

# INTEGRATED HYBRID TUBE AMPLIFIER

Model

# VT-40.2

HYBRID TUBE AMPLIFIER



**EMP**  
Tek

## OWNER'S MANUAL

## Safety Instructions



The lightning flash with the arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product enclosure that may be of sufficient magnitude to constitute a risk of 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 product.

When using your amplifier basic safety precautions should always be followed to reduce the risk of fire, electric shock, and injury.

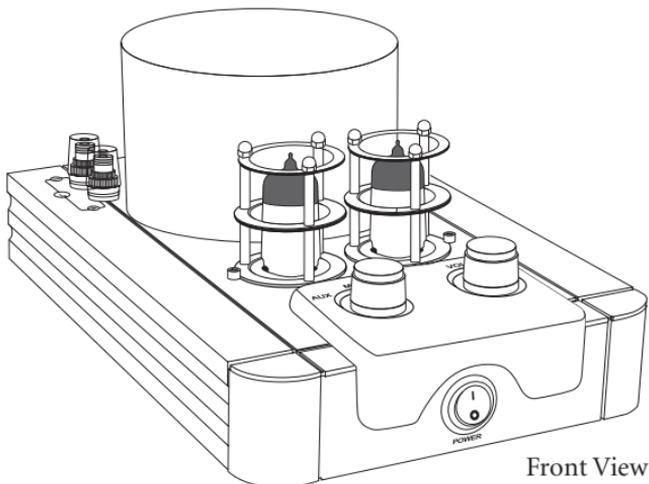
1. Do not open the amplifier, attempt any modifications or repairs. There are extremely high voltages present and any servicing must be referred to EMP Tek or an authorized qualified technician.
2. Opening the amplifier will void the warranty.
3. To prevent shock or fire hazard, never permit moisture or any liquid to get into the amplifier. If an accidental spill occurs, immediately shut off the power, unplug its AC power cord and seek a qualified technician for repair.
4. To reduce the risk of electric shock, do not remove the cover (or back). No user serviceable parts inside of amplifier.
5. All safety instructions should be read before this amplifier is operated. Please retain these safety instructions for future reference. All warnings on the amplifier and in this manual should be adhered to.
6. The amplifier should be placed so its location or position provides proper ventilation on all sides of the amplifier on a solid surface.
6. The amplifier should only be connected to a power supply type described in this manual or as marked on the amplifier.
7. Power supply cords should be routed so they will not be pinched or walked on.
8. The amplifier should never be exposed to any liquids of any kind or objects filled with liquids (vases or plants).

## Introduction

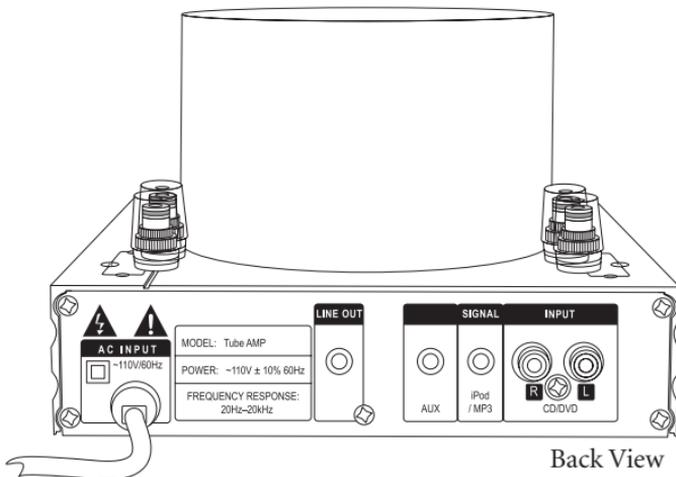
Congratulations on your purchase of the EMP Tek VT-40.2 integrated hybrid tube amplifier! Your amplifier is the result of many years of research and development.

This manual contains setup recommendations and specifications for the amplifier. It is highly recommended you thoroughly read through the material contained in this manual before connecting your amplifier. This will ensure you have an understanding of how to properly setup, operate and maintain your amplifier for optimum performance and maximum enjoyment.

# VT-40.2 Integrated Tube Amplifier



Front View



Back View

## Maintenance and Cleaning

To maintain the amplifier's appearance, it is recommended use of a dry or slightly-damp soft cloth to keep the exterior of the amplifier free from dust, lint or dirt. When cleaning the amplifier, make sure the amplifier is turned off.

