



Instruction Manual

OMX-LAS2

Dual Channel Stereo
Audio Line Amplifier

**OCEAN
MATRIX®**

812 Kings Highway • Box 397 • Saugerties, NY 12477

845-246-0428 • FAX 845-246-0626

www.oceanmatrix.com

Thank you for purchasing this Ocean Matrix component. This unit is designed to give you years of trouble free professional operation for your most demanding applications. It is our goal to develop long term partnerships with our customers through our commitment to exceed their expectations.

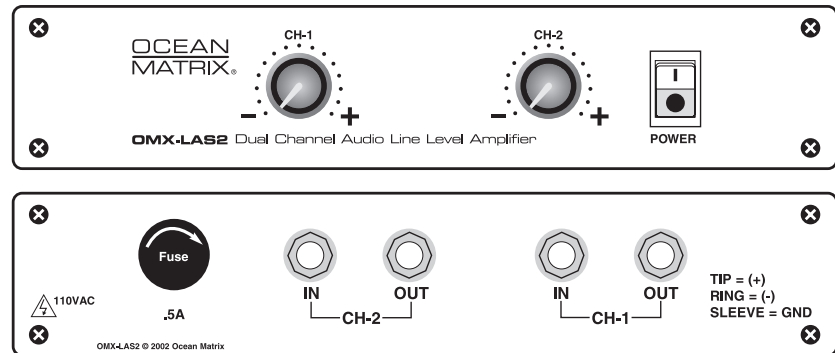
Safety Precautions

1. To prevent fire or shock hazard, do not expose this equipment to the environment of Humidity and/or dust. Do not use this equipment in an unprotected outdoor installation or any area classified as a wet area.
2. The operating temperature of this product must be kept between -40°C and +95°C. Direct sunlight or an intense source of heat, direct or ambient, must not be introduced to the product either by induction or contact.
3. Always keep the product on a stable and secure base or enclosure. Do not drop the product or subject it to sudden heavy impact.
4. Provide adequate ventilation so that thermal characteristics do not cause an increase in product temperature to resulting in overheating.
5. Do not clean the unit by using electrically conductive or corrosive chemicals. Always be certain to unplug the unit from AC wall power before any major cleaning. Use a damp cloth only for cleaning.
6. Do not subject the product to electrical mains power over voltage: The product must be used at the rated supply voltages indicated on the product rear panel only.
7. Do not plug the product into an overloaded electrical outlet. This may result in fire or electrical shock.
8. Object Ingress and Liquid Entry: Never insert or push sharp metal objects into the product or use such devices for an attempt at opening or servicing the product. Servicing should be referred to a trained and qualified technician only. Do not allow liquid of any type to enter the unit. Do not allow the unit to be submersed in water as this may cause a shock hazard.
9. A trained qualified technician should perform all servicing of the unit. There are no serviceable components within the unit for user access.

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The OMX-LAS2 offers 2 channels of line level attenuation & amplification. As an audio signal conditioning tool for the A/V industry, the OMX-LAS2 was designed to end the problems created by improper or uneven audio levels encountered by A/V engineers. Once the signal from the source is fed to the OMX-LAS2, the operator has full control of the audio level of the outgoing level. The signal can be attenuated or amplified by a factor of $\pm 100\%$.

GENERAL OPERATION

The OMX-LAS2 is shipped from the factory already calibrated and ready to use. There is no need for any customer adjustments for normal use of the unit. There are, however, procedures that must be observed in order to assure proper performance of the unit in your system.

SPECIFICATIONS

AUDIO (per channel)		Power:	110VAC, 50/60Hz, 10 Watts
Input:	Max Input: +15dB @ 600Ω Balanced	Dimensions:	(220V Model OMX-EU/LAS2) 1.625"H x 8.25"W x 6.0"D
Outputs:	Variable Balanced 600Ω Range: -12dB to +12dB	Weight:	2.5lbs.
Response:	20-100KHz, ± 0.1 dB	Warranty:	3 Years
S/N Ratio:	85dB: 10Hz - 30KHz	Options:	OMX-RK2 rackmount kit.
Crosstalk:	>80dB		Mounts up to two units side-by-side in 1RU.
Distortion:	Less than 0.05%		

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USING UNBALANCED DEVICES

The OMX-LAS2 can be used with unbalanced devices. To connect an unbalanced source to the input, simply use an unbalanced 1/4" phone plug (tip-sleeve). Once inserted into the OMX-LAS2, it will unbalance the input. Follow the same procedure for the output.

ADJUSTING GAIN

Two front panel controls are used for signal level adjustment, one for each channel. A fully counterclockwise turn of the gain control knob will shut off the signal.

LOOPING SEVERAL UNITS

To LOOP one OMX-LAS2 to another, or any other audio device, bridge the input connector jack and feed the signal into another unit or another OMX-LAS2. (Observe Signal Polarity & Ground)

Note: Use High Quality Twisted Pair Wiring with Shield when cabling.

OUTPUT WIRING:

Connect output as indicated observing polarity and ground.

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A BRIEF WORD ON AUDIO

There is a great deal of incorrect information concerning audio levels and how to measure them. The following chart may help in determining the various audio level issues. Use it as a reference to better help you understand your audio needs.

DECIBELS	RATIO	dBV (pp)	dBv (rms)
+20dB	10.0 x	10.0 volts	7.75 volts
+10dB	3.2 x	3.2 volts	2.45 volts
0dB	1.0 x	1.0 volts	.775 volts
-10dB	.32 x	.32 volts	.245 volts
-20dB	.1 x	.1 volts	.077 volts
-30dB	.032 x	.032 volts	.024 volts
-40dB	.01 x	.01 volts	.008 volts
-50dB	.003 x	.003 volts	.002 volts
-60dB	.001 x	.001 volts	.0008 volts
-70dB	.0003 x	.0003 volts	.0002 volts

- +8dBv (1.95 volts) = 0VU for the broadcast industry
- +4dBv (1.23 volts) = 0VU for the recording industry
- -10dBv (0.245 volts) = 0VU for home multi-track recording equipment
- -15dBv (0.138 volts) = 0VU for musical instrument level equipment

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