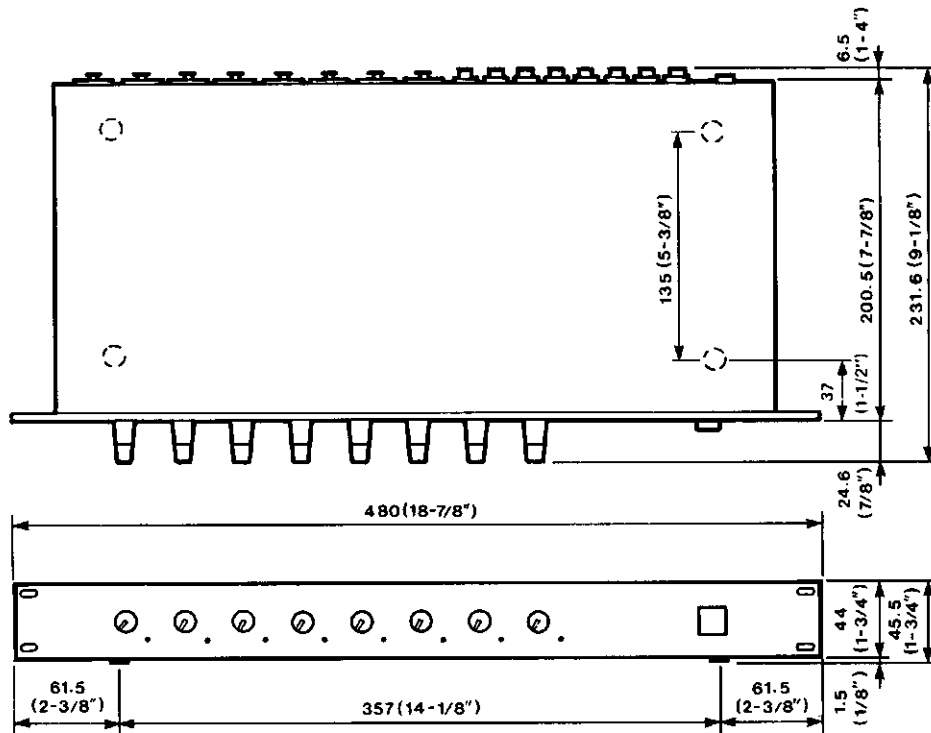
• OUTPUT SPECIFICATIONS

CONNECTION	ACTUAL SOURCE IMPEDANCE	FOR USE WITH NOMINAL	OUTPUT LEVEL		CONNECTOR
			NOMINAL	MAX. BEFORE CLIP	
OUTPUT	150 ohms	10k ohm Lines	+4dBμ (1.23V)	+20dBμ (7.75V)	Phone Jack (Unbalanced)

* : In these specifications, when dB represent a specific Voltage, 0dBμ is referenced to 0.775V.

** : Sensitivity is the level required to produce an output of +4dB (1.23V).

DIMENSIONS



Unit : mm (Inch)

SERVICE

This product is supported by Yamaha's worldwide network of factory trained and qualified dealer service personnel. In the event of a problem, contact your nearest Yamaha dealer.

YAMAHA

YAMAHA CORPORATION
P.O.Box 1, Hamamatsu, Japan