

Operation Manual

Professional Power Amplifier
L800/1400/1800/2400/3000



* Rack mount products in the Western Hemisphere(North America, South America, and the Caribbean) do not have handles installed due to customer preference.

interM

Unpacking

Please take a few minutes to read this manual to familiarize yourself with important information regarding installation, product features, and operation.

As with most electronic devices, ORIGINAL PACKAGING (OR EQUAL) IS REQUIRED in the unlikely event that the product needs to be returned for servicing.

Short Form Instructions

1. Do not connect the AC power until step 6. The ac mains POWER switch should be in the OFF position.
2. Adjust both of the LEVEL controls to the fully attenuated position (turn fully counter-clockwise).
3. Connect an appropriate line level input signal to either the balanced XLR or the balanced 1/4" TRS (Tip-Ring-Sleeve) connector marked INPUTS.
4. Move the MODE selector to the desired position. The Stereo position is the most common.
5. Connect the OUTPUTS to the speaker load according to the mode of operation determined in the previous step.
6. With the ac mains POWER switch in the OFF position, plug in the supplied Universal AC power cord to the product and connect to an appropriate AC source.
7. Depress the ac mains POWER switch to the ON position. The indicator within the power switch will illuminate.
8. The product is ready for operation. Slowly increase the LEVEL control to the desired operating level. Avoid illuminating the PEAK indicator and do not apply too much power to the speakers.
9. Operate the product and the system in a manner which DOES NOT illuminate the PEAK warning indicator.

Description

- L800
A 2U rack space, 2 channel amplifier capable of 800W into 4Ω load (bridged mono).
- L1400
A 2U rack space, 2 channel amplifier capable of 1400W into 4Ω load (bridged mono).
- L1800
A 2U rack space, 2 channel amplifier capable of 1800W into 4Ω load (bridged mono).
- L2400
A 2U rack space, 2 channel amplifier capable of 2400W into 4Ω load (bridged mono).
- L3000
A 2U rack space, 2 channel amplifier capable of 3000W into 4Ω load (bridged mono).

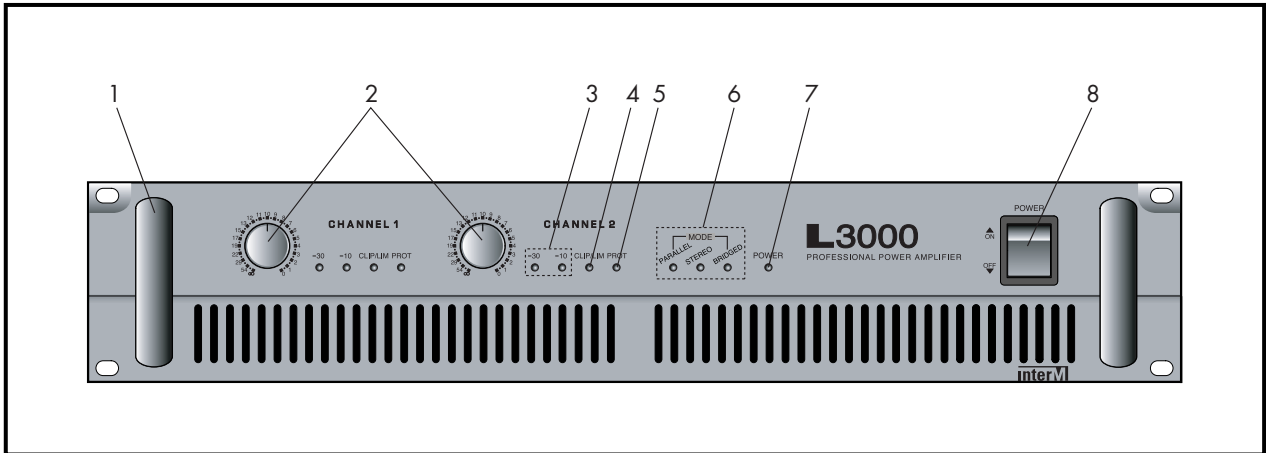
Features

- 2Ω-load stable per channel, 4Ω-load stable in bridge mono
- 2U rack space
- Selectable High Pass Filter on each channel
- Clip limiter circuitry
- Forced air cooled (front panel intake, rear panel exhaust)
- Front panel indicators for different operating modes
- Front panel indicators for output signal level, clip, protect, and power
- Rack Ears for permanent installation in a standard 19" (rack mount width) enclosure.
- Detachable AC power cord

Accessories

One detachable universal AC mains power cord is provided for use with this product.

