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Compact Stereo Hybrid 15W Tube Amp with Bluetooth®

P/N **16152**

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- Specifications described herein are subject to change without prior notification.
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User's Manual

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REGULATORY COMPLIANCE

Notice for FCC

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Modifying the equipment without Monoprice's authorization may result in the equipment no longer complying with FCC requirements for Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

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 receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Radio Notice for FCC

Caution

This FCC Part 15 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by Monoprice, including the use of non-approved antennas, could void the user's authority to operate this device.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice for Industry Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Radio Notice for Industry Canada

Caution

This IC RSS-210 radio device operates on a non-interference basis with other devices operating at this frequency. Any changes or modification to said product not expressly approved by Monoprice, including the use of non-approved antennas, could void the user's authority to operate this device.

This device complies with IC RSS-210. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

SPECIFICATIONS

Frequency Response	20Hz ~ 20kHz ±2dB
Total Harmonic Distortion (@1kHz)	≤ 0.1%
RMS Power Output (4-ohm load @ 1kHz)	15 watts/channel
Output Impedance Range	4 ~ 16 ohms
Input Impedance	47 kilohms
Input Sensitivity	280mV
Signal-to-Noise Ratio	≥ 75dB
Input Voltages	100 ~ 120 VAC, 60Hz 200 ~ 230 VAC, 50Hz
Fuse Ratings	F1A /125V
Tube Type	2x 6N2
Bluetooth® Version	4.0 with aptX® audio codec
Bluetooth Range	Up to 32 feet (10 meters)
Dimensions	7.6" x 5.0" x 9.8" (192 x 126 x 248 mm)
Weight	6.61 lbs (3.0 kg)

The Bluetooth® word mark and logos are registered trademarks of Bluetooth SIG, Inc.

CVC®, the aptX® mark, and the aptX logo are trademarks of CSR plc or one of its group companies and may be registered in one or more jurisdictions.

SAFETY WARNINGS and GUIDELINES

- This device is intended for indoor use only.
- Do not expose this device to water or moisture of any kind. Do not place drinks or other containers with moisture on or near the device. If moisture does get in or on the device, immediately unplug it from the power outlet and allow it to fully dry before reapplying power.
- If operating this device in a humid environment, ensure that no condensation occurs. Condensation could cause a short circuit, which could cause fire or severe electric shock.
- Use only in a well-ventilated area. Do not use in close, confined spaces.
- Do not expose this device to excessively high temperatures. Do not place it in, on, or near heat sources, such as a fireplace, stove, radiator, etc. Do not leave it in direct sunlight.
- Do not place or install this device in an area where it can be exposed to excessive amounts of dust, humidity, oil, smoke, or combustible vapors.
- Do not expose this device to excessive vibration.
- Do not subject this device to extreme force, shock, or fluctuations in temperature or humidity.
- Disconnect the unit from the power source when replacing the fuse. Replace the fuse only with the same type or the type listed in the Specifications section of this manual.
- Unplug this device from the power source if it will go unused for a long period of time.
- Prior to operation, check the unit and power cord for physical damage. Do not use if physical damage has occurred.
- Before plugging the unit into a power outlet, ensure that the outlet provides the same type and level of power required by the device, as listed in the Specifications section of this manual.
- This device uses a grounded power cord and requires a ground connection for safe operation. Ensure that the power source has a proper ground connection. Do not modify the plug or use a "cheater" plug to bypass the ground connection.
- Do not allow the power cord to be crimped, pinched, stepped on, etc. Ensure that the power cord does not present a tripping hazard.
- Never unplug the unit by pulling on the power cord. Always grasp the connector head.
- Ensure that power is turned off and disconnected before making any electrical connections, including audio level connections.
- Unplug the device from the power source before performing any cleaning.
- Clean only using a soft, dry cloth. Do not use chemical cleaners, solvents, or detergents. For stubborn deposits, moisten the cloth with warm water.
- Keep out of reach of children.
- Keep away from corrosive materials.
- Do not touch the tubes while the amplifier is powered on. After removing power from the amplifier, wait until the tubes have had a chance to cool down before touching them.
- After receiving the product and before applying power, ensure that the tubes are properly seated in their sockets. The tubes may come loose during shipping and may need to be reseated to ensure a good electrical connection.
- Wait at least 10 seconds after powering on the amplifier to allow it to properly warm up before applying a music signal.

