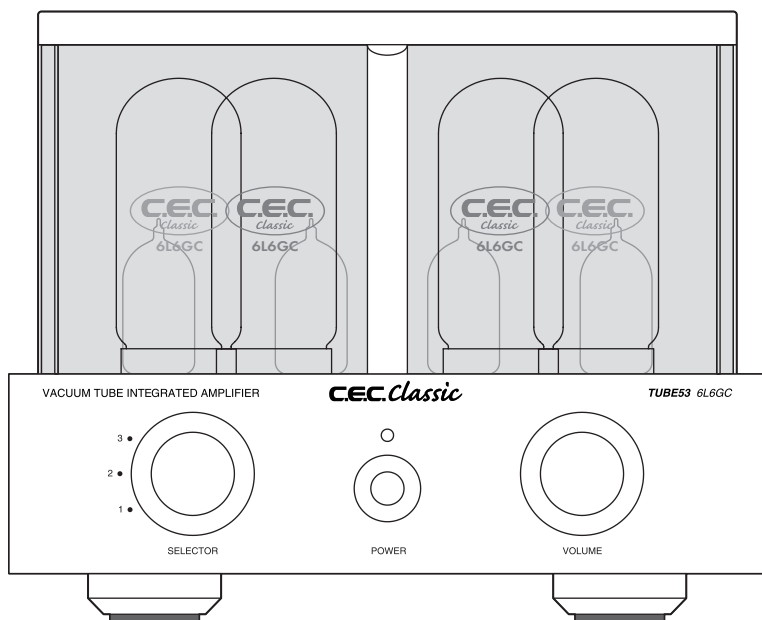


Vacuum Tube Integrated Amplifier

TUBE53

Owner's Manual



C.E.C.

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Introduction

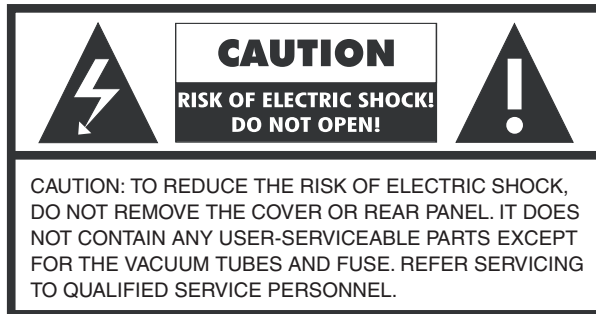
Thank you for purchasing the TUBE53.

Please refer to this Owner's Manual to use your TUBE53 safely, and in the best possible way. It is recommended that you keep the carton box and the packing material available for future transportation needs.

Features:

- Though it is a vacuum tube amplifier, the TUBE53 achieves a 20W + 20W (8Ω) output and high response, that can drive the analog signal with ease from even digital media players.
- The TUBE53 uses two 6L6GC tubes per channel in a push-pull configuration, and low-distortion Mullard type phase inverting circuitry design.
- The TUBE53 achieves hi-fidelity music reproduction with minimum reliance on negative feedback circuitry.
- The output transformer, which uses orient core materials, achieves a straight sound quality with minimum phase misalignment. The TUBE53 uses a troidal transformer, featuring superior rise characteristics, for its power supply. Noise is thoroughly eliminated by solidifying the transformer with resin and covering it with a steel casing.
- The TUBE53 uses selected high quality components to draw out the circuitry's full potential, such as low-distortion volume control, electrolytic capacitors and resistors with high information processing ability and low noise.

Important Safety Instructions



The lightning flash with an arrowhead symbol, within an equilateral triangle, is intended to alert the user to potential electric shock hazards within the product's casing.



The exclamation point within an equilateral triangle is intended to notify the user to the presence of important operating and maintenance (servicing) instructions in the accompanying documentation.

WARNING : TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use the TUBE53 near water.
- 6) Clean only with a dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install the TUBE53 near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

- 9) (For USA, Canada:) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades, with one blade 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. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet. (For European Countries:) Do not defeat the safety purpose of the grounding-type plug. This plug has two poles and a third grounding hole. The third hole is provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the TUBE53's power cord from being walked on or pinched, especially around the plugs, convenience receptacles, and where it exits the TUBE53's casing.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Only use the TUBE53 with a cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the unit. If using a cart, exercise caution when moving the cart/unit combination to avoid injury from it tipping over.
- 13) Unplug the TUBE53 during lightning storms or when leaving it unused for extended periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the TUBE53 itself, its power-supply cord, or plug has been damaged in any way, when liquids have been spilled onto the TUBE53, when foreign objects have fallen into the TUBE53, when the TUBE53 has been exposed to rain or moisture, when the TUBE53 does not operate normally, or when the TUBE53 has been dropped.



