



# AURORA 35 MODEL



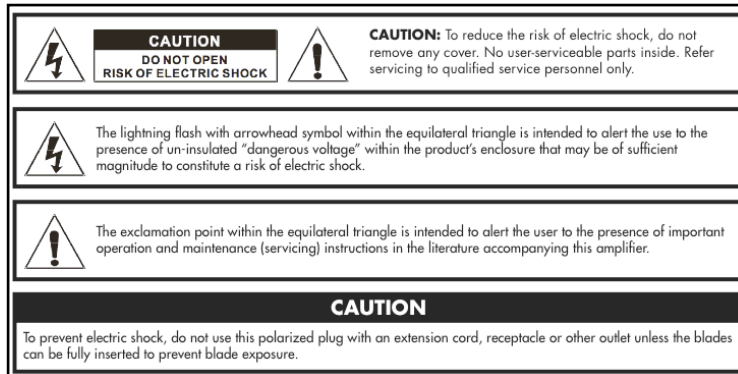
GUITAR AMPLIFIER

USERS GUIDE

**Your 3RD POWER Amplifier is a professional musical instrument amplifier. The information contained herein is current at the time of publication. However, specifications are subject to change without prior notice.**

## **PRECAUTIONS & WARNINGS**

- **READ THESE INSTRUCTIONS.**
- **KEEP THESE INSTRUCTIONS.**
- **HEED ALL WARNINGS.**
- **FOLLOW ALL INSTRUCTIONS.**
- **YOUR AMPLIFIER IS LOUD!  
EXPOSURE TO HIGH SOUND VOLUMES MAY CAUSE PERMANENT HEARING DAMAGE !  
Practice "safe listening."**
- **No user serviceable parts inside. Refer service to qualified personnel. Always unplug AC power before removing chassis.**
- **IF YOU INTEND ON OPERATING THIS EQUIPMENT OUTSIDE OF THE USA: Always insure that unit is wired for proper voltage. Make certain all connections and grounding conforms with local standards. Make certain that you have obtained authorization to operate prior to connecting to power supply.**
- **WARNING: Vacuum tube amplifiers generate heat. To insure proper ventilation always make certain there is at least four inches (100mm) of space behind the rear of the amplifier cabinet.**
- **Keep away from curtains or any flammable objects.**
- **WARNING: Do not block any ventilation openings on the rear or top of the amplifier. Do not impede ventilation by placing objects on top of the amplifier which extend past the rear edge of its cabinet.**
- **WARNING: Do not expose the amplifier to rain, moisture, dripping or splashing water. Do not place objects filled with liquids on or nearby the amplifier.**
- **WARNING: Always make certain proper load is connected before operating the amplifier. Failure to do so could pose a shock hazard and may result in damage to the amplifier.**
- **Do not expose amplifier to direct sunlight or extremely high temperatures.**
- **Always insure that amplifier is properly grounded. Always unplug AC power cord before changing fuse or any tubes. When replacing fuse, use only same type and rating.**
- **Avoid direct contact with heated tubes. Keep amplifier away from children.**
- **Be sure to connect to an AC power supply that meets the power supply specifications listed on the rear of the unit. Remove the power plug from the AC mains socket if the unit is to be stored for an extended period of time. If there is any danger of lightning occurring nearby, remove the power plug from the wall socket in advance.**
- **To avoid damaging your speakers and other music equipment, turn off the power of all related equipment before making the connections.**
- **Do not use excessive force in handling control buttons, switches and controls. Do not use solvents such as benzene or paint thinner to clean the unit. Wipe off the exterior with soft cloth.**
- **WARNING: Cancer and Reproductive Harm <http://www.p65warnings.ca.gov>**



## MOVING FORWARD... IN 3D



Thank you for choosing the AURORA 35 by 3RD POWER as an integral component of your musical journey.

Music is a thrilling blend of tone, attitude and technique. When the right combination occurs, magic happens and it's experienced by everyone.

I've had the extraordinary privilege of performing music for over 30 years on stage and in the studio. As the principal visionary of the company, every product we design reflects my energy, attitude and life experiences.

