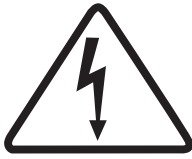




**Athem®**

# **STR** POWER AMPLIFIER

Operating Manual



## CAUTION

**RISK OF ELECTRIC SHOCK DO NOT OPEN**



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



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 SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.



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 APPLIANCE.

**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE, AND OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS.

**CAUTION:** TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

**CAUTION:** FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE THE FUSE ONLY WITH THE SAME AMPERAGE AND VOLTAGE TYPE. REFER REPLACEMENT TO QUALIFIED SERVICE PERSONNEL.

**WARNING:** UNIT MAY BECOME HOT. ALWAYS PROVIDE ADEQUATE VENTILATION TO ALLOW FOR COOLING. DO NOT PLACE NEAR A HEAT SOURCE, OR IN SPACES THAT CAN RESTRICT VENTILATION.

### IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
11. Only use the attachments/accessories specified by the manufacturer.
12. Use only with a cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

**WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. Avoid installing this unit where foreign objects may fall onto this unit and/or this unit may be exposed to liquid dripping or splashing. On the top of this unit, do not place:

- Burning objects (i.e. candles), as they may cause fire, damage to this unit, and/or personal injury.
- Containers with liquid in them, as they may fall and liquid may cause electrical shock to the user and/or damage to this unit.

Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Do not install this equipment in a confined space such as a case or similar. Install it away from direct sunlight, heat sources, vibration, dust, moisture, and/or cold.

Do not cover this unit with a newspaper, tablecloth, curtain, etc. in order not to obstruct heat radiation. If the temperature inside this unit rises, it may cause fire, damage to this unit, and/or personal injury.

Install this unit near the AC outlet and where the AC power plug can be reached easily.

This unit is not disconnected from the AC power source when it is turned off. This state is called the standby mode. In this state, this unit is designed to consume a very small quantity of power.

**NOTE:** This product is not an auto voltage Amplifier. Connect only to the prescribed AC outlet, i.e., 120V 60Hz or 240V 50/60Hz.

**CAUTION:** Top surface can become hot.

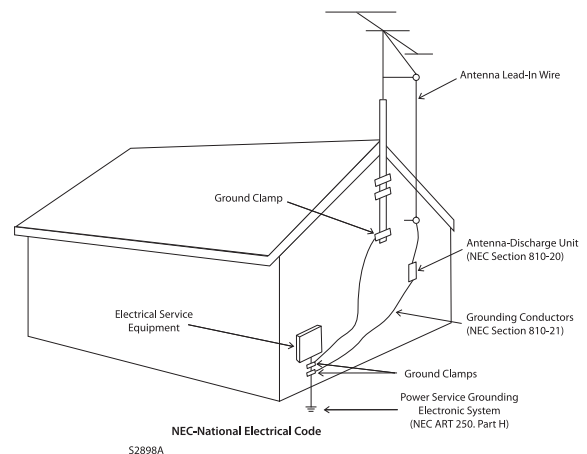
**CAUTION:** These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions, unless you are qualified to do so.

**CAUTION:** Changes or modifications to this equipment not expressly approved by Paradigm Electronics for compliance could void the user's authority to operate this equipment.

**FCC WARNING:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and amplifier.
- Connect the equipment into an outlet on a circuit different from that to which the amplifier is connected.
- Consult the dealer or an experienced radio / TV technician for help.



**IMPORTANT INFORMATION FOR UK CUSTOMERS:** DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer. If, nonetheless, the mains plug is cut off, REMOVE THE FUSE and dispose of the PLUG immediately, to avoid possible shock hazard by inadvertent connection to the mains supply. If this product is not provided with a mains plug, or one has to be fitted, then follow the instructions given below:

IMPORTANT: DO NOT make any connection to the larger terminal which is marked with the letter "E" or by the safety earth symbol or colored GREEN or GREEN AND YELLOW.

The wires in the mains lead on this product are colored in accordance with the following code:

BLUE – NEUTRAL  
BROWN – LIVE

As these colors may not correspond with the colored markings identifying the terminals in your plug, proceed as follows:

The BLUE wire must be connected to the terminal marked with the letter "N" or colored BLACK.

The BROWN wire must be connected to the terminal marked with the letter "L" or colored RED.