INTRODUCTION

Thank you for purchasing this amplifier from Monoprice!

This amplifier utilizes a hybrid design, which combines a tube preamplifier section with a solid state class AB power amplifier stage. The advantage of listening to a sound system utilizing tubes is a warmth and depth of sound not possible with systems that are only digital or analog solid state. There are however some things you should know if you are a first time user of classic tube amp designs.

1. Transformer hum: The nature of tubes and transformers can produce a natural hum emanating from the transformer. This hum should not be audible through the speakers, but can be concerning for first time users. As long as moderate listening levels mask the hum, there is nothing wrong with your Tube Amplifier.

2. Tubes generate heat: Be sure to always keep items clear of this tube amp. When the amp is used for prolonged periods of time, the tubes will generate a considerable amount of heat. Let the amp cool off before moving it after use. The heated elements of the tube are very fragile and get damaged easily if shaken after use.

This amp includes a line level stereo RCA input and a Bluetooth® 4.0 radio with the aptX® audio codec for wireless connections with mobile devices.

FEATURES

- Hybrid design combines the tube sound with the power of solid state amplifiers
- Tube preamplifier stage
- Solid state class AB power amplifier stage
- Built-in Bluetooth 4.0 radio with aptX audio codec
- One line-level stereo RCA input
- 5-way binding posts for speaker level outputs
- Classic, lighted analog VU meter design

CUSTOMER SERVICE

The Monoprice Customer Service department is dedicated to ensuring that your ordering, purchasing, and delivery experience is second to none. If you have any problem with your order, please give us an opportunity to make it right. You can contact a Monoprice Customer Service representative through the Live Chat link on our website **www.monoprice.com** during normal business hours (Mon-Fri: 5am-7pm PT, Sat-Sun: 9am-6pm PT) or via email at **support@monoprice.com**

PACKAGE CONTENTS

Please take an inventory of the package contents to ensure you have all the items listed below. If anything is missing or damaged, please contact Monoprice Customer Service for a replacement.

- 1x Hybrid class AB integrated amplifier
- 1x Bluetooth antenna
- 2x 6N2 vacuum tubes
- 1x AC power cord (IEC 60320 C13 to NEMA 5-15)
- 1x User's manual

Source and Power Connections

9. Plug the Bluetooth® antenna into the **BT ANT** connector on the rear panel. Tighten the thumbscrew to secure it in place, then position the antenna vertically.
10. Plug one end of a stereo RCA cable (not included) into the **CD** inputs on the rear panel, taking care to plug the right channel plug (red) into the red RCA jack and the left channel plug (usually black or white) into the white RCA jack.
11. Plug the other end of the RCA cable into the audio output jacks on your CD player (or other source device), taking care to plug the right channel plug (red) into the red RCA jack and the left channel plug (usually black or white) into the white RCA jack.
12. Plug the included AC power cord into the **AC IN** socket on the rear panel. Plug the other end into a nearby AC power outlet.

Bluetooth Connection

This amplifier features a built-in Bluetooth radio with a range of up to 32 feet (10 meters) for streaming audio from your mobile device. It can remember up to 8 pairings and will automatically drop old connections when pairing with a full list. Perform the following steps to connect your mobile device to the amplifier's Bluetooth radio.

13. Depress the power button on the front panel to turn the amplifier ON.
14. Flip the Source Selection Switch to the **BT** position.
15. Open the Bluetooth settings on your mobile device and initiate a scan for nearby Bluetooth devices.
16. Locate and select the **MP TUBE** entry. If prompted for a passcode, enter four zeroes (0000).

Congratulations! Your amplifier is now properly setup and ready for use!