Each amplifier we create is designed to help you tell your musical story - IN 3D!!!

Rock on!

- Dylana Nova Scott



## **Special Features of the AURORA 35 Amplifier:**

- 6VEL Functionality - Compatible with 6V6 (20W), EL34 (31W), 6L6GC (35W) Power Tubes
- Patented VENUE MODE Attenuator and HybridMASTER for the right volume in any room
- Tube Buffered FX Loop
- Tube-driven Reverb featuring a Large Spring Reverb Tank
- Volume, Treble, Middle and Bass controls
- Bright and Mid Voicing Switches
- Unique Treble Damping circuit
- 8 ohm and two 4 ohm speaker output jacks
- Long-tailed-pair phase inverter for greater headroom
- Power and Standby switches on the front panel
- Choke filtered power supply
- 112 combo or head version available

## **VENUE MODE built-in Attenuator (Macro Level Control)**

The Aurora 35 features our patented built-in attenuator. The new VENUE MODE switching circuitry reconfigures various circuits within the amp to optimal settings for a given performance range to maintain the same tonal response and feel just as if the amp was running at higher signal levels.

## **HybridMASTER (Micro Level Control)**

The Aurora 35 features our patented master volume control. HybridMASTER lets you fine-tune your volume levels to achieve the perfect volume for the room.

## **Tube-driven Reverb On Board**

The Aurora 35 features a full-size spring reverb tank on board. The design features separate Class-A vacuum tube drive and recovery circuits that delivers a vintage sounding reverberation effect with a mix level control located on the front panel.

## **Dimensions & Weights:**

Subject to change anytime. Please measure your amp carefully if a custom case is being made. These measurements do not include handle and rubber feet.

Dimensions (WxHxD): 19.875 x 16 x 9.5 in.

Weight: 35 lbs

## Front Panel:



### Preparing to Operate your AURORA 35 Amplifier

Make certain that all connections are made prior to operating your Amplifier including power cable, speaker connection, instrument cable and instrument connection. Make certain that all tubes are installed.

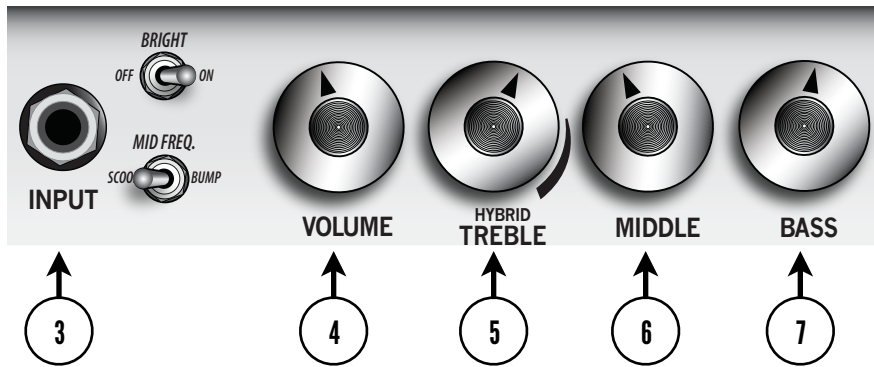
#### Power Switch (1)

The POWER switch, when placed in the UP position, provides AC wall power to the amplifier.

#### Standby Switch (2)

The STANDBY switch, when placed in the DOWN position, puts the amplifier in 'standby mode' allowing the tubes to warm up. When this switch is placed in the UP position, the tube circuitry is fully functional and ready to amplify your guitar signal.

# Front Panel: Input Section



## Input Jacks (3)

The INPUT jack is where you connect instrument level signals. HI and LOW sensitivity inputs are provided for versatility.

## Volume Control (4)

The VOLUME control allows you to adjust the signal level as well as the temperament and overall character of your instrument's sound.

## Treble Control (5)

The TREBLE control allows you to adjust the character of the higher frequency range.