When replacing the fuse, only a correctly rated and approved type should be used, and be sure to re-fit the fuse cover. If in doubt consult a competent electrician.

## NOTES ON ENVIRONMENTAL PROTECTION

At the end of its useful life, this product must not be disposed of with regular household waste but must be returned to a collection point for the recycling of electrical and electronic equipment. The symbol on the product, user's manual and packaging, point this out. The materials can be reused in accordance with their markings. Through re-use, recycling of raw materials or other forms of recycling of old products, you are making an important contribution to the protection of our environment. Your local administrative office can advise you of the responsible waste disposal point.

## RECYCLING AND REUSE GUIDELINES (Europe)

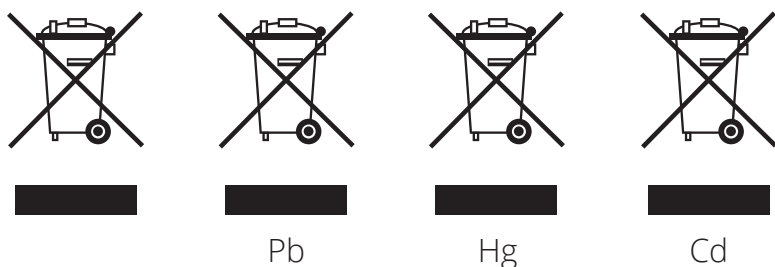
In accordance with the European Union WEEE (Waste Electrical and Electronic Equipment) directive effective August 13, 2005, we would like to notify you that this product may contain regulated materials which, upon disposal, require special reuse and recycling processing. For this reason Paradigm Electronics Inc. (the manufacturer of Paradigm speakers and Anthem electronic products) has arranged with its distributors in European Union member nations to collect and recycle this product at no cost to you. To find your local distributor please contact the dealer from whom you purchased this product or go to our website at [www.paradigm.com](http://www.paradigm.com).

Please note that only the product falls under the WEEE directive. When disposing of packaging and other shipping material we encourage you to recycle through the normal channels.

## INFORMATION ABOUT COLLECTION AND DISPOSAL OF WASTE BATTERIES (DIRECTIVE 2006/66/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL OF EUROPEAN UNION) (for European customers only)

Batteries bearing any of these symbols indicate that they should be treated as "separate collection" and not as municipal waste. It is encouraged that necessary measures are implemented to maximize the separate collection of waste batteries and to minimize the disposal of batteries as mixed municipal waste. End-users are exhorted not to dispose waste batteries as unsorted municipal waste. In order to achieve a high level of recycling waste batteries, discard waste batteries separately and properly through an accessible collection point in your vicinity. For more information about collection and recycling of waste batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

By ensuring compliance and conformance to proper disposal of waste batteries, potential hazardous effects on human health is prevented and the negative impact of batteries and waste batteries on the environment is minimized, thus contributing to the protection, preservation and quality improvement of the environment.



Anthem and any related party assume no liability for the user's failure to comply with any requirements.

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Thank you for purchasing the Anthem STR Power Amplifier.

All Anthem products are engineered to recreate the passion of a live musical performance and emotional involvement experienced in the best movie theaters by utilizing the highest level of circuit design, superior parts and manufacturing techniques, innovative features, and intuitive ergonomics. We are confident that their inclusion in your system will significantly enhance your enjoyment of recordings for years to come.

## 1.1 BEFORE MAKING CONNECTIONS

Check that you have received all items listed below and report discrepancies to your dealer as soon as possible. In case the unit needs to be transported in the future, keep the packing materials.

**Retain the invoice that you received from your authorized Anthem dealer at time of purchase – without it, service will not be provided under warranty.**

### Packing List:

- Power Amplifier
- Operating manual
- 3.5mm trigger cable
- IEC power cord (US / UK / EU / CN types are supplied by the factory, other types are normally provided by the local distributor)

## 1.2 IN-USE NOTICES

- Disconnect the power cord before connecting or disconnecting any components.
- If the amplifier was transported or stored in the cold, let it reach room temperature before use.
- Do not remove the top cover.
- Do not modify the product.
- Due to continuing advances, operational characteristics may change. If this manual contains discrepancies please check **[www.anthemAV.com](http://www.anthemAV.com)** for the latest manual.