**WARNING:** DO NOT apply a damp cloth to the vacuum tubes when they are warm or hot. Damage to the vacuum tubes will result.

## Vacuum Tubes

Most of the maintenance on your amplifier will involve the vacuum tubes. The tubes used in the VT40.2 are type 6N3. The tubes have a lifespan up to approximately 5 years of outstanding performance depending on usage. Tube wear is gradual and usually goes unnoticed until new replacements are installed. Worn tubes tend to sound flat with reduced punch, clarity and high end. Symptoms of failing vacuum tubes may include:

- Any intermittent noise
- Excessive hum
- Excessive white noise
- Inability to get a clean sound
- Loss of power

If the outer plates of a tube begin to glow brightly, this tube has shorted. Turn off the amplifier and replace the tubes, preferably with a matched set. It is okay in an emergency to replace only one tube, but both tubes should be replaced with a matched set. These tubes have been tested and matched according to their power and performance characteristics. A matched set of power tubes will significantly lower audible hum and increase power output and clarity in sound.

### Replace Tubes By:

1. Turn off power at switch.
2. Unplug amplifier from the power source.
3. Using a glove or clean dry cloth, carefully remove the tubes from their sockets by pulling them straight up.
4. Insert a new set of tubes using a glove or dry cloth.

**NOTE:** New tubes can be purchased from EMP Tek at [www.emptek.com](http://www.emptek.com)

## Features

- Classic tube pre-amplifier design principals reduce odd-order harmonic distortion.
- Tubes provide a “sweet” pure and accurate sound.
- Connections for Subwoofer, iPod/MP3, CD/DVD and an additional Auxiliary component.
- 40 Watts per channel output easily drives most speakers.
- High quality machined aluminum case looks beautiful and aids in heat dissipation.
- Blue highlighted vacuum tubes in stylish protective cages for added visual elegance.
- High quality binding posts for secure connections of up to 12-gauge wire.
- Hand-painted and polished beautiful front accent panel.
- Power supply housing machined of solid aluminum, black anodized.
- Stable rubber feet add style and vibration damping.

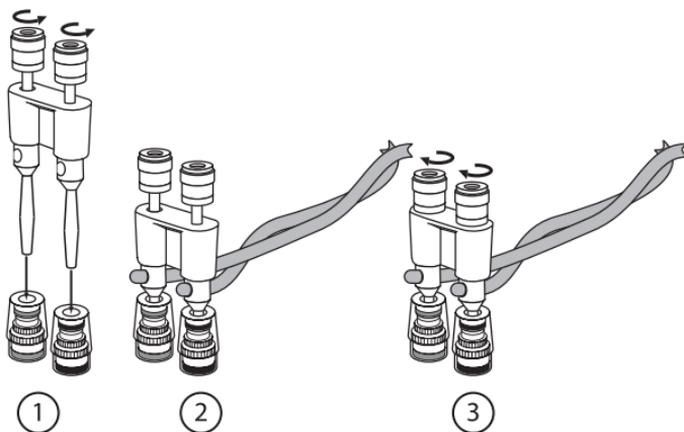
## Amplifier Location

Choose a location where air can circulate freely around the amplifier. Do not cover the amplifier.

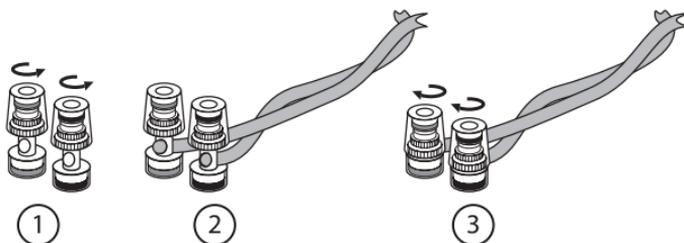
## Attaching Speaker Wires

When using a banana jack to attach speaker wires to the binding post terminals, loosen the top as shown in step 1, and then insert the speaker wire into the banana jack as shown in step 2. Next insert the banana jack into the binding posts on the amplifier into the hole provided in the top of the terminal, and then tighten down the screw as shown in step 3 until secure. Repeat for the other speaker wire(s) as necessary.