- Do not expose the TUBE53 to drips or splashes.
- Do not place any objects filled with liquids, such as vases, on the TUBE53.
- Do not install the TUBE53 in a confined space, such as within a book case or similar piece of furniture.
- Plug the AC power cord into an easily accessible AC wall outlet, so it can be quickly unplugged in case of emergency.

CAUTION

- DO NOT REMOVE THE PROTECTIVE HOUSING WITH A SCREW-DRIVER.
- USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
- IF THE TUBE53 SEEMS TO BE MALFUNCTIONING, CONTACT A QUALIFIED SERVICE STATION. DISCONTINUE USE OF ANY MALFUNCTIONING UNIT.

For CANADA

AC POWER CORD CONNECTION

CAUTION:

TO PREVENT ELECTRIC SHOCK, MATCH THE BLADE WIDTH OF THE PLUG TO THE SLOT WIDTH. THE PLUG MUST BE FULLY INSERTED TO THE SLOT.

Handling Precautions

- 1. Before connecting or disconnecting other devices, unplug the TUBE53's AC power cord from the outlet.**

- 2. To avoid noise from your speakers, turn your system components on or off in the following order:**

Power on: Turn on other devices connected to the TUBE53's inputs first, before turning the TUBE53 on.

Power off: Turn the TUBE53 off first, before turning off any connected devices.

- 3. Handle with care**

Avoid exerting excessive force to the glass cover, knobs and cabinet on the TUBE53.

- 4. Installation**

Use of an audio rack is recommended to maximize the sound quality and performance of the TUBE53. Installation and use of the TUBE53 in the locations described below may cause deterioration in sound quality or malfunction:

- Locations exposed to direct sunlight - such as windowsills, and other exceptionally warm locations - such as near heating appliances (surrounding temperature higher than 35 °C), or exceptionally cold locations (surrounding temperature lower than 5 °C), can prevent the TUBE53 from functioning properly.
- Damp locations exceeding 90% humidity may cause the TUBE53's metal parts to rust, causing the unit to malfunction.
- Dusty locations may cause contact failure of the switches and noise, and may result in deteriorated performance of the TUBE53.
- Otherwise, avoid installing the TUBE53 close to other transformers and electrical motors, so as to prevent the pickup of induction hum. Also, avoid mounting the TUBE53 on surfaces that may be affected by vibration.

- 5. Avoid lightning strikes**

Disconnect the AC power cord from the AC outlet when there is a thunderstorm in your vicinity.

6. Condensation

When the TUBE53 is brought into a warm room when the exterior temperature is cold, or when the room temperature rises sharply from using a heater, condensation may form both inside and outside the TUBE53, hampering its performance. If this happens, leave the TUBE53 unused in the room for 1 to 2 hours (depending on the amount of condensation), so as to bring the TUBE53's temperature closer to the room temperature. The condensation should go away gradually.

7. Listening etiquette

When adjusting the sound volume level, make sure you do not disturb other people and your neighborhood.