## 1.3 FRONT PANEL



- ① Display
- ② Display view and setup menu access
- ③ Display brightness and menu selection confirmation
- ④ Power

## 1.4 REAR PANEL



- ① Chassis ground screw
- ② Power cord inlet (IEC C18 type)
- ③ Fuses for amplifier channels
- ④ Single-ended RCA inputs
- ⑤ Balanced XLR inputs
- ⑥ Speaker terminals
- ⑦ 5-24V AC/DC trigger input
- ⑧ Trigger throughput for daisy-chaining
- ⑨ Audio signal detection enable/disable
- ⑩ Trigger control enable/disable
- ⑪ Firmware upgrades via USB stick

## 2.1 INPUT CONNECTIONS

Balanced XLR connection offers the highest transmission quality, particularly over long cable lengths because it rejects noise and hum pickup. If your preamplifier does not have XLR outputs, use the RCA inputs.

Do not use “RCA-compatible” connectors that have a hollow center pin with a hole at its tip instead of a solid center pin. They can damage the amplifier’s RCA jack internally while being inserted.

## 2.2 SPEAKER CONNECTIONS



Depending on the level of the input signal, the voltage at the outputs can be high enough to cause electric shock — be sure that power is turned off when connecting or disconnecting anything. As well, be sure that the speakers are rated for use with this amplifier — an overdriven speaker can pose a fire hazard.

Connect the red (+) connection on the speaker to the red (+) binding post on the amplifier, and the black (–) connection on the speaker to the black (–) binding post on the amplifier using cable that is insulated to handle the maximum output of the amplifier. Do not overtighten the binding posts as this may cause damage. The binding post pair accepts a connection from one speaker.

## 2.3 ON/OFF MODES

The STR Power Amplifier can be powered On/Off four ways:

- **Manually** with the front panel power button
- **Automatically** where it turns on when it senses an audio input signal and turns off 20 minutes after the signal stops
- **By another device** using trigger connection
- **Both trigger and signal sensing active at the same time.** This can be useful when using a preamp in Home Theater Bypass mode where the source has a volume control but not its own trigger-out. For example, under normal operation, trigger control would be used between the STR Preamplifier and STR Power Amplifier, but when the STR Preamplifier is in standby with HT Bypass taking effect, audio signal sensing turns the STR Power Amp on/off.

In summary, if both switches are in the Yes position:

- **When the STR Power Amp is off** — audio signal or trigger turns it on.
- **While the STR Power Amp is on** — when the trigger signal transitions from on to off, the amp turns off. If no trigger signal is in use, the amp will turn off 20 minutes after no audio signal activity.

To use trigger control, connect the 3.5mm trigger cable between the amplifier and preamplifier or control component. If the trigger source needs to be used by another device as well, it can be connected using the Through connection. Ensure that the trigger source has enough maximum current output and uses the proper voltage for all connected devices. The trigger jacks on the rear panel can be used with mono as well as stereo 3.5mm cables but your connected device may work with only one type — check its manual.

For convenience, the Device Information view on the front panel display indicates the position of each rear panel switch.

Once all other connections are made, connect the power cord to the amplifier and then the wall outlet. After connecting power, wait at least 5 seconds before pressing the power button.

## 3.1 SETUP

Your STR Power Amplifier provides options for how information is displayed.

To access setup, press VIEW then DIM. To navigate, follow the help line at the bottom of the display:

| Main Menu                           |        |
|-------------------------------------|--------|
| Speaker Impedance for Meter Display | 8Ω     |
| Power Screen Info                   | Power  |
| Wake-Up Brightness                  | Medium |
| Brightness Settings                 |        |
| Temperature Units                   | °C     |
| Restore Default Settings            |        |
| Exit                                |        |
| VIEW = Scroll, DIM = Select         |        |

### Speaker Impedance for Meter Display

Select from 8, 4, or 2 ohms according whichever is closest to your speaker's nominal rating. This setting is only used for the accuracy of the scale on the power meter display and has no effect on power output or overall performance.

### Power Screen Info

By default, the power meter is displayed. To add temperature reading in the lower left and right corners, select Power + Temperature. Note that minor variations between the two channels are normal and can be caused by differences in air circulation as well as musical content. In an over-temperature condition the amplifier will turn itself off for protection, so do not be concerned if you see the internal temperature reading climbing significantly while playing bass-heavy music loudly. It is expected and normal.

### Wake-Up Brightness

When a button is pressed the display and LED can go to a brighter level for 5 seconds for ease of viewing – select Low, Medium, or High. During setup menu mode, the brighter setting is used without time-out. Note that during normal operation the DIM button also cycles through a turned-off display and LED, in which case the wake-up is forced to indicate that the unit is powered on.

### Brightness Settings

Here you can fine-tune the Low, Medium, and High brightness levels which range from 3 to 100.

### Temperature Units

Select between Celsius and Fahrenheit.

### Restore Default Settings

After selecting Yes and confirming, all menu settings will be reset.

## 3.2 FIRMWARE UPDATE

The operational and display characteristics of the STR Power Amplifier are controlled by firmware. For best performance and latest features, ensure that your unit has the latest version installed.

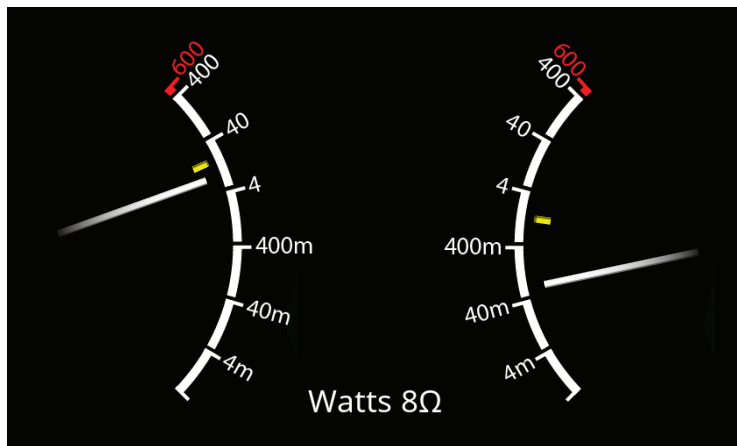
To install:

- Locate the firmware on **[www.anthemAV.com](http://www.anthemAV.com)** and proceed only if your version number is lower, indicating that it is older.
- You will be asked where to save a .zip file — save it to Desktop.
- When the .zip file download is complete, double-click it.
- See the Read Me file for the change history.
- Copy the STRAMP folder to a USB stick - this can be done through dragging.
- Check to ensure that this folder contains two files named “current” and “STRAMP xxxx.upd”.
- With the amplifier powered on, connect the USB stick to the rear panel.
- Follow the instructions on the front panel.
- Installation is complete when the unit powers itself back on displaying the power meter.

## 4.1 OPERATION

During power-on and power-off a mechanical click is produced from the unit — this is normal.

The power meter needle shows the instantaneous peaks in the signal. Since the needle may move too quickly for peaks to be noticed, there are also peak hold indicators which show the peak for a longer period. If the needle goes into the red zone, reduce volume.



To change the brightness of the front panel display and LED indicator, or to turn them off, press DIM to cycle between the four settings.

## 4.2 DEVICE INFORMATION

To view device information and status, press VIEW. Press it again to return to the meter display.

| Device Information |      |       |                |          |
|--------------------|------|-------|----------------|----------|
|                    | Left | Right |                |          |
| Thermal            | OK   | OK    | DC             | OK       |
| Load               | OK   | OK    | Voltage Supply | OK       |
| Amp On             | OK   | OK    | High Frequency | OK       |
| Trigger Mode       |      |       |                | No       |
| Audio Detect Mode  |      |       |                | No       |
| Firmware Version   |      |       |                | 0.1.6357 |
| DIM = Setup        |      |       |                |          |

The rear panel on-mode switch positions are shown for reference along with the firmware version and status of various operating conditions. If a fault is detected, a message will appear automatically at the bottom of the power meter display.

### If “Fault” is shown instead of “OK”:

**Thermal** — Allow the amplifier to cool and ensure that ventilation is adequate. In an over-temperature condition the temperature must drop before output resumes. This could take several minutes depending on ambient temperature.

**Load** — Turn off the amplifier or at least turn off the audio source before proceeding. Note that a load fault on one channel does not affect the other, which will continue to operate.

Inspect the speaker cables. Ensure that the + and – wires are only contacting their respective connectors on the amplifier and speaker, and not anything else including each other, the chassis or any other conductive metal.

Once a load fault is removed, the amplifier will recover automatically. If no fault is found, verify whether the amplifier is the cause of the fault by turning the power off and disconnecting the power cord and speaker cables from the rear panel. Reconnect the power cord only and turn on the amp. If the Load fault indication still appears then the amplifier needs repair – contact your dealer or Anthem Technical Support.

**Amp On** — There are several possibilities depending on whether a Thermal, Load, or Voltage Supply fault is also indicated. In these cases the Amp On fault will clear when the others clear.

If the fault is indicated only for Amp On, turn the power off, disconnect the power cord, and check the channel's fuse which is located on the rear panel. If it is open, replace it according to the type and rating indicated on the rear panel. If it is normal, or if the fault remains after replacing the fuse and turning the amp on again, contact your dealer or Anthem Technical Support.

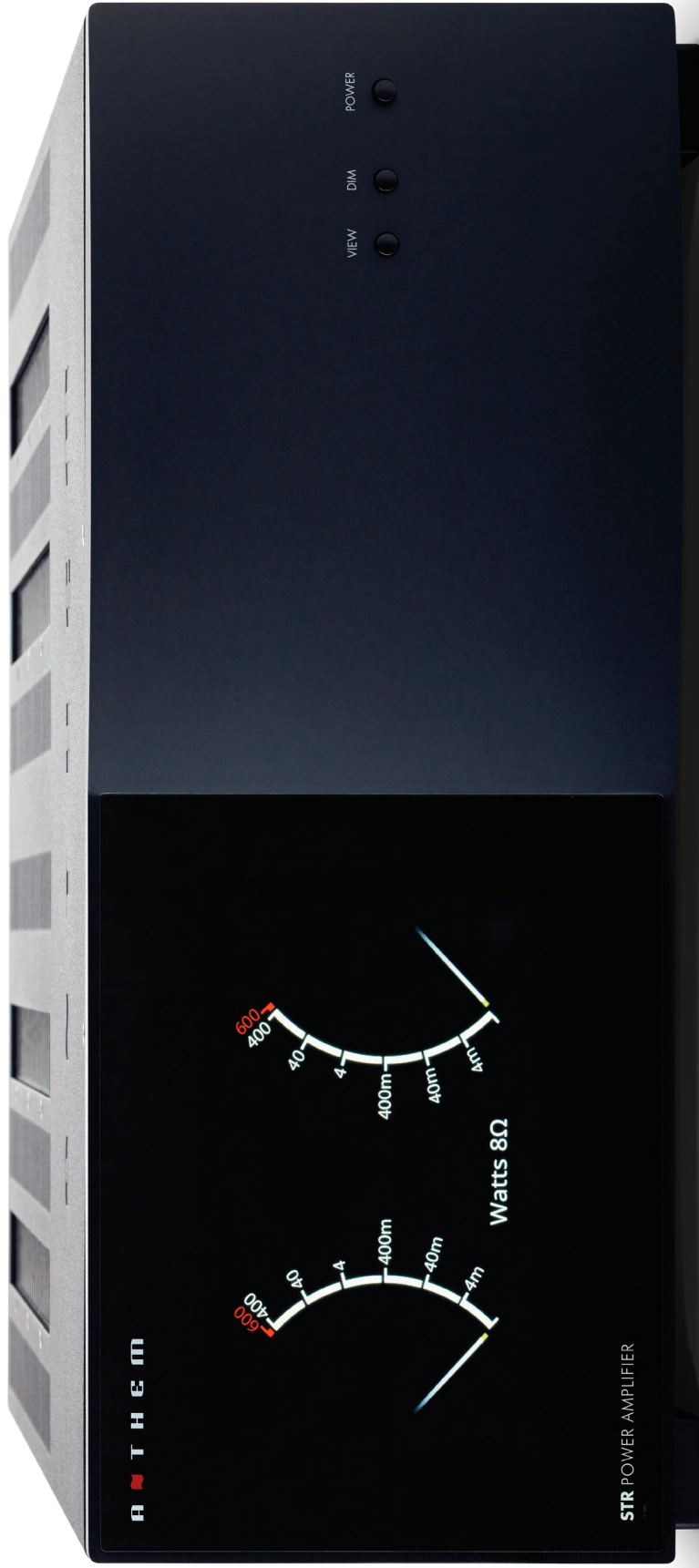
The display remains active if either or both of these fuses are removed or open.

**DC** — A DC voltage is being detected at the output. Verify whether the amplifier is the cause of the fault by turning the power off and disconnecting the power cord and speaker cables from the rear panel. Reconnect the power cord only and turn on the amp. If the DC fault indication remains then the amplifier needs repair – contact your dealer or Anthem Technical Support.

**Voltage Supply** — The line voltage is too low. Check whether it is within normal range at the power outlet, and ensure that the power cord is in good working order.

**High Frequency** — An excessive level of content beyond the audio frequency range is being detected at the output. This would be an extremely unlikely occurrence during normal operation with music playing. Improper and potentially damaging use of ultrasonic signals from test equipment would lead to fault indication. If the High Frequency fault appears, verify whether the amplifier is the cause by turning the power off and disconnecting the power cord, input, and speaker cables from the rear panel. Reconnect the power cord only and turn on the amp. If the fault indication remains then the amplifier needs repair — contact your dealer or Anthem Technical Support.

# THE BIG PICTURE — FRONT PANEL



# THE BIG PICTURE — REAR PANEL



## **CANADA & USA**

The warranty period on new Anthem products is:

5 years: Separate power amplifiers, audio preamplifiers, and integrated amplifiers

3 years: Audio/Video preamplifiers and receivers

Please register your product at [www.anthemAV.com](http://www.anthemAV.com)

The warranty period begins on the date of purchase from Anthem or an Authorized Anthem Dealer. This warranty is offered only to the original owner and is not transferable. Demonstration and display units are covered by the same warranty except that the period commences on the date of dealer invoice, not the purchaser's invoice, and cosmetic flaws are excluded.

If Anthem determines that the product has a defect in materials or manufacturing during the warranty period Anthem will at its option repair, replace or provide the necessary replacement parts without charging for parts or labor. Repaired or replaced equipment or parts supplied under this warranty are covered by the unexpired portion of the warranty.

Warranty is void if the serial number has been removed, altered or defaced, if the product has been operated, installed or handled other than in accordance with the intended application, tampered with, modified, or damaged by accident, while in transport or by failure of electric power, or has been repaired by a non-authorized party. Anthem shall have no obligation to correct any defect that is not reproducible by Anthem. If inspection by Anthem discloses that the repair required is not covered by this warranty, regular repair charges shall apply.

If a problem is discovered in your Anthem product, please contact the Authorized Anthem Dealer from whom you purchased the product. Your dealer will help to determine the cause of the problem and arrange for the appropriate action. Alternatively, follow the procedure below for factory service.

A Return Authorization (RA) number must be obtained from Anthem Technical Support before a product can be shipped to Anthem for any reason. Product shipped to Anthem without its RA Number clearly visible on the outside of the shipping carton will be refused and returned to the sender, freight collect. Product shipped to Anthem must have shipping and insurance prepaid by the sender, be packaged in the original carton and packing material and accompanied by a written description of the defect. Service will not be given under warranty without an accompanying copy of the sales invoice. Product repaired under warranty will be returned with shipping and insurance prepaid by Anthem (within Canada and continental USA only).

## **DISCLAIMER OF LIABILITY**

Under no circumstances shall Anthem, its agents, representatives or employees assume liability or responsibility for injury or damages sustained in the use or operation of Anthem products or for damages to connected products. Some jurisdictions do not allow limitations of incidental or consequential damages so this exclusion may not apply to you.

Anthem reserves the right to make design changes without obligation to revise prior versions. All specifications are subject to change without notice.

This warranty shall be the sole and exclusive remedy to you. No other warranty or condition, statutory or otherwise, expressed or implied, shall be imposed upon Anthem nor shall any representation made by any person, including a representative or agent of Anthem, be effective to extend the warranty coverage provided herein.

On the expiration of the warranty all liability of Anthem in connection with the product shall terminate.

## **INTERNATIONAL**

Terms and conditions are set and maintained by the Authorized Anthem Distributor, not Anthem.

## NOTES