If not using a banana jack, simply loosen the binding nut to allow the hole in the side of the terminal to become exposed as shown in step 1. Strip  $\frac{1}{4}$ -inch of the insulation from the end of the speaker wire and insert the exposed wire end into the now exposed hole in the side of the terminal as shown in step 2. Tighten the binding nut by turning the nut clockwise until the speaker wire is secured as shown in step 3. Repeat for the other speaker wire(s) as necessary.



Using a Banana Jack



Without a Banana Jack

# Using the Amplifier

## FRONT AND TOP PANELS

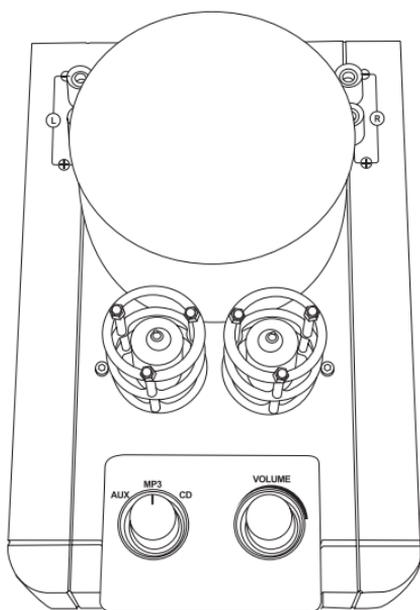
**Power:** The power on/off switch is located on the front face of the amplifier.

**Volume:** The volume can be adjusted using the knob on the top of the amplifier. Make sure the volume is set at a low setting when initially setting up the amplifier.

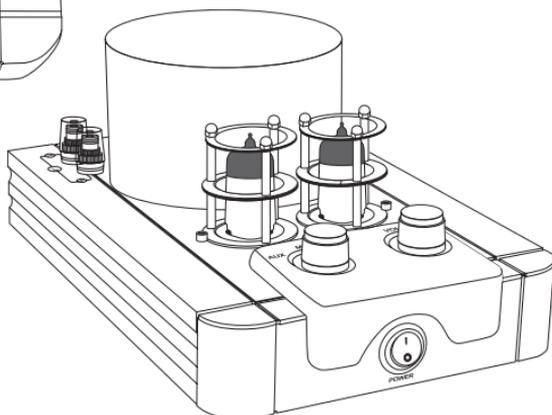
**Mode:** Using the Mode knob on the top of the amplifier you can select from either AUX, MP3 or CD/DVD inputs.