MAINTENANCE

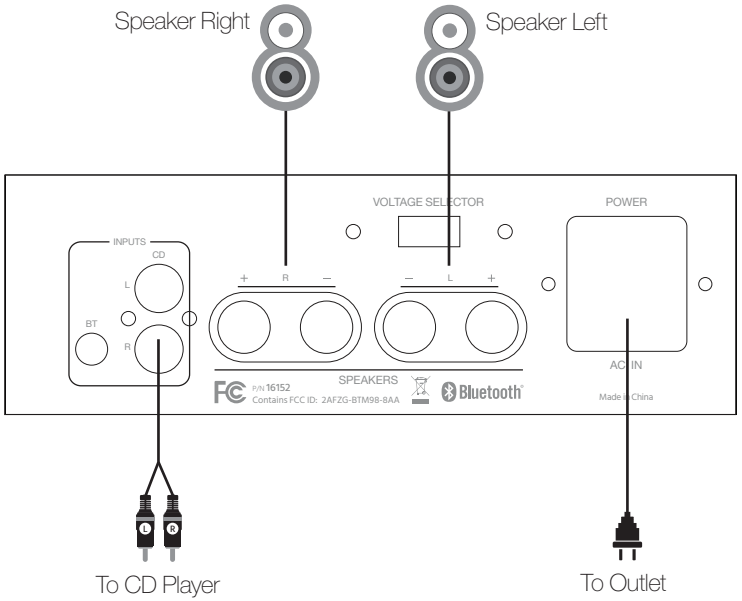
Note that after years of use, vacuum tubes will not perform as well as when they are new. This may result in audible distortion at moderate volume levels. If this occurs, you should replace the vacuum tubes with new tubes of the same type. Since these are not power tubes and no biasing is required, you can safely replace them yourself.

TECHNICAL SUPPORT

Monoprice is pleased to provide free, live, online technical support to assist you with any questions you may have about installation, setup, troubleshooting, or product recommendations. If you ever need assistance with your new product, please come online to talk to one of our friendly and knowledgeable Tech Support Associates. Technical support is available through the online chat button on our website **www.monoprice.com** during regular business hours, 7 days a week. You can also get assistance through email by sending a message to **tech@monoprice.com**

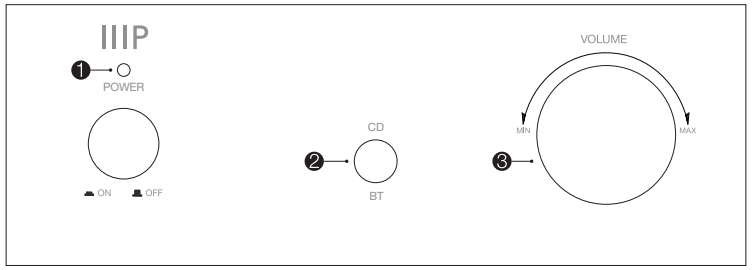
Speaker Connections

5. Measure the distance between the amplifier and the speakers, taking into account the need to route the wire around furniture or other obstacles. Cut two lengths of 2-conductor speaker wire to the measured length. It is best to cut the wires longer than needed as any excess can be trimmed later.
6. Connect one end of one of the speaker wires to the left-channel Speaker Output five-way binding posts on the rear panel, taking care to connect the negative side of the wire to the negative (black) binding post and the positive side of the wire to the positive (red) binding post. The easiest and safest method of connecting the wires to the binding posts is to use banana plugs. If using bare speaker wire, carefully inspect each connection to ensure that there are no stray wire strands.
7. Connect the other end of this speaker wire to the inputs on your left-channel speaker, taking care to match the polarity. If using bare speaker wire, carefully inspect each connection to ensure that there are no stray wire strands.
8. Repeat steps 6-7 for the right channel speaker wire.



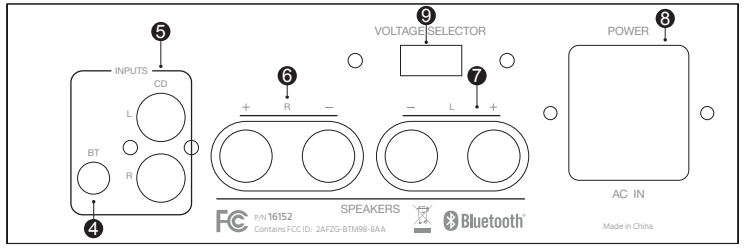
CONTROLS and CONNECTION

Front Panel



1. POWER: Toggles power on/off. When power is on, the LED above the power button is illuminated.
2. CD/BT: Selects which of the two inputs will be used.
3. VOLUME: Adjusts the output volume level.