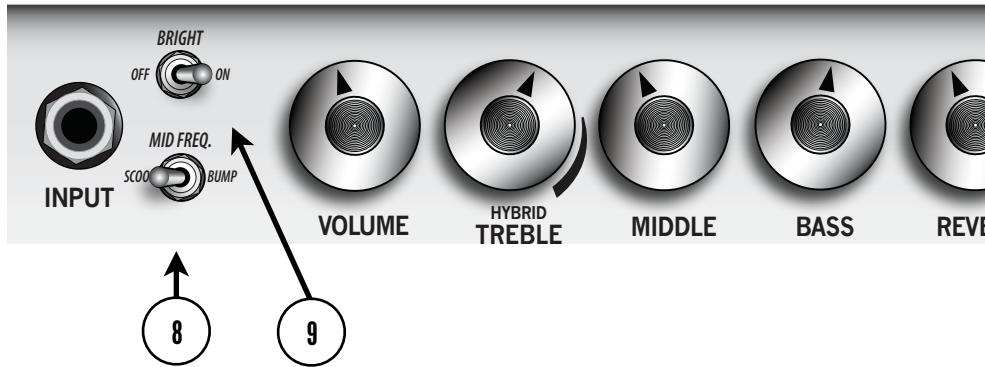
## Middle Control (6)

The MIDDLE control allows you to adjust the emphasis of the mid-range frequencies.

## Bass Control (7)

The BASS control allows you to adjust the depth of your lower frequencies.

# Front Panel: Input Section



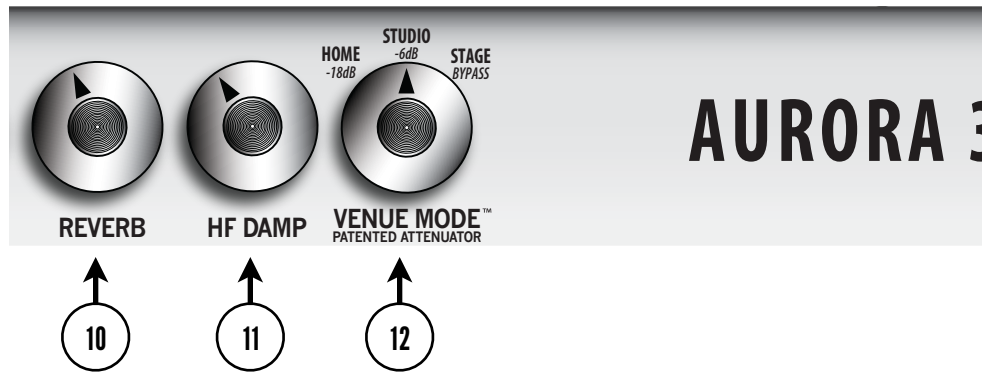
## Bright Switch (9)

The BRIGHT switch allows for additional control of your high frequency content. In the down position, the high frequencies are more evenly dispersed and balanced. In the up position, the BRIGHT switch enhances the high-frequencies for a harmonically rich 'chime'.

## Mid Freq. (9)

The MID FREQ. switch allows for additional control of your midrange frequency content. In the left position, the middle frequencies are scooped with more bloom and depth to the low frequency response. In the right position, the low frequencies are more subdued and focussed while the middle frequency content is enhanced with additional bloom, sustain and compression.

## Front Panel: Master Effects Section



### Reverb Control (10)

Units with the REVERB control have a lush spring reverb effect built into the amplifier. Use this knob to add/blend in the perfect amount of ambience to your sound. The reverb effect in this amplifier features pure Class A vacuum tube drive and recovery circuitry to deliver an authentic, vintage sounding spring reverb effect.