**Left Speaker Connection:** Connection for the left speaker

**Right Speaker Connection:** Connection for the right speaker



TOP VIEW



FRONT SIDE VIEW

## Using the Amplifier (continued)

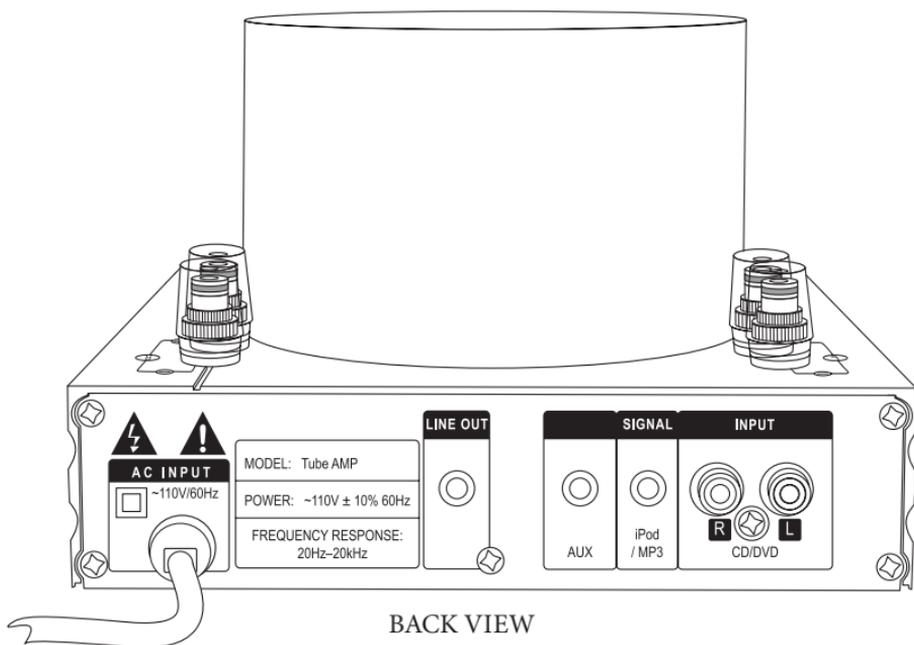
### BACK PANEL

**Variable Line Out:** Headphones or to another amplifier or powered subwoofer

**AUX:** Stereo input for any device with line out

**iPod/MP3:** Stereo input for an iPod or MP3 player

**Input:** Stereo input for a CD/DVD or any device with a low-level stereo line out



# Specifications

Model	VT-40.2
<b>Amplifier Type:</b>	Integrated Tube Hybrid
<b>AC Input:</b>	110V±10%/60Hz
<b>Power Output:</b>	40 Watts Per Channel @ 8 Ohms 60 Watts Per Channel @ 4 Ohms
<b>Frequency Response:</b>	20Hz–20kHz
<b>Distortion (THD):</b>	<2%
<b>S/N Ratio</b>	>80dB
<b>Pass Band:</b>	10Hz–100kHz
<b>Signal Input (Analog):</b>	– AUX (1/8-inch jack) – iPod*/MP3 (1/8-inch jack) – R/L (CD/DVD) (RCA jacks)
<b>Line Level Input Sensitivity:</b>	450mV
<b>Dimensions:</b>	6-5/8" W x 4-1/2" H x 10-1/4" D (168mm W x 114mm H x 260mm D)
<b>Weight:</b>	8 lbs. (3.63 Kg)
<b>Warranty:</b>	1 Year

\*iPod is a registered trademark of Apple Inc.

## Troubleshooting

The following chart should help isolate some common problems you may encounter with your amplifier. Some are obvious problems you can remedy, but remember, **THERE ARE NO USER SERVICEABLE PARTS INSIDE THE AMPLIFIER.** If you cannot identify the cause of the problem using the chart, and are in need of repair, return the amplifier to an EMP Tek authorized service facility.

Situation	Probable Cause	Solution
<b>Amplifier does not come on when power switch is on.</b>	Power is not connected.	Ensure power cord is plugged in.
	No source voltage.	Verify power source with something you know works.
<b>No sound coming from speakers, no audible hum from amplifier.</b>	Speaker output wire not connected.	Check all input and output connections are secure.
	Volume control is turned to the lowest setting.	Increase volume control.
		Ensure the tubes are properly seated in their sockets.
		Ensure power cord is seated securely.
	Blown fuse	Contact Emp Tek customer support ( <a href="http://www.support@emptek.com">www.support@emptek.com</a> ) for instructions on how to replace the fuse.
<b>Amplifier channels shut down while the amplifier is powered on.</b>	Amplifier is overheating, protection circuit has engaged to avoid damage to the amplifier.	Turn amplifier off for at least 20 minutes, circuit will reset after cool down.
<b>Distorted sound.</b>	Worn tubes	Replace tubes (6N3)

## Warranty

Engineered Music Products "EMP Tek" warrants the VT-40.2 integrated tube amplifier (the "Product") to be free from original manufacturing defects in materials and workmanship for one (1) year from date of purchase from an authorized EMP Tek reseller. This warranty extends only to the original consumer purchaser. EMP Tek does not warrant goods used in industrial applications. This warranty does not cover any expenses incurred in any removal or re-installation of the product.

If the product should prove defective within the warranty period, contact EMP Tek for a return authorization number prior to returning the product by prepaid delivery to EMP Tek, along with the original sales invoice or other proof of purchase, which establishes eligibility for warranty service. EMP Tek will, at its option, replace or repair the product free of charge and return the product by prepaid delivery. This warranty does not apply to any product which has been damaged, misused, altered, neglected or repaired by anyone other than an EMP Tek authorized service facility.

Any implied warranties including fitness for use and merchantability are limited in duration to the period of the express warranties set forth above, and no person is authorized to assume for EMP Tek any other liability in connection with the sale of the product. EMP Tek expressly disclaims liability for any incidental and consequential damages caused by the product or the result of failure of this product. The remedies provided under this warranty are exclusive and in lieu of all others.

This warranty gives specific legal rights. In addition, there may be other legal rights arising from the sale of the product, which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply in some areas.

Extended warranty available at [www.emptek.com/extendwarranty.php](http://www.emptek.com/extendwarranty.php)





382 Marshall Way, Layton, Utah • USA • 84041  
Toll Free: (801) 991-1308 • Fax: (801) 543-3300  
[www.emptek.com](http://www.emptek.com)