POWERING YOUR GTR-100

Before plugging in and powering up your GTR-100, please take a moment to be certain that the proper AC MAINS operating voltage setting has been selected on the rear panel.

INSTALLATION AND THERMAL PROTECTION

The GTR-100 is a 1U amplifier that can be mounted in a standard 19-inch rack. Four front panel mounting holes are provided. When racking, be sure it has sufficient air flow through fans and vents to avoid triggering thermal protection, which will protect the amp by disconnecting loudspeakers and shutting down until sufficiently cooled.

If you choose not to rack your GTR-100, attach the four included feet to the bottom of the unit for cab-top use.

SHORT CIRCUIT

If an output is shorted (via defective speakers or crossed speaker wires) the protection circuits will automatically shut down the unit to protect the amplifier. The protection circuit senses the short circuit as an extremely stressful load condition and attenuates the signal, protecting the channel's output transistors from over-current stress. If the short circuit remains, the load will be disconnected entirely.

DC VOLTAGE PROTECTION

If an amplifier channel detects DC voltage at its output terminals, the output relay will immediately open to prevent loudspeaker damage.

CONNECTING POWER

Damage caused by connecting the amplifier to improper AC voltage is not covered by any warranty. Always turn off and disconnect the amplifier from main voltage before making audio connections, and as an extra precaution, have the volume controls turned down during power-up.

COOLING REQUIREMENTS

The GTR-100 uses a fan cooling system to maintain an even operating temperature. Air enters through the vents on the front and exits through the back. Always ensure that there is enough space around the front and back of the amp to allow air to circulate.

NOTICE

This manual provides general information, preparation for use, and operating instructions for the GTR-100. The information contained in this manual is subject to change without notice. Avantone Pro makes no warranties of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Avantone Pro shall not be liable for errors contained herein or direct, indirect, special, incidental, or consequential damages in connection with the furnishing, performance, or use of this material.

SPECIFICATIONS

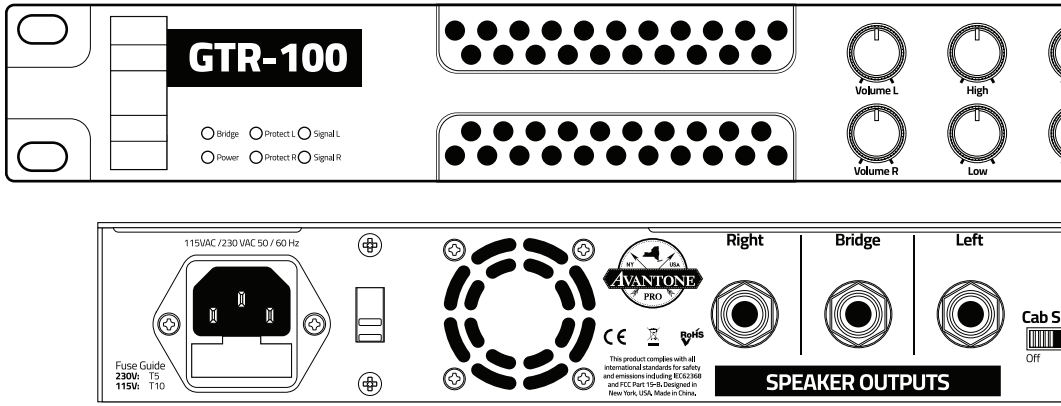
8 Ω STEREO POWER (1 KHZ):	100 W
4 Ω STEREO POWER (1 KHZ):	140 W
8 Ω BRIDGE POWER (1 KHZ):	245 W
SLEW RATE (AT 1 KHZ):	28 V/µs
INPUT SENSITIVITY (1 KHZ): LINE	0.775 V
INPUT SENSITIVITY (1 KHZ): INST	0.125 V
TOTAL HARMONIC DISTORTION (1 KHZ):	<0.1%
INTERMODULATION DISTORTION (AT 10% RATED POWER 1 KHZ):	<0.1%
CROSSTALK:	-70 dB
FREQUENCY RESPONSE:	20 Hz-20 kHz +/-0.25 dB
INPUT IMPEDANCE: LINE	20 KΩ
INPUT IMPEDANCE: INSTRUMENT (HI-Z)	1 MΩ
DAMPING FACTOR (100 HZ, 8 Ω):	275
SIGNAL TO NOISE RATIO (A-WEIGHTED):	>101 dB
AMPLIFIER:	Class AB
CHASSIS DIMENSIONS:	270 W x 82 H x 385 D (19" x 1.75" x 15.2")
WEIGHT:	7.7kg (17 lb)

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GTR-100



IMPORTANT SAFETY INSTRUCTIONS

Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerable in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) have specified the permissible noise level exposures shown in the following chart.

According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent permanent hearing loss if exposure is in excess of the limits set forth here.

Duration, per day in hours	Sound Level dBA, slow response	Typical example
8	90	Duo in small club
6	92	
4	95	Subway train
3	97	
2	100	Very loud classical music
1.5	102	
1	105	That couple screaming at each other
0.5	110	
<0.25	115	Loudest parts at a rock concert

The GTR-100 complies with all applicable RoHS / WEEE European Union directives. This product complies with IEC62386.

Do not attempt to service this unit yourself, as it will void your warranty. Please check your unit carefully upon receipt and return to place of purchase immediately if there are any problems with the product. After that, the standard AVANTONE 5 YEAR warranty will apply to defects in materials and workmanship.

U.S.A.