### Special Feature: HF Damp Control (11)

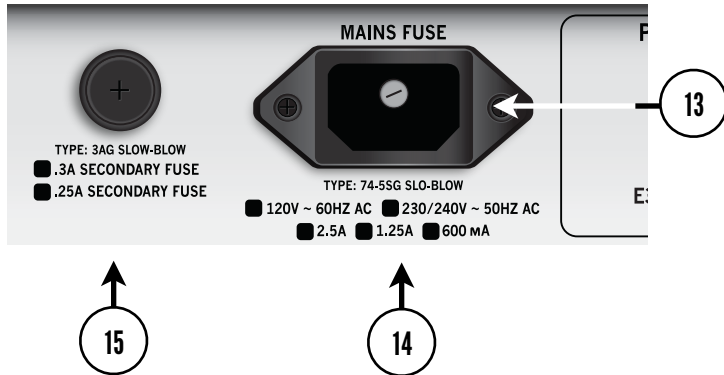
The global HF Damp control allows you to adjust the overall amount of high frequencies in your sound. Think of it like a presence control in reverse. The magic of the HF Damp control is that it reduces the ultra high frequencies in the power amp stage so that the tone and temperament of the preamp section remains intact. This control is a life saver when adjusting your tone for performances in bright rooms or with in-ear monitoring systems.

### Special Feature: VENUE MODE Attenuator (12)

The Aurora 35 features our patented built-in attenuator. The new VENUE MODE switching circuitry reconfigures various circuits within the amp to optimal settings for a given performance range to maintain the same tonal response and feel just as if the amp was running at higher signal levels.



## Back Panel:



### AC Input (13)

The AC INPUT socket (TYPE IEC Grounded) is a required connection for operating the unit at 120V (standard USA household electrical power).

### Mains Fuse (14)

The MAINS FUSE requires a 2.5 AMP slow-blow fuse. This fuse protects your amplifier from voltage peaks from your power outlet.

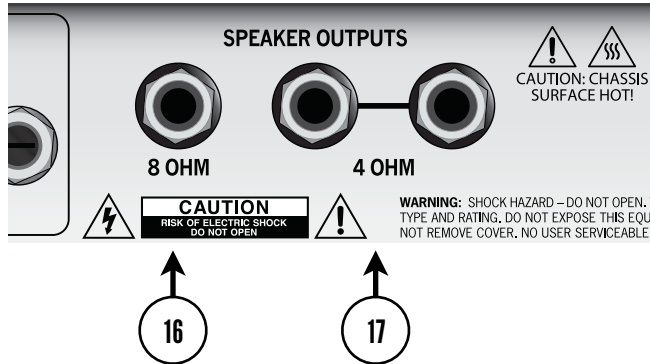
### H.T. Fuse (15)

The H.T. FUSE requires a .25 AMP (250 milliamp) slow-blow fuse. The H.T. FUSE usually blows if your power tubes are bad to protect the circuit from being damaged.

## SAFETY NOTES:

- Always plug your amp into a properly grounded 3 prong AC outlet.
- Never plug your amp into an ungrounded outlet.
- Never remove or break off the 3rd prong safety ground pin from the power cord.
- Never use a damaged or ungrounded power cord.
- Always use the proper value and type fuse according to the rear-panel markings.
- Never attempt to replace the fuse while the amplifier is still plugged into the power source. The fuse should only be replaced when the power cord has been disconnected from its power source.

## Back Panel:



### 8-OHM Speaker Output (16)

The AURORA 35 model has been designed to give you the greatest amount of flexibility when operating your amplifier. Now you can choose the correct speaker output impedance for your situation. Connect the internal speaker to the 8-OHM when operating only the internal speaker.

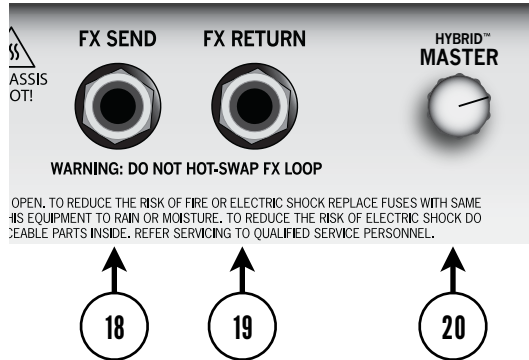
### 4-OHM Speaker Outputs (17)

The 4-OHM SPEAKER OUTPUTS are wired in parallel. They are provided for connecting your amplifier to a single 4-OHM speaker, or two 8-OHM speaker cabinets, or more traditionally, a remote speaker cabinet that is connected simultaneously with the internal speaker.

