



AMPLITUDE 8m

USER MANUAL





THANK YOU FOR CHOOSING TRINNOV AUDIO

The Amplitude^{8m} amplifier is among the most advanced available. By combining high-power linear power supplies and the Class D, N-Core® NC-1200 amplifier modules, Trinnov Audio has delivered an amplifier that closely approaches the theoretical ideal: a straight wire with gain.

AMPLITUDE^{8M} OWNER'S MANUAL

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IMPORTANT SAFETY INSTRUCTIONS



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of significant magnitude to constitute a risk of electric shock to persons.

CAUTION:
TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, DO NOT USE THE AC (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

EXTENSION CORDS ARE NOT RECOMMENDED FOR USE WITH THIS PRODUCT.

THIS UNIT CONTAINS VOLTAGES WHICH CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT OPERATE WITH COVERS REMOVED. REFER ALL SERVICING TO YOUR AUTHORIZED TRINNOV AUDIO DEALER.

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE FUSES ONLY WITH THE SAME TYPE AND RATING OF FUSES AS SPECIFIED.

PLEASE CAREFULLY READ EACH ITEM OF THE OPERATING INSTRUCTIONS AND SAFETY PRECAUTIONS BEFORE INSTALLING AND USING THIS PRODUCT. USE EXTRA CARE TO FOLLOW THE WARNINGS WRITTEN ON THE PRODUCT ITSELF AND/OR IN THE OPERATING INSTRUCTIONS. KEEP THE OPERATING INSTRUCTIONS AND SAFETY PRECAUTIONS FOR FUTURE REFERENCE.

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE ANY OF THE COVER PANELS.

NO USER-SERVICEABLE PARTS INSIDE. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT ALLOW LIQUIDS TO SPILL OR OBJECTS TO FALL INTO ANY OPENINGS OF THE PRODUCT.

THIS UNIT IS SUPPLIED WITH A TWO 3 PIN GROUNDED AC PLUGS. ALWAYS INSERT THE AC PLUG INTO A GROUNDED OUTLET. DO NOT REMOVE THE GROUND PIN OR DISABLE THE GROUND FOR ANY PURPOSE.

BEFORE MAKING ANY CONNECTIONS TO THE AMPLITUDE^{8M}, FIRST TURN OFF THE POWER AND THEN DISCONNECT THE AC POWER CORD.

WHEN INSTALLING THE AMPLITUDE^{8M} IN YOUR SYSTEM, MAKE CERTAIN TO ALLOW A MINIMUM OF ½ INCH OF VENTILATION ON EACH SIDE OF THE UNIT. ALSO, ALLOW AT LEAST 3 INCHES OF VENTILATION SPACE ABOVE THE UNIT.

IMPROPER VENTILATION OF THE UNIT MAY CAUSE OVERHEATING, WHICH MAY DAMAGE THE UNIT AND CAUSE A FIRE. PLACE THE UNIT ON A SOLID SURFACE ONLY. I.E. NOT ON CARPET, ETC.

DO NOT PLACE THE AMPLITUDE^{8M} NEAR HEAT SOURCES SUCH AS DIRECT SUNLIGHT, STOVES, HEAT REGISTERS, RADIATORS OR OTHER HEAT PRODUCING EQUIPMENT.

TO PREVENT DAMAGE TO THE ANALOG OUTPUT CIRCUITRY, BE CERTAIN NOT TO SHORT THE

OUTPUT SIGNAL TO GROUND. ENSURE THAT YOUR AUDIO OUTPUT CABLES DO NOT HAVE ANY INTERNAL SHORTS BEFORE CONNECTING THEM TO THE AMPLITUDE^{8M}.

IF REPLACEMENT OF THE AC LINE FUSE AND/OR ANY INTERNAL FUSE BECOMES NECESSARY, REPLACE ONLY WITH SAME VALUE AND TYPE OF FUSE. NEVER BYPASS THE FUSE.

IF THE AC CORD BECOMES DAMAGED, DO NOT USE IT. IMMEDIATELY REPLACE IT WITH A NEW ONE OF THE SAME OR BETTER RATING.

IT IS IMPERATIVE THAT THE AMPLITUDE^{8M} BE OPERATED IN A WELL VENTILATED ENVIRONMENT AND THE IMMEDIATE EXTERNAL TEMPERATURE BE MAINTAINED AS SPECIFIED. EXTERNAL COOLING FANS MAY BE REQUIRED IN SOME CASES. DO NOT STACK ANY EQUIPMENT DIRECTLY ABOVE OR BELOW THE AMPLITUDE^{8M} AS TO PROTECT IT FROM OVERHEATING, AS WELL AS THE CONTINUED FUNCTIONALITY OF ANY EQUIPMENT NEAR AND AROUND IT.