Should your Avantone product require service, please contact the Avantone PRO Service Department. +1 845 642 3697-or- e-mail info@avantonepro.com. **You must obtain an RA # (Return Authorization number) from us before shipping a unit back to us. This RA # must be clearly written on the outside of the box.**

Please safely pack the units...It is best to use the original packing materials. AVANTONE PRO cannot be responsible for any damages incurred in shipping to us due to poor packaging. PLEASE PACK CAREFULLY and FULLY INSURE THE SHIPMENT.

INTERNATIONAL

For service or warranty assistance, please contact the AVANTONE PRO distributor in your country through the dealer from whom you purchased this product.

LIMITED 5-YEAR WARRANTY

AVANTONE GTR-100s are warranted by Avantone Pro to be free from defects in materials and workmanship for the period of 5 YEARS to the original purchaser. In the event of such defects, the Avantone Pro product will be repaired without charge or, at our option, replaced with a new one if delivered to Avantone Pro prepaid, together with a copy of the sales slip or other proof of purchase date. The warranty excludes problems due to normal wear, abuse, shipping damage or failure to use the product in accordance with the specifications.

All speaker systems are vulnerable to damage from sustained amplifier clipping. This can be described as a distortion of the signal caused by the amplifier running out of headroom. Heat will then be generated in the voice coil of the driver beyond the heat handling capabilities of wire and glue. At some point the voice coil will burn, causing the speaker to sound very distorted; eventually the driver will stop working.

All parts and labor are covered under this Limited Warranty. However, if it is determined by AVANTONE PRO that the voice coil was burned due to sustained amplifier clipping, we reserve the right to charge the customer for the cost of the repair, since this is considered abuse.

Avantone Pro shall not be liable for damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation or commercial loss or any other damages, whether incidental, consequential, or otherwise. This warranty gives you specific legal rights, and you may have other rights, which will vary from state to state.

This warranty is not transferable.

INTRODUCTION

The GTR-100 is a 1U, 2-channel solid state power amp designed for modern guitarists who rely on guitar modelers like AxeFX or Quad Cortex to shape their sound. Delivering 100w per side @ 8 ohms, 140w per side @ 4 ohms, or 245w in bridged mono mode at 8 ohms, the GTR-100 renders your carefully-designed tones with accuracy, power, and reliability.

We took particular care to create an amplifier clean enough for the studio but rugged enough for the road. It sports generous LED metering, high-quality Japanese components, a serious toroidal transformer and a linear power supply. The GTR-100 is fan-cooled.

The GTR-100 was designed to be paired with guitar cabinets, and its dual-channel operation is ideal for running stereo effects into two separate cabinets live. Very low distortion, steady performance under harsh conditions, and an open and transparent sound make this an obvious choice for discerning guitarists.

QUICK START GUIDE

1. Turn GTR-100 power off.
2. Select the operating voltage. If you are changing voltages, please be sure to change fuse values as specified on the rear panel.
3. Select operating mode: stereo or bridged mono.
4. Place volume controls to minimum.
5. Connect the outputs of your guitar processor or pedalboard to the left and right inputs if using stereo mode, or the left input if using bridged mono mode.
6. Set the Input switch to Line if using a guitar modeler, or Inst if using a guitar or stompboxes.
7. Connect speaker cables to speaker cabinets
8. Connect GTR-100 to AC mains power.
9. Turn on GTR-100 power.
10. Adjust volume to appropriate levels at source and speaker.

FRONT PANEL

1. **Volume L**: Controls output level of left channel or bridged channel
2. **Volume R:** Controls output level of right channel
3. **Output Meter**: displays left and right output levels
4. **Bridge**: Lights red when the unit is operating in bridged mono mode.
5. **Power**: Lights red when the unit is powered on.
6. **Protect L/R**: lights red when channel has entered protect mode (shutdown due to high temperature)
7. **Signal L/R**: lights green when audio signal is detected. Lights red when signal is clipping.
8. **EQ**: Toggles the EQ controls. Lights red when EQ controls are active.
9. **Low**: Controls the amount of low-frequency boost or cut; +/- 10dB @ 87Hz
10. **Mid**: Controls the amount of mid-frequency boost or cut; +/- 10dB @ 645Hz
11. **High**: Controls the amount of high-frequency boost or cut; +/- 10dB @ 4.4kHz
12. **Air**: Controls the amount of air-frequency boost or cut; +/- 7dB @ 11.6kHz.

REAR PANEL

13. **Inputs**: Balanced ¼" TRS jacks for connecting your sound source: guitar processors; stompboxes, guitars, basses, etc. Use Left and Right inputs in stereo mode, and Left (Bridge) input in bridged mono mode.
14. **Line/Inst select**: Selects input impedance. Use Line for guitar processors or keyboards; Inst for guitars or stompboxes.
15. **Mode Switch**: Do not adjust this switch with power on! This switch allows you to operate the amplifier in one of two modes:

    Stereo: both channels are driven separately.

    Bridge: both channels operate together as a single amplifier, sacrificing stereo operation for increased output wattage.

16. **Cab Sim**: adjusts output tone to emulate the frequency response of an SM57 miking a V30 speaker for the corresponding THRU output. Useful when sending your signal directly to front-of-house or recording.
17. **Thru**: Balanced XLR outputs of the left and right signals, useful for recording or sending your signal straight to the mixing board in live applications.
18. **Speaker Outputs**: ¼" TS connections for connecting to speaker cabinets. Use only the center Bridge output when the Mode setting is set to Bridge. Be sure to use proper speaker cables in these jacks and not high-impedance instrument cables or line cables!
19. **Voltage select and AC mains input**: Select the proper operating voltage for your location. Also be sure to use the correct specified fuse value for your location. The fuse tray is incorporated into the IEC320 receptacle on the rear panel.