Rear Panel



4. BT ANT: SMA connector for attaching the included Bluetooth® Antenna.
5. CD: Line level left and right RCA jacks for input from a CD player (or other audio source).
6. R: Two 5-way binding posts for connecting the positive and negative leads to the right channel speaker.
7. L: Two 5-way binding posts for connecting the positive and negative leads to the left channel speaker.
8. AC IN: Combination power input socket and fuse holder. Plug the included AC power cord into the IEC 60320 C14 panel connector.
9. VOLTAGE SELLECTOR: Use this switch to change the input voltage between 100 ~ 120 VAC, 60Hz and 200 ~ 230 VAC, 50Hz.

CABLE PREPARATION

You will need several types of cables for this installation. None of the cables or connectors mentioned in this section are included with the system.

Important Safety Note! *If you plan on running any of these cables through the walls, through a connecting floor, or inside an air duct, they should be rated for In-Wall, Riser (between floors), or Plenum (air duct) use, respectively. Using unrated or improperly rated cables could accelerate the spread of any fire and could nullify insurance claims.*

Speaker Wires

You will need speaker wire to connect each speaker to the amplifier. The size (AWG) of wire you choose depends on the distance from the amplifier to the speaker(s), the speaker impedance, and the physical limits of the terminals at each end.

Other than saving a few pennies of cost or grams of weight per foot, there is no reason to use anything other than the thickest wire possible. This amplifier can accept up to 7 AWG wire, so it is recommended to use 10 or 12 AWG speaker wire. If the speaker terminals cannot accept 10 or 12 AWG wire, you can use a banana or pin plugs to connect the wire to the speaker terminals.

Whichever speaker wire you get, make sure that it has marks to identify one conductor from another. Most speaker wire uses a colored stripe to identify one of the conductors. The identified conductor is usually used for the positive (+/red) connection and the other for the negative (-/black) side.

Note*: When cutting speaker wire, ensure that the length of each stereo pair is the same. This ensures that the overall impedance of each channel is identical. If there is any excess speaker wire, it should not be coiled, as it could create an antenna to receive stray radio signals. Instead, snake the excess wire back and forth.*

RCA Cables

You will need stereo RCA cables to connect the CD player or other source device to the amplifier's source inputs. In most cases these will be relatively short connections, so ordinary RCA cables are sufficient. However, if the distance is longer than about 15-20 feet (4.5-6 meters), it is recommended to use RCA cables manufactured using shielded RG6 or RG59 cable. RG59 can connect to distances up to about 131 feet (40 meters), while RG6 can make reliable connections to distances up to about 328 feet (100 meters).

SETUP

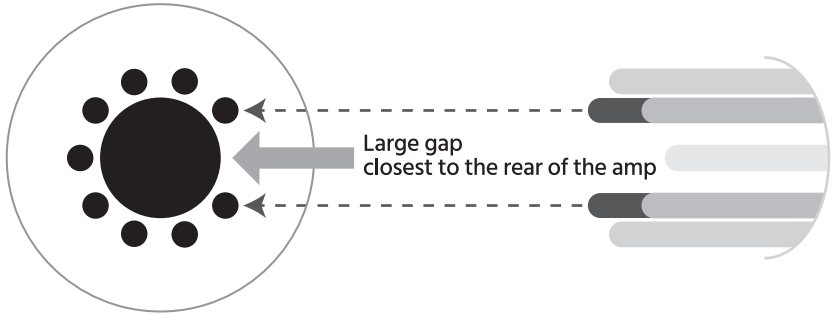
Note*: Before making any connections, ensure that all equipment is powered off and unplugged to prevent the possibility of personal injury or equipment damage due to electrical shock.*

Tubes

To prevent damage during shipping, your Compact Stereo Hybrid Tube Amp ships with the tubes uninstalled. Perform the following steps to install the tubes.

1. Remove one of the 6N2 tubes from its box.

   Use gloves when handling the vacuum tubes to prevent oil residue from your fingers accumulating on the glass, thereby preventing premature tube failure.



2. Position the tube inside one of the tube cages. Align the pins to match the pattern in the tube socket, with the large gap closest to the rear of the amp. Gently push the tube into the socket. You may need to gently wiggle or rock the tube to help overcome resistance from friction. Ensure that the tube is firmly seated in the socket.
3. Using the same procedure, insert the second 6N2 tube into the other tube socket. Ensure they are fully seated.
4. Position the amplifier in a location in which it can get adequate airflow around the case and ventilation holes. Do not connect the power cord yet.