Front Panel



1. HANDLES

These are provided for easy transporting and installing into equipment enclosures or racks.

2. LEVEL CONTROL

This control adjusts the level (amplitude) of the input signal for each channel. In stereo or parallel mode the knobs will determine the signal level independently for each channel. In the bridge mono mode channel 1 will be turned fully to the right and channel 2 will be turned right only as needed to achieve the desired signal level.

3. LEVEL INDICATOR

These indicators should illuminate during normal operation when there is an output signal.

4. CLIP LIMITER INDICATOR

This warns of a problem when illuminated. Reduce the LEVEL of the device which supplies signal to the amplifier or reduce the LEVEL control(s) on the amplifier. This should not be continuously illuminated during normal operation, but may flash occasionally.

5. PROTECTION INDICATOR

This warns of a problem in the system when illuminated. Reduce the volume and look for problems. It is possible that the amplifier is too hot or the speaker impedance is too low. This should not be illuminated during normal operation.

6. MODE INDICATOR

This indicates the operating mode based on the position of the MODE selector switch located on the rear panel.

7. POWER INDICATOR

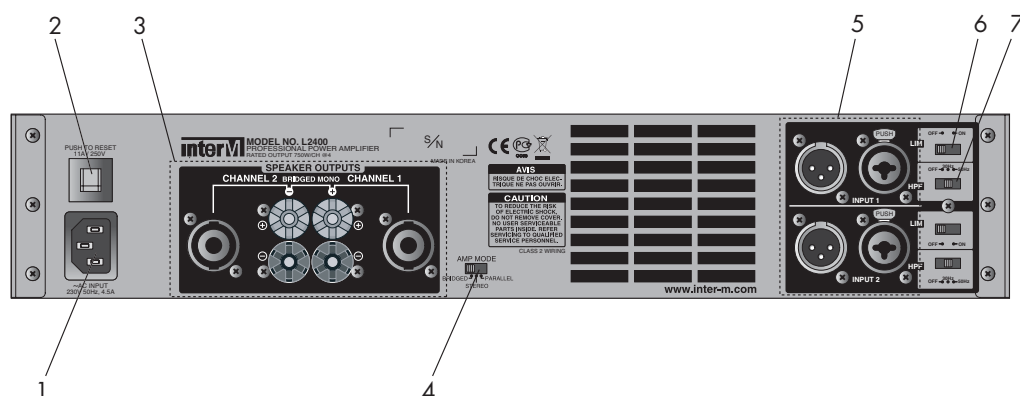
This confirms the amplifier is switched ON and receiving AC mains POWER when illuminated.

8. POWER SWITCH

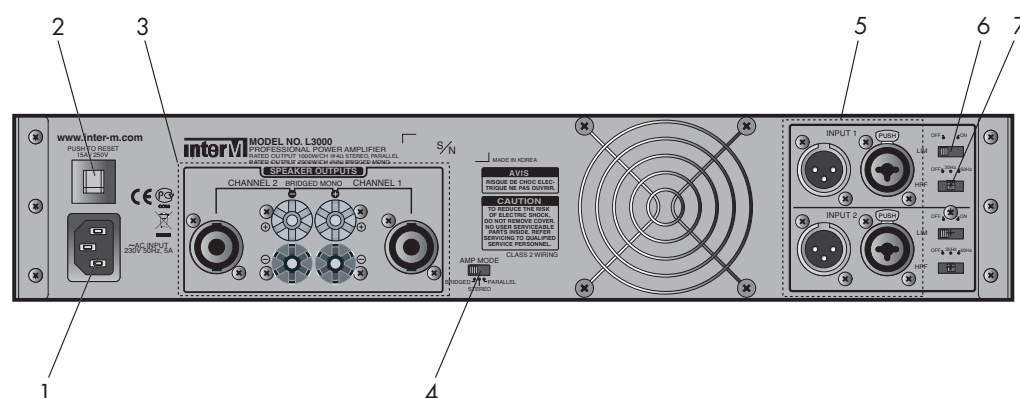
The position of this switch determines whether the AC mains power is ON or OFF. The power-on status is confirmed by the illuminated power indicator. Amplifiers are always the last item in a system to be turned on. It is generally a good idea to reduce the level controls before applying AC mains power.