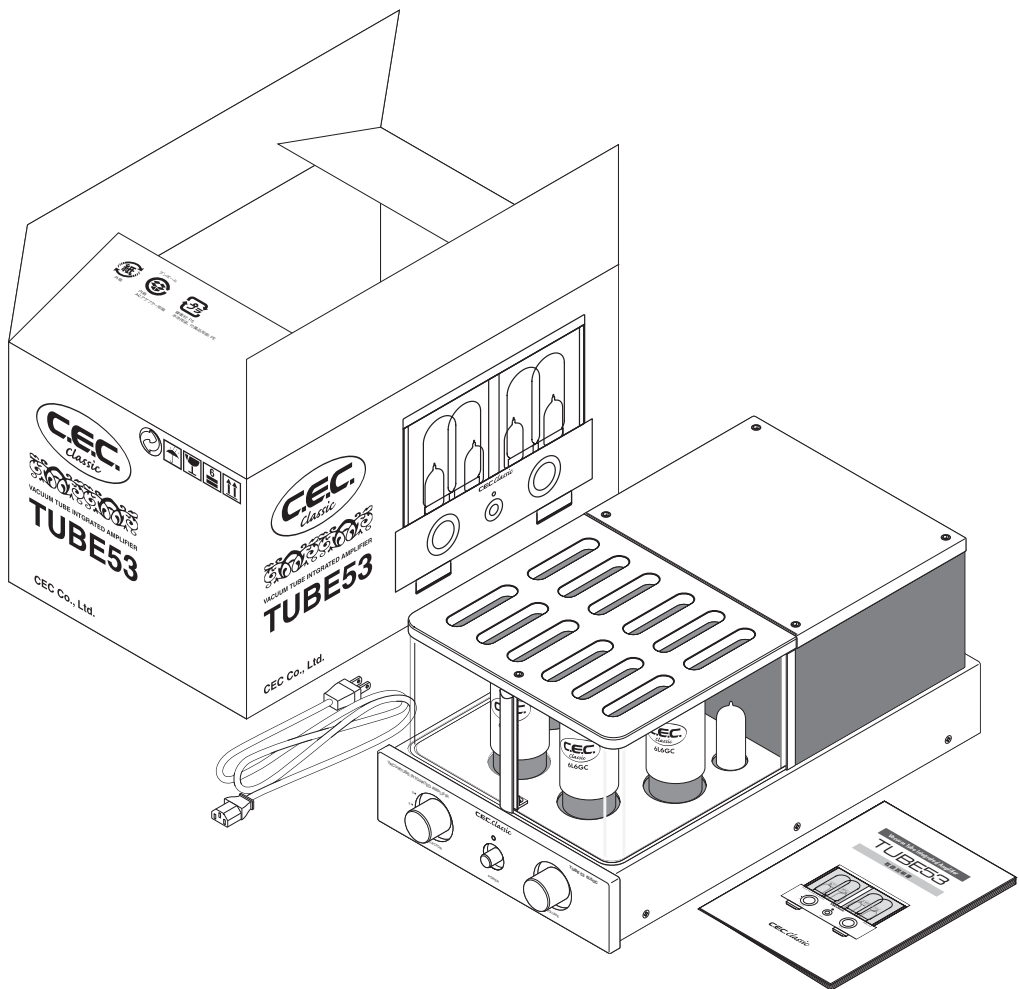
Accessories

The packaging for the TUBE53 should contain the following:

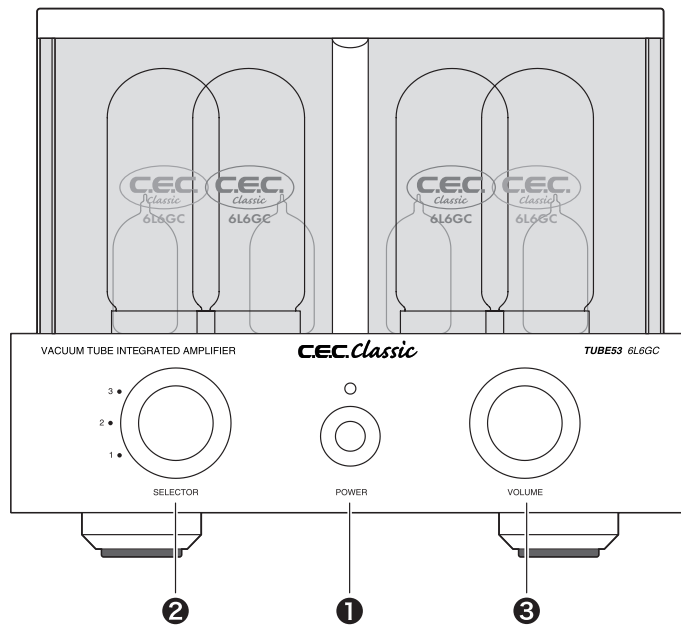
1. TUBE53 unit
2. AC power cord
3. Owner's Manual

Note: Keep the carton box and packing material available for future transportation needs.

The AC power cord is for use with the TUBE53 exclusively, and should not be used for other devices.



Front Panel Functions



❶ POWER

Press the POWER button to turn the TUBE53 on. The LED above the button will light up.

Note: It takes 2 to 3 minutes for the TUBE53 to stabilize once its power is on.

To turn the unit off, move the VOLUME knob to the minimum and press the POWER button again.

❷ SELECTOR

Turn the SELECTOR knob to select an input source from 1, 2 or 3.