MAXIMUM PERMISSIBLE OPERATING CONDITIONS: 0°C TO 40°C (32°F – 104°F)°, 20-80% RELATIVE HUMIDITY (WITHOUT CONDENSATION).

AFTERMARKET and THIRD PARTY MODIFICATIONS

Please note that any aftermarket and/or third-party modifications will void the warranty. In the case of changing the feet on a unit, to prevent any damage (which will also not be covered under warranty), please verify that the screws being used to secure non-Trinnov Audio feet do not screw any deeper into the chassis than the original ones. The original screw is 1/4-20 by 1/2 and goes into the chassis 1/4 inch.

1. ABOUT THE AMPLITUDE^{8M}

1.1 GETTING TO KNOW YOUR AMPLITUDE^{8M}

This Amplitude^{8m} has been put through a rigorous and unique testing procedure that ensures that it will last for many years with minimal service requirements. This procedure includes the following:

- All assembled circuit boards are given a thorough visual inspection and are then tested in a bench reference Amplitude^{8m}.
- The tested, assembled circuit boards are then installed in a new Amplitude^{8m} and the whole unit is tested for every function and parameter.
- The unit is put on a burn-in torture rack to test for any possible component failures.
- It is then tested on an audio analyzer for all pertinent parameters.
- The unit has all remaining chassis components installed and then undergoes a complete visual inspection, which assures that all Amplitude^{8m}'s meet visual specifications.
- The Amplitude^{8m} then undergoes a critical listening and functional test.

1.2 BURN-IN TIME

While the Amplitude^{8m} amplifier will sound wonderful without any burn-in time, users may experience small sonic improvements during the first week or so of operation.

1.3 IMPORTANT RECOMMENDATION

Before turning on your Amplitude^{8m}, make sure you are using the right fuse in function of your local current :

- 20 Amp fuse for 120V (The 20 Amp fuse is installed by default).
- 10 Amp fuse for 220V.

1.4 SPECIFICATIONS

POWER

POWER REQUIREMENTS	120VAC (90V-132V) / 230VAC (200V-250V) 50/60Hz, 20 Amp fuse for 120V, 10 Amp fuse for 220V
POWER CONSUMPTION	Less than 0,5W at Standby (for 230V, 1W for 120V); <80W at idle; 40W at Sleep; 1800W fully loaded
TRIGGER INPUT	5-12 VDC; Steady State
MODES /PROCESS	Standby: Amplifier is ready to be turned on via front panel switch or remote trigger. Overcurrent, D.C., and/or thermal protection: Amplifier will cycle. Catastrophic D.C. or output stage failure: Amplifier will shut down.

AUDIO

GAIN	19 dB
POLARITY	Pin-2 = Positive, Pin-3 = Negative for Non-Inverting Output
INPUT IMPEDANCE	20 k Ohms for each phase
ANALOG AUDIO OUTPUTS	8 pairs of outputs with 5-way binding posts
FREQUENCY RESPONSE	+0, -.5 dB 0 Hz to 20 kHz, load-independent
DAMPING FACTOR	>800 at any frequency up to and including 20 kHz
SIGNAL TO NOISE RATIO	123 dB referenced to rated output (A-Weighted)
CROSSTALK	> 90 dB
POWER OUTPUT	8x8 ohms: 200W RMS per channel with less than 0.05% THD from 20 Hz to 20 kHz 4x4 ohms: 300W RMS per channel with less than 0.05% THD from 20 Hz to 20 kHz

PHYSICAL CHARACTERISTICS

CHASSIS: 3U

WEIGHT: above 61.6 lbs; 27.7 kg

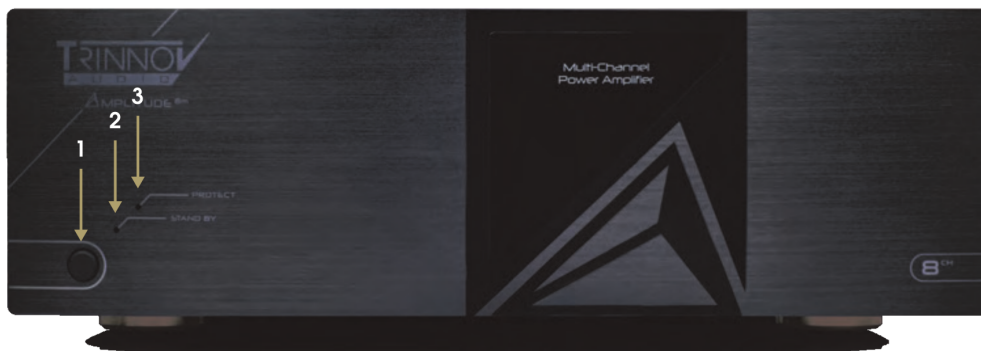
ENVIRONMENTAL CONDITIONS:

- Temperature: 0°C - 40°C / 32°F - 104°F
- Humidity: 20% - 80% relative humidity (without condensation)



Conventions: For clarity, references to buttons and LEDs will be shown in **BOLD, CAPITAL LETTERS**.

1.5 THE FRONT PANEL



1 - STANDBY BUTTON

After the left-hand (when viewed from the front of the amplifier) rear-panel POWER switch is turned on, press the front panel STANDBY button to exit the standby mode. Channels 5-8 will come out of standby. Channels 1-4 are controlled by the right-hand (when viewed from the front of the amplifier) rear-panel POWER switch. If both rear-panel POWER switches are turned on, the STANDBY button will control all channels.

2 - STANDBY LED

Illuminates RED when the amplifier enters the Standby mode.

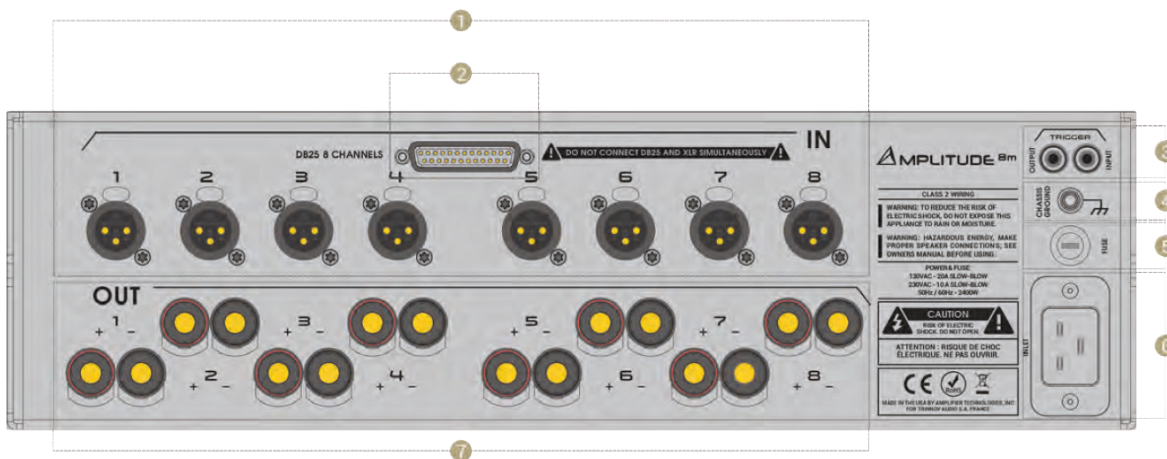
Illuminates GREEN when the amplifier is in the turn-on sequence.

Illuminates BLUE when the amplifier is ready for normal operation.

3 - PROTECT LED

Illuminates if the unit enters the protection mode. This can be caused by a short circuit in any of the channels or by an over-temperature operating condition.

1.5 THE REAR PANEL



1 - 8 BALANCED INPUTS ON XLR CONNECTOR

Do not connect XLR and DB25 simultaneously.

2 - 8 BALANCED INPUT ON DB25 CONNECTOR

Tascam pinning. Do not connect XLR and DB25 simultaneously.

3 - REMOTE TRIGGER INPUT / REMOTE TRIGGER OUTPUT

Refer to Chap. 2.2 (Page 12)

4 - GROUNDING LUG

Used to interconnect chassis of associated components if necessary.

5 - REAR PANEL FUSE

Use the same type and rating only.
20 Amp for 120V, 12.5 Amp for 230V.

6 - AUTOMATIC AC POWER RECOGNITION

AC Inlet: use the included power cord to connect your amplifier to an AC power source.

7 - 8 BINDING POSTS

Connect the negative to the – (minus) and the positive to the + (plus) speaker connector. The binding posts can accept spade plugs, banana plugs or bare wire.