Rear Panel

- L800/1400/1800/2400



- L3000



1. AC INPUT

Connect this product to an appropriate AC mains power source using the supplied Universal AC Power Cord.

2. CIRCUIT BREAKER

This protects the amplifier by shutting down the power when the amplifier operates abnormally due to overload or malfunction. Push to reset.

3. OUTPUT CONNECTORS

Binding Posts and Speakon-type connectors are provided. Bridged Mono operation requires a different method of connecting the speaker cables than Stereo operation. Be sure than the amplifier is in the correct mode before connecting the speaker load.

4. MODE SELECTOR SWITCH

Move this switch to select the STEREO, PARALLEL or BRIDGED MONO position as needed for the application. The Stereo mode is most common. Channel 1 input provides signal through the amplifier to the channel 1 output. The channel 2 input provides signal through the amplifier the channel 2 output.

The Parallel mode uses the channel 1 input provides signal through the amplifier to both the channel 1 and channel 2 outputs. No input will be supplied to channel 2 in the Parallel mode.

The Bridge Mono mode combines both channels to create one larger mono channel. Input signal applied to channel 1 will provide signal through the amplifier to the positive terminals of Channel 1 and channel 2. Do not connect any signal to the channel 2 input or any loads to the negative outputs.

5. BALANCED INPUT CONNECTORS

Each input channel is equipped with a special connector that will accept either a 1/4" TRS or an XLR connector. Even though the connector is of a special design, the standard rules for wiring the input connectors apply.

6. CLIP LIMITER SWITCH

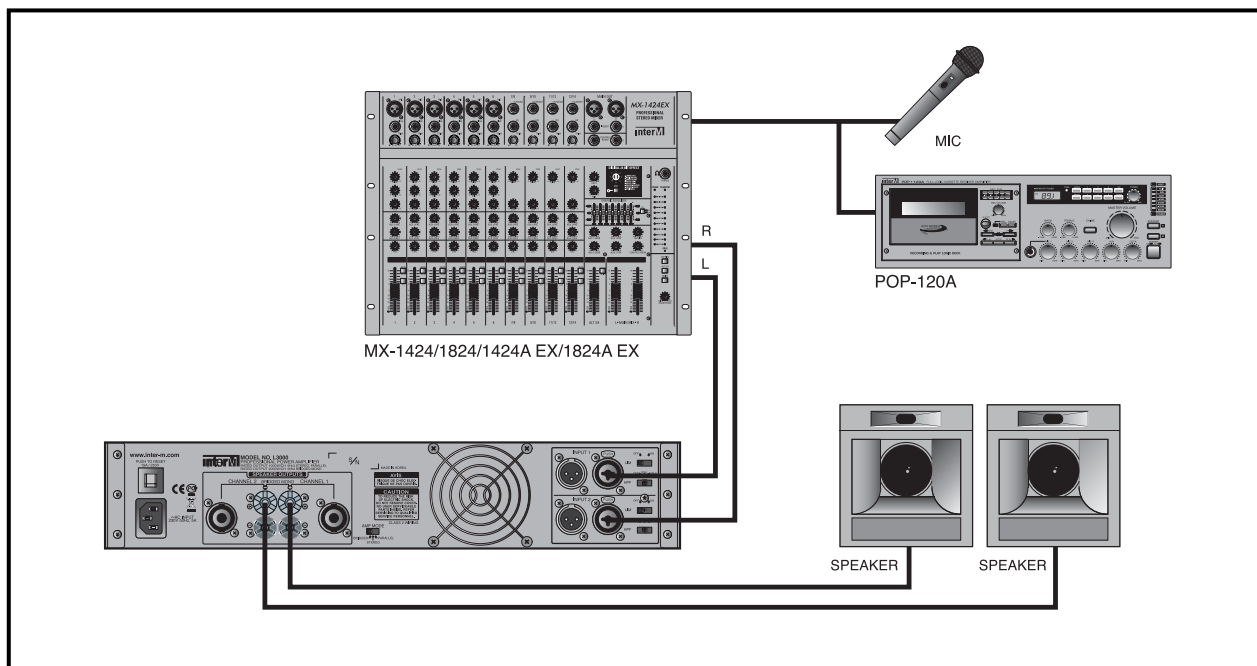
The CLIP LIMITER reduces the internal operating level of the amplifier as necessary to insure that signal peaks do not overdrive the amplifier, causing distortion or damage to the amplifier or loudspeakers. It is recommended to leave this switched to the "ON" position to reduce distortion and help provide protection to the loudspeakers.

7. HIGH PASS FILTER SWITCH

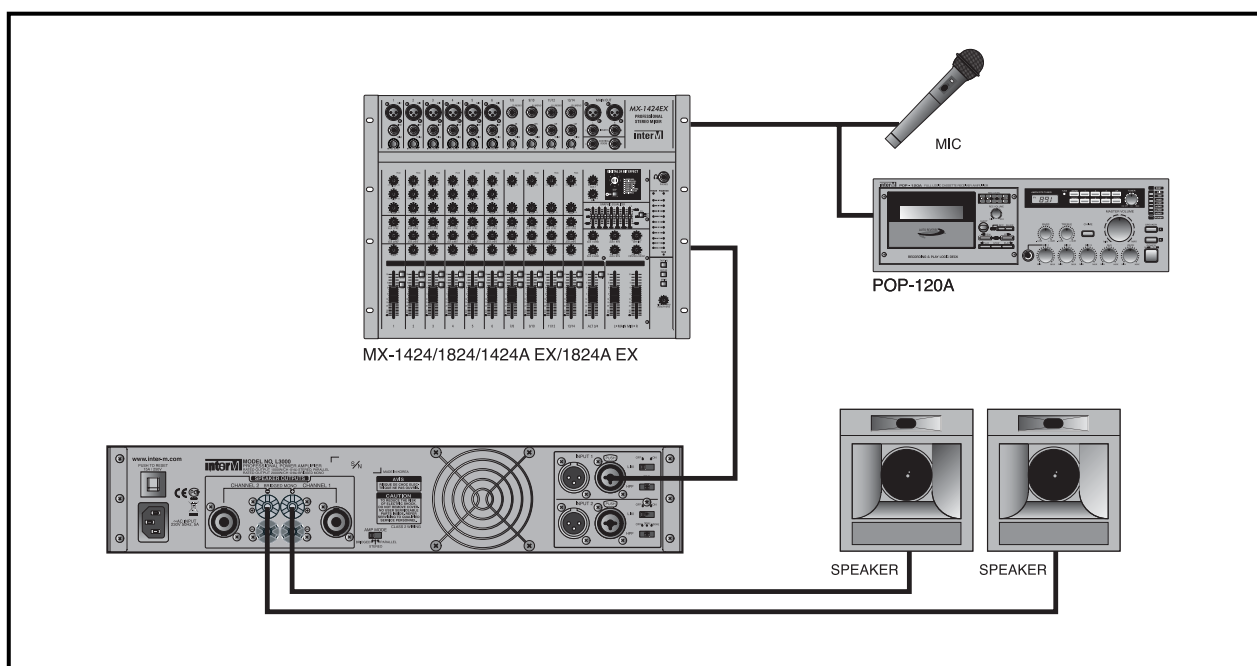
Select the switch position that is best suited for your application. The OFF position allows full frequency range signals to reach the loudspeakers. The 30Hz position reduces the signal amplitude below 30 Hz to conserve power and help protect the loudspeakers. The 50Hz position reduces the signal amplitude below 50 Hz to conserve power and help protect the loudspeakers.

Applications

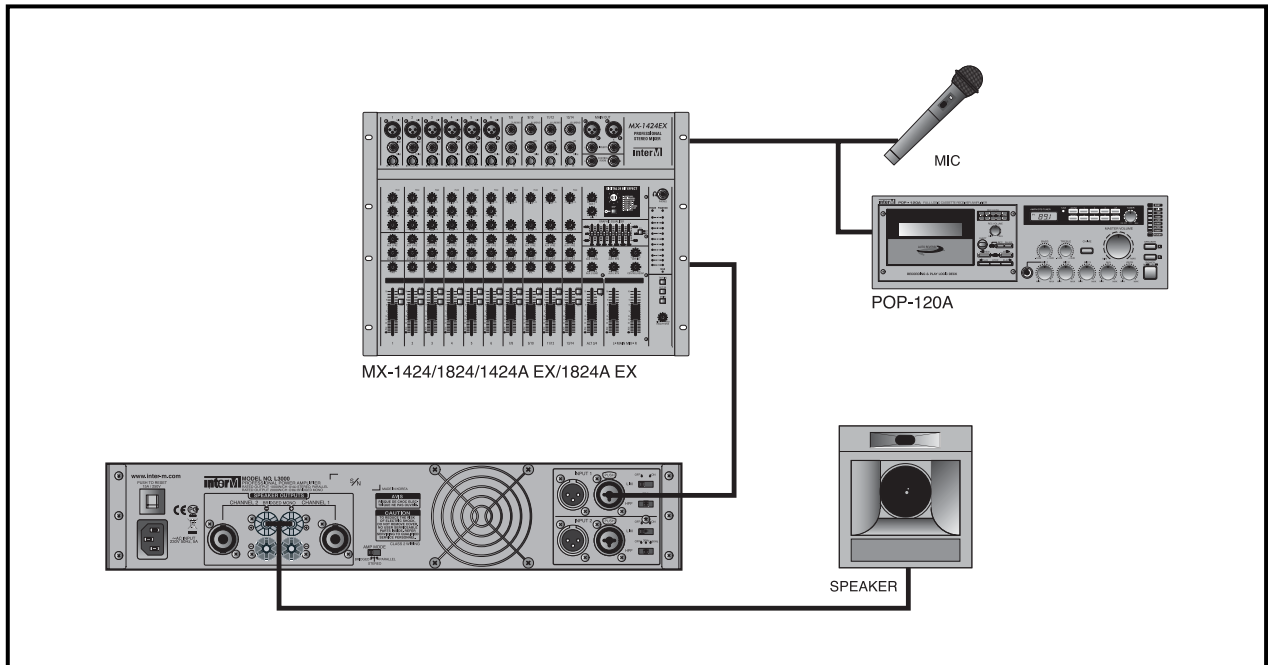
Stereo Installation



Parallel Installation

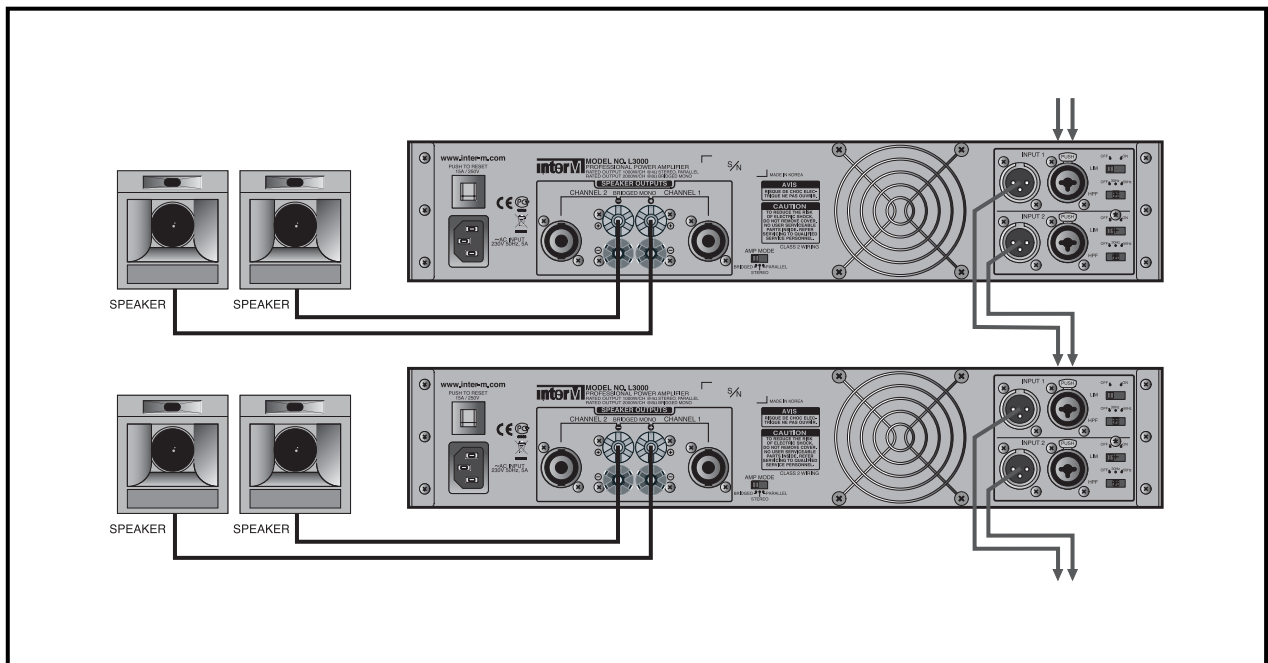


Bridged Mono Installation



Linked Installation

Linking is possible when in Stereo/Parallel or Bridged Mono operation



Connections

Inter-M products are wired according to professionally accepted wiring practices used throughout the world.

Balanced XLR connectors are wired as described:

Pin #1 shield

Pin #2 Positive

Pin #3 Common

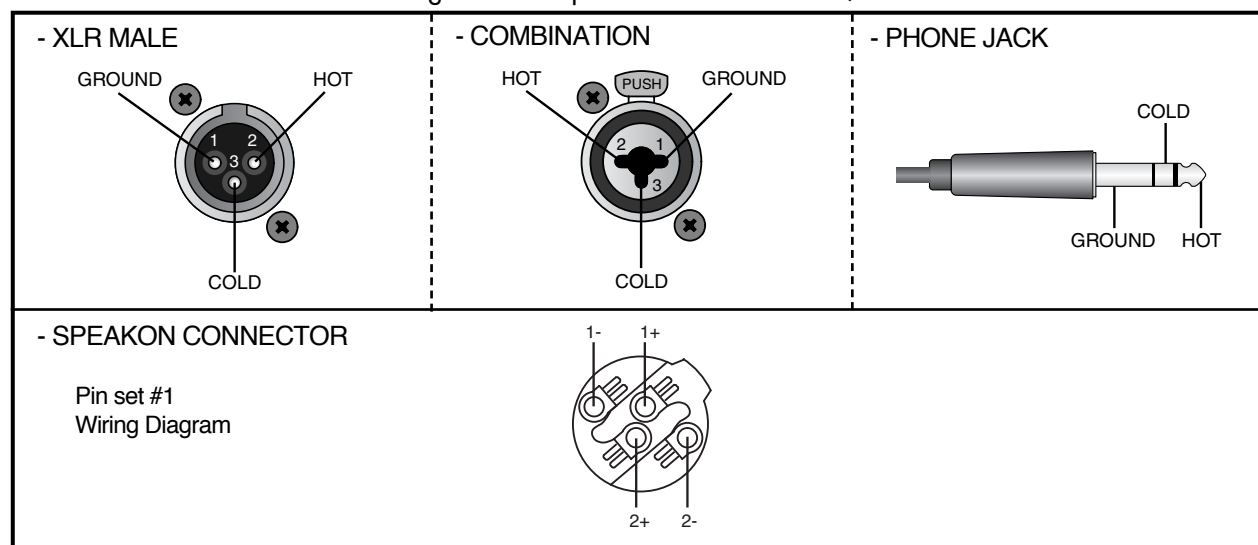
Balanced 1/4" TRS connectors are wired as described:

Tip is Positive

Ring is Common

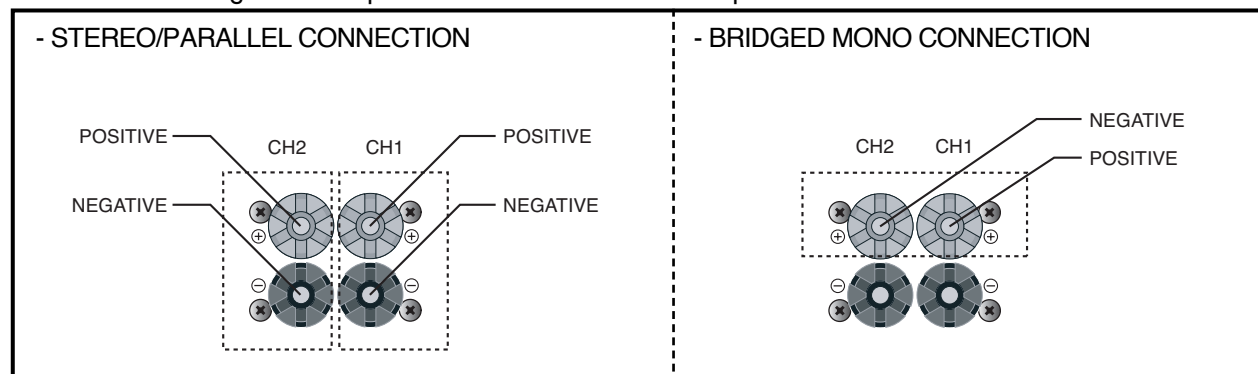
Sleeve is Shield

The combination connector is designed to accept either the XLR or the 1/4" TRS Phone Jack



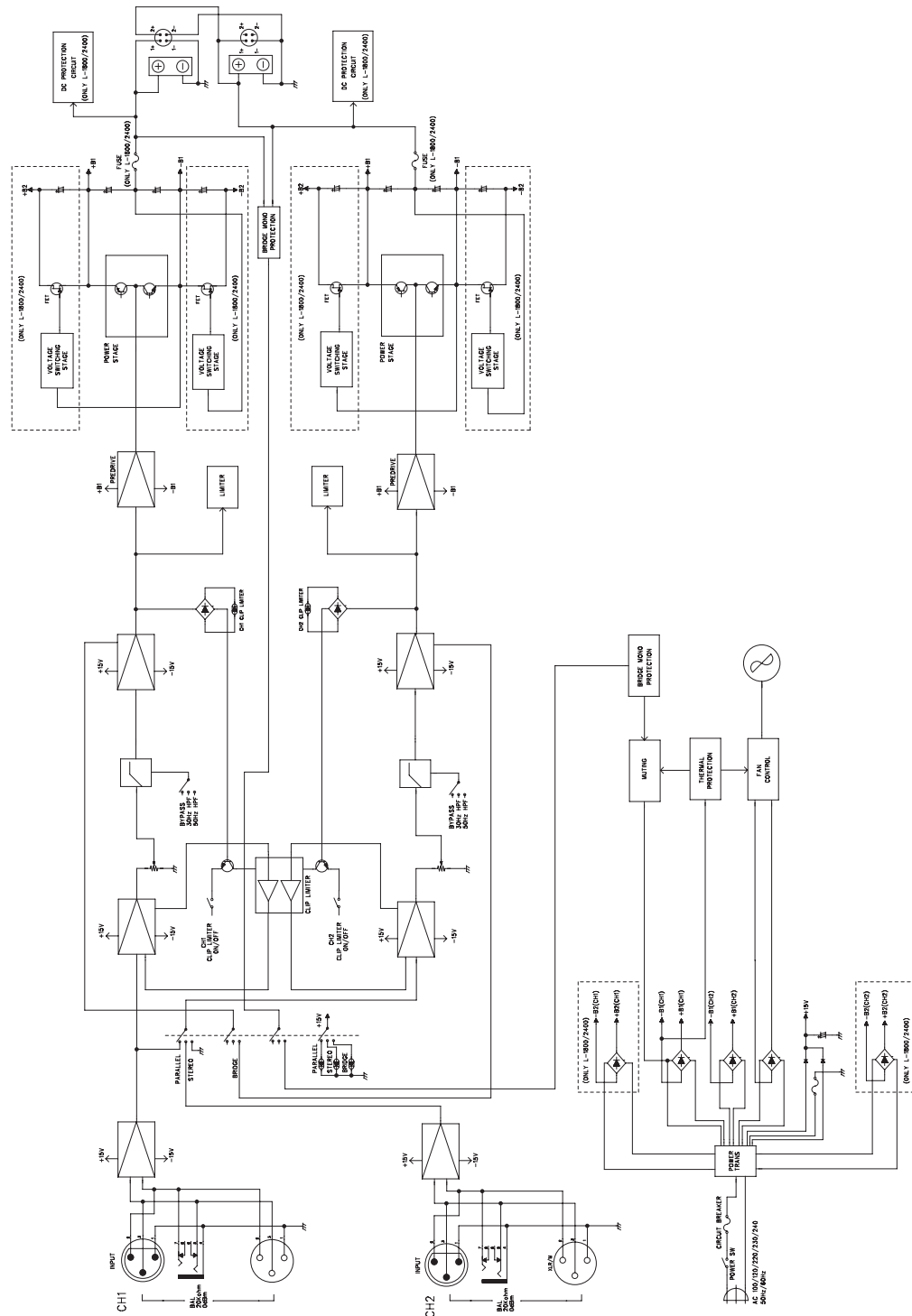
Stereo operation uses the + (positive) and the - (negative) terminal from each set of channel output binding posts. (CH1 : 1+, 1- / CH2 : 2+, 2-)

Bridged Mono uses the + (positive) terminal of both channels only. The - (negative) terminals have no connection. Bridged Mono operation has a minimum load impedance of 4Ω.



Block Diagrams

- L800/1400/1800/2400





Specifications

0dB=0.775Vrms, Half Power=1/2 Power Output Level (Rated Power)

	L800	L1400	L1800	L2400	L3000
Power Output Level					
STEREO 1kHz both channels driven					
RL=8Ω @ 0.1% THD	200W	280W	360W	500W	650W
RL=4Ω @ 0.1% THD	300W	450W	600W	750W	1000W
RL=2Ω @ 0.5% THD	430W	700W	900W	1200W	1500W
BRIDGED RL=8Ω 1kHz @ 0.1% THD	600W	900W	1200W	1500W	2000W
RL=4Ω 1kHz @ 0.5% THD	800W	1400W	1800W	2400W	3000W
Frequency Response RL=8Ω, P=1W	20Hz~20kHz: ±0/1dB, 5Hz~70kHz: -3dB				
Total Harmonic Distortion					
f=20Hz~20kHz, Half Power(L800/1400)					
1/10Power(L1800/2400/3000)					
STEREO RL=8Ω & 4Ω	≤0.03%				
BRIDGED RL=8Ω	≤0.03%				
Channel Separation Half Power RL=8Ω, f=1kHz, ATT. max. Input 600Ω Shunt	≥80dB				
Residual Noise(DIN Audio Filter)	≤-85dB: ATT min.				
Signal-to-Noise Ratio DIN Audio, Input 600Ω Shunt	≥100dB				
Input Sensitivity (Rated Power into 4Ω 1kHz)	2.7dBu	2.7dBu	3.5dBu	3.5dBu	3.5dBu
Damping Factor RL=8Ω, f=1kHz	≥400				
Voltage Gain (ATT max.) 4Ω at 1kHz	30dB	32dB	33dB	34dB	38.5dB
Output Circuitry	AB Class	AB Class	H Class	H Class	H Class
Input Impedance (ATT max.)	≥20kΩ(Balance/Unbalance)				
Indicators	Power (Blue) Clip/Limiter (Red) Signal (Green) Protection (Red) Mode Selector (Yellow)				
Protection	Power SW ON/OFF muting, Full Short circuit, Thermal protection, RF protection				
Fan Circuit	Low-Speed - Variable - Hi-Speed				
Operating Temperature	-10°C ~ +40°C				
Power Source	100-120VAC or 220-240VAC; 50/60Hz (Supplied AC mains transformer depends on country requirements)				
Power Consumption(1/8 POWER)					
100V-120VAC Both Channel Driven RL=4Ω	6A	7A	8A	9A	11A
230V-240VAC Both Channel Driven RL=4Ω	3A	3.5A	4A	4.5A	5A
Weight	14kg/30.8lb	14.4kg/31.7lb	15kg/33lb	15.6kg/34.6lb	19.5kg/39.5lb
Dimensions	482(W) x 88(H) x 369(D)mm / 19(W) x 3.5(H) x 14.5(D)in				
Connector	Inputs: balanced combination connector(XLR type+1/4" TRS) Outputs: 5-Way binding posts x 2, Speakon Terminal x 2				

* Specifications and design subject to change without notice.