### SAFETY NOTES:

- Never operate your amplifier without a connected speaker cabinet. This will damage your tubes or transformers - or both.
- Always operate your amplifier with the proper impedance output that matches your speaker cabinets(s).
- In all cases, always use a good quality heavy gauge speaker cable (not a shielded instrument cable) to connect your guitar amplifier to the internal speaker or external speaker cabinet(s).

# Back Panel: Tube Effects Loop



## Tube Effects Loop

Experience STUDIO QUALITY TONE from your pedals or multi-effects units by running them through the loop.

### FX Send Jack (18)

This 1/4" mono Tip/Sleeve jack feeds signal to your effects device.

### FX Return Jack (19)

This 1/4" mono Tip/Sleeve jack accepts the return signal from your effects device.

### Hybrid-MASTER™ Control (20)

The MAIN control is always active and sets the absolute volume ceiling. The foot-switchable HM bypass control will be covered later in the manual. HybridMASTER is a patented by 3rd Power.

## OPERATION NOTES:

- Signal levels at the FX SEND jack are a nominal -10dBV (just under 1V p-p) matching the levels most vintage and modern effect pedals want to see.
- The FX RETURN path brings your signal back into the amplifier with a tremendous amount of headroom (accepting signals as low as -10dBV and as high as +4dBu before the onset of compression).
- It can also be a gig-saver too. If your pedal board ever goes down during a performance, you can plug your guitar straight into the FX RETURN jack and get through a song with quality tone.

## CAUTION:

Avoid "hot swap" any cables connected to the loop while the amplifier is operational. Before breaking any connections, make sure that your amp is on Standby. Failure to do so may result in a loud pop, hum or buzz that could potentially damage your speaker.

## Back Panel:



### To Tank Reverb Connection (21)

This RCA jack connection is provide to send the amplifier signal to the reverb tank.

### From Tank Reverb Connection (22)

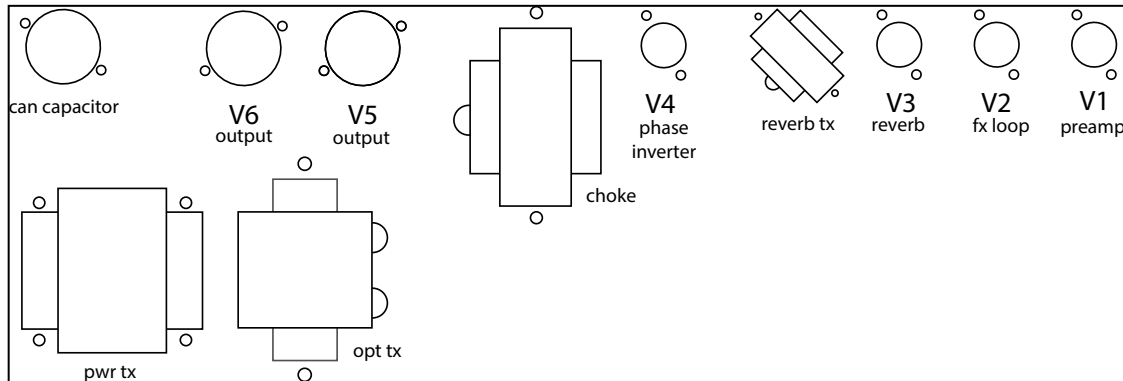
This RCA jack connection is provide to receive the return signal from the reverb tank.

### OPERATION NOTES:

- Please make sure that the reverb send and return are connected with proper orientation and that you are using shielded RCA wire connections.

# Operational Notes:

## TUBE CHART



## Tube Layout and Requirements:

V1: JJ 12AX7 (Preamp)

V2: JJ Mullard Reissue 12AX7 (FX Loop)

V3 and V4: Sovtek 12AX7LPS (Reverb, Phase Inverter)

V5 and V6: JJ 6L6 Output tubes

## Bias Adjustment

Your AURORA 35 Amp comes from the factory biased for JJ 6L6GC tubes. Please read the Power Tube Biasing section when considering to change your tubes.

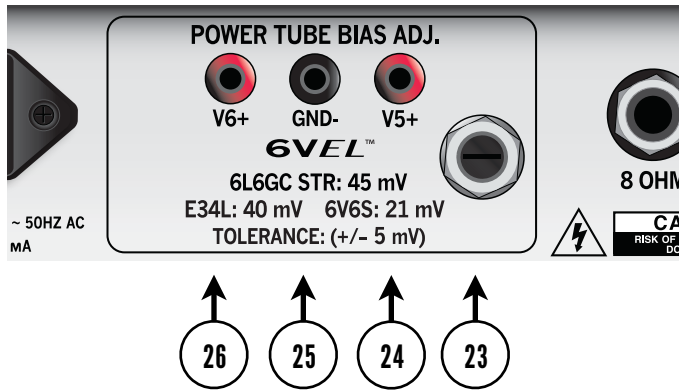
## Tube Replacement

WE RECOMMEND TAKING YOUR AMPLIFIER TO A QUALIFIED TECHNICIAN FOR SERVICING YOUR TUBES. Make certain the amplifier is turned off and has been allowed ample time to cool down. Be very careful when you remove the tubes as they might still be very hot! Do not touch tube sockets with fingers! Even after turning your amp off and unplugging it from the power outlet there could be enough voltage stored in the capacitors to give you a lethal electrical shock.

## WARNING:

- Do not remove the back panel.
- Do not attempt to check or replace tubes yourself. Refer to an authorized service center.
- Never touch the tubes while the amplifier is turned on or has recently been turned ON. You can severely burn your fingers and hands.

# Back Panel: Power Tube Biasing



## CAUTION:

**NEVER touch hot tubes!!! Temperatures can exceed 500°F and cause severe burns!**

## CAUTION:

Read all of the information and procedures in this section before attempting to modify the factory bias settings of your amplifier.

## Power Tube Bias Adjustment Control (23)

Controls the amount of negative DC bias voltage being fed into both output tube input grids. Insert a mini flathead screw driver into control port and rotate counter-clockwise to lower the idle current setting (operate cooler). Rotate clockwise to increase the idle current setting (operate hotter).

## V5+ Voltage Reading Terminal (24)

This terminal is internally connected to a one-ohm resistor on the output tube cathode of V5 (the power tube on the right). When monitoring the current here, you will be reading millivolts on your portable multimeter. You will need to connect your positive (+) test lead (typically red) to this terminal.

## GND- Terminal (25)

This terminal is internally connected to chassis ground. When monitoring the current of either output tube, you will need to connect the negative (typically black) test lead here.

## V6+ Voltage Reading Terminal (26)

This terminal is internally connected to a one-ohm resistor on the output tube cathode of V6 (the power tube on the left). When monitoring the current here, you will be reading millivolts on your portable multimeter. You will need to connect your positive (+) test lead (typically red) to this terminal.

# Power Tube Biasing:

## CAUTION:

**NEVER touch hot tubes!!! Temperatures can exceed 500°F and cause severe burns!**

Biasing your tube amplifier need not be a scary endeavor as the process is pretty straightforward. Heed all warnings, cautions and instructions and you should do fine. If you're unsure or unclear on the process, do not attempt to manipulate the bias from factory settings. If, during the biasing process, you hear a loud "pop" or see a tube "flash" immediately power down the unit and seek a qualified tube amplifier repair/service technician.

## OPERATION NOTES:

- Monitor your output tube bias at idle current. To achieve idle current, your amp must be turned on and operating at idle (no audio signal being fed into the input or the FX loop return). Make sure that your speaker is plugged in.
- Attach the negative test lead from your multimeter to the GND- terminal (black) on the back panel of the amp.
- One at a time, attach the red (positive) test lead from your multimeter to either V5+ or V6+ terminals (red) and note the reading on your meter. Then read the voltage on the other tube. The resulting numbers should be within 6mv of each other. Note that your maximum bias setting must be based off of the higher number.
- To optimize your output tube bias, adjust the control screw by inserting a mini flathead screw driver into control port (see diagram and description for item number (15)). Turn clockwise to bias your tubes 'hotter' (increasing the idle current) and counter-clockwise to bias your tubes 'cooler' (decreasing the idle current).
- Cooler settings (lower idle current) can increase the life of your tubes. Too cool and the sound will tend to be brash and one dimensional.
- Optimal tone and feel can be found when the bias range is around 50% - 70% of your tube's maximum operating range. This will vary between the types of tubes you choose to operate your amp with.

# Power Tube Biasing: Factory Settings

## Factory Settings:

Your amplifier ships with the bias settings optimized for maximum flexibility and safety. During QC and final testing, the bias is set maximum safe power dissipation (approximately 60% of a given tube's performance rating).

Power Tube	~Plate Voltage	~Bias (milliamps)	~Wattage @ Idle/ Dissipation	Safety Range
JJ Electronics 6L6GC	390V	45	35W (60%)	Average (Factory)
JJ Electronics E34L	392V	40	31W (62%)	Average (Factory)
JJ Electronics 6V6GC	403V	21	17W (60%)	Average (Factory)



# LIMITED WARRANTY

Thank you for choosing 3RD POWER Amplification. 3RD POWER takes great pride in producing high-quality tube amplifiers and speaker cabinets. Each product is thoroughly tested prior to shipment.

Your amplifier is warranted to the original purchaser to be free from defects in material and workmanship for a period of 33-1/3 years from the original date of purchase. An original sales receipt will establish coverage under this warranty. This warranty does not cover service or parts to repair damage caused by accident, neglect, abuse, normal wear, disaster, misuse, over-powering, negligence, inadequate packing or shipping procedures and service, repair or modifications to the product which have not been authorized by 3RD POWER. If this product is defective in materials or workmanship as warranted above, your sole remedy shall be repair or replacement as provided below.

**Tubes:** 3RD POWER warrants the original purchaser that the tubes used in the unit will be free from defects in material and workmanship for a period of 90 days from the original purchase date. A dated sales receipt will establish coverage under this warranty. This warranty is in lieu of all other expressed warranties. If tubes fail within the initial 90 day period your sole remedy shall be the replacement of tubes as provided below.

**Return Procedures:** In the unlikely event that a defect should occur, follow the procedure outlined below. Defective products must be shipped, together with proof of purchase, freight pre-paid and insured directly to 3RD POWER. A Return Authorization Number must be obtained prior to shipping the product. Contact 3RD POWER to obtain this RA number. Products must be shipped in their original packaging or equivalent. IN any case, the risk of loss or damage in transit is borne by the purchaser. The RA number must appear in large print directly below the shipping address. Always include a brief description of the defect, along with your correct return address and telephone number.

When calling to inquire about a returned product, always refer to the RA number. If 3RD POWER determines that the unit was defective in materials or workmanship at any time during the warranty period, 3RD POWER has the option of repairing or replacing the product at no additional charge, except as set forth below. All replaced parts become property of 3RD POWER. Products replaced or repaired under this warranty will be returned via ground shipping within the United States, freight prepaid. 3RD POWER is not responsible for costs associated with expedited shipping, either to 3RD POWER or returned of the product to the customer.

**Incidental or Consequential Damage:** In no event will 3RD POWER be liable for any incidental or consequential damages arising out of the use or inability to use any 3RD POWER product, even if a 3RD POWER dealer has been advised of the possibility of such damages or any other claim by any other party. Some states do not allow the exclusion or limitation of consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

**For your protection:** Please complete and mail the Purchase Information Card within (10) ten days of the date of purchase so that we may contact you directly in the event a safety notification issued in the accordance with the 1972 Consumer Product Safety Act.

**Customer Support:** Our dedicated staff is ready to assist you should you have any questions with regard to your product. Please call: (615) 945-3393 (9:00 AM to 5:00 PM Monday through Friday, Central Standard Time).





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