2. OPERATION

Before turning on the Amplitude^{8m}, ensure that all precautions and warnings have been carefully reviewed and adhered to. Damage to the Amplitude^{8m} caused by improper operation, wiring and/or ventilation will not be covered under warranty and Trinnov Audio will not be liable for any consequential damage or loss.

When the amplifier is connected, the amp goes into Standby. The amplifier is completely off, save for a minimal (and low power) supply to power the soft-start circuit. When the Standby button is pressed, the soft-start sequence begins and the LED turns green. Several relay clicks may be heard while the amplifier readies itself for operation. When the turn-on sequence is complete the LED will illuminate blue and the amp will be fully on. Pressing the Standby button again takes the amp directly into the standby mode.

2.1 ENVIRONMENTAL NOTICE

Here are critical instructions to follow before you turn the power on your Amplitude^{8m}:

I. It is imperative that the Amplitude^{8m} be connected to the ground via its three-wire AC power cord. It is important that the AC power outlet, which the Amplitude^{8m} is plugged into, is actually grounded. Failure to do so will severely compromise the performance, reliability, and safety of use of the Amplitude^{8m}.

II. Ventilation is an important issue when placing the Amplitude^{8m} in a system. Make certain that the Amplitude^{8m} is placed in a well-ventilated area or rack unit.

III. Please take note that some power line conditioners defeat the AC power ground on their outlets. If the intention is to plug the Amplitude^{8m} into a line conditioner, check with your dealer to make certain that the particular conditioner that is intended for use DOES NOT DEFEAT THE AC GROUND on its AC outlets. Only the highest-powered line conditioners should be considered for use with the Amplitude^{8m}. Otherwise, the amplifier's power output may be compromised.

IV. DO NOT remove any cover panels from the Amplitude^{8m}, as there are no user serviceable components inside. Refer servicing and updating to qualified service personnel only.

V. It is imperative that the Amplitude^{8m} be operated in a well-ventilated environment and the immediate external temperature is maintained as specified in Appendix B of this manual. External cooling fans may be required in some cases. Do not stack any equipment directly above or below the Amplitude^{8m}, to protect it from overheating, as well as the continued functionality of any equipment near and around it.

2.2 REMOTE TRIGGERS

Use the remote trigger to connect to a compatible preamplifier, source device or other product with 5 to 12 VDC output.

When so interconnected, the Amplitude^{8m} will turn on and off in response to the signals received from the source device. The trigger circuit requires a steady-state signal. Units that send a pulse signal for turn-on and turn-off will not work with the Amplitude^{8m}.

The trigger output will pass through the steady-state signal received on the trigger input to switch downstream devices on and off.

NOTE: Make sure to use a mono TS mini-jack cable for 12V triggers

A. APPENDIX

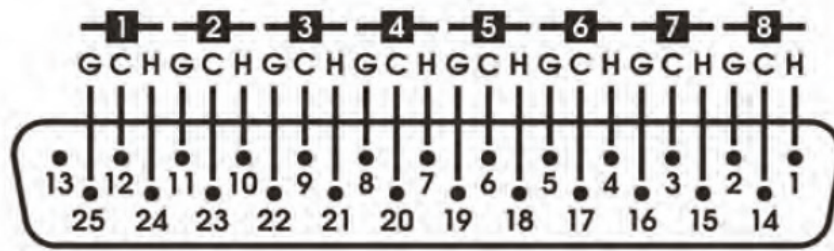
A.1 TROUBLESHOOTING SOLUTIONS

If the Amplitude^{8m} should function abnormally during operation, please review the items in the following checklist.

Please be sure to thoroughly check all other connected components such as speakers, preamplifiers, as well as cables.

SYMPTOM	POSSIBLE CAUSE(S)	REMEDY
No power or front panel lights and no sound.	Power cable is not inserted 100% into AC input connector.	Ensure that the AC cord is inserted all the way into the Amplitude ^{8m} and that the wall outlet is active.
	Rear panel fuse is open	Replace with same type and rating ONLY.
	Circuit breaker is open (AC outlet).	Check the AC outlet circuit breaker and reset, if necessary, or contact your dealer.
No audio output.	Overheating	If the front panel PROTECT LED illuminates, this could indicate overheating. Shut down the Amplitude ^{8m} until it cools. This should be a very rare occurrence. If it does happen, an external fan may be required.

A.2 DB25 TASCAM PINOUT



The input DB25 Tascam Pinout is also printed on the back panel of the Amplitude^{8m}.

H = Hot
C = Cold
G = Ground

B.RACK EARS

The total width of the amplifier including rack ears is 482 mm.



Thank you for your attention

Please enjoy your system