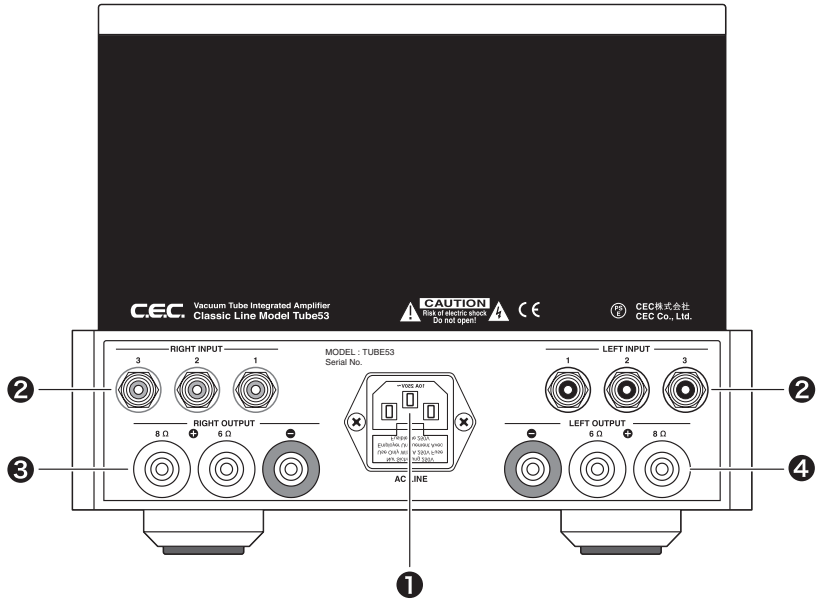
Note: Before changing the input, turn the VOLUME to the minimum.

❸ VOLUME

Turn the VOLUME knob clockwise for volume up.

Turn the VOLUME knob counter clockwise for volume down.

Rear Panel Functions



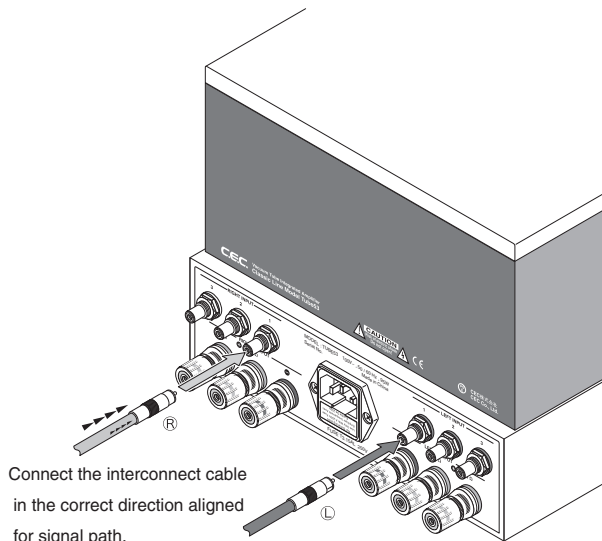
① AC LINE

Connect the supplied AC power cord to the AC LINE inlet.

② RIGHT INPUT/LEFT INPUT

Line in audio signal input jacks equipped with unbalanced RCA connectors. Use interconnect RCA cables to connect inputs 1 / 2 / 3 to an external source with an RCA line output, such as a CD player, tuner or tape deck.

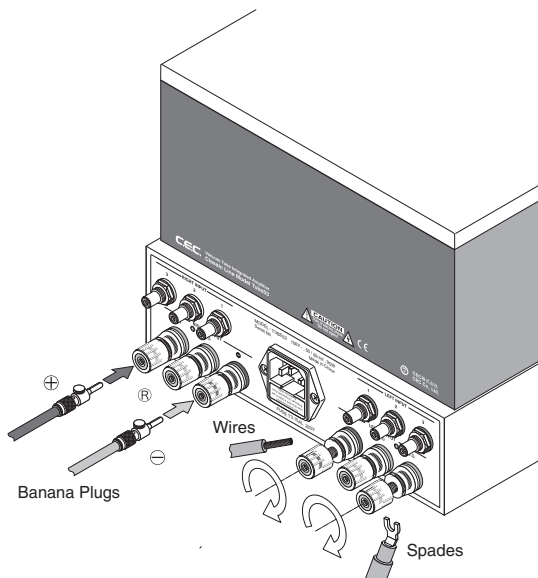
Note: Phono and digital sources cannot be connected directly to these line inputs.



③ RIGHT OUTPUT/LEFT OUTPUT

Power amplifier output terminals to connect speakers. Banana plugs, spