



Amplitude8

USER MANUAL





THANK YOU FOR CHOOSING TRINNOV AUDIO

The Amplitude⁸ 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.

AMPLITUDE⁸ 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-SERVICABLE 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 8, FIRST TURN OFF THE POWER AND THEN DISCONNECT THE AC POWER CORD.

WHEN INSTALLING THE AMPLITUDE 8 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 8 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 8.

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 8 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 8 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, in order 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 AMPLITUDE⁸

1.1 GETTING TO KNOW YOUR AMPLITUDE⁸

This Amplitude⁸ 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 Amplitude⁸.
- The tested, assembled circuit boards are then installed in a new Amplitude⁸ 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 Amplitude⁸'s meet visual specifications.
- The Amplitude⁸ then undergoes a critical listening and functional test.

1.2 BURN-IN TIME

While the Amplitude⁸ 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 SPECIFICATIONS

POWER

POWER REQUIREMENTS 117VAC, 15 Amp SLO-BLO main fuse; 230VAC, 8 Amp SLO-BLO main fuse; 50/60Hz

POWER CONSUMPTION Less than 1W at Standby; <80W at idle; 1500W maximum x 2 when 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 47 kOhms for each phase

ANALOG AUDIO OUTPUTS One balanced output with 5-way binding posts per channel

FREQUENCY RESPONSE +0, -5 dB 0 Hz to 20 kHz, load independent

DAMPING FACTOR >6000 at 100 Hz; >2000 at any frequency up to and including 20 kHz

SIGNAL TO NOISE RATIO 120 dB referenced to rated output (A-Weighted)

CROSSTALK > 85 dB

POWER OUTPUT 8 ohms: 225W RMS per channel with less than 0.05% THD from 20 Hz to 20 kHz
4 ohms: 375W RMS per channel with less than 0.05% THD from 20 Hz to 20 kHz
2 ohms: 500W RMS per channel with less than 0.05% THD from 20 Hz to 20 kHz

PHYSICAL CHARACTERISTICS

CHASSIS: 4U

WEIGHT: above 98.5 lbs; 44.8 kG

ENVIRONMENTAL CONDITIONS:

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



Conventions: For clarity purposes, references to buttons and LED's will be shown in bold capital letters.

1.4 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 & 11 MAIN POWER SWITCHES

(#11 is the Master Power Switch. Neither side of the amplifier will operate if this switch is set to off.)

#1 controls the right-hand amplifier and disconnects AC to all circuits. It is recommended that this be left ON at all times during regular use with the exception of whenever cables are connected/disconnected or when the unit will be used for an extended period of time.

2 & 12 REAR PANEL FUSE

Use same type and rating only. 15 Amp for 120V, 8 Amp for 230V.

3 & 13 AC INLET

Use the included power cord to connect your amplifier to an AC power source.

4 GROUNDING LUG

Used to interconnect chassis of associated components if necessary.

5 8 BALANCED INPUTS ON XLR CONNECTOR

Do not connect XLR and DB25 simultaneously.

6 8 BALANCED INPUT ON DB25 CONNECTOR

Tascam pinning. Do not connect XLR and DB25 simultaneously.

7 REMOTE TRIGGER INPUT

Remote trigger input.

8 REMOTE TRIGGER OUTPUT

Trigger out to rely to another device.

9 POSITIVE BINDING POST

Connects to the + (plus) speaker connector. The binding posts can accept spade plugs, banana plugs or bare wire.

10 NEGATIVE BINDING POST

Connects to the – (minus) speaker connector. The binding posts can accept spade plugs, banana plugs or bare wire.

2. OPERATION

Before turning on the Amplitude⁸, ensure that all precautions and warnings have been carefully reviewed and adhered to. Damage to the Amplitude⁸ 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.

After the main rear power switches are turned on, the amp goes into Standby. The amplifier is completely off, save for a very small (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 very important instructions to follow before to power on your Amplitude⁸:

- I. It is imperative that the Amplitude⁸ be connected to a ground via its three wire AC power cord. It is important that the AC power outlet, which the Amplitude⁸ is plugged into, is actually grounded. Failure to do so will severely compromise the performance, reliability and safety of use of the Amplitude⁸.
- II. Ventilation is an important issue when placing the Amplitude⁸ in a system. Make certain that the Amplitude⁸ is placed in a well-ventilated area or rack unit.
- III. Please take note that some powerline conditioners defeat the AC power ground on their outlets. If the intention is to plug the Amplitude⁸ 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 Amplitude⁸. Otherwise, the amplifier's power output may be compromised.
- IV. DO NOT remove any cover panels from the Amplitude⁸, as there are no user serviceable components inside. Refer servicing and updating to qualified service personnel only.
- V. It is imperative that the Amplitude⁸ be operated in a well ventilated environment and the immediate external temperature be 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 Amplitude⁸, 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 Amplitude⁸ 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 Amplitude⁸. The trigger output will pass through the steady-state signal received on the trigger input to switch downstream devices on and off.

A. APPENDIX

A.1 TROUBLESHOOTING SOLUTIONS

If the Amplitude⁸ 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 8 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 8 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 Amplitude⁸.

H = Hot
C = Cold
G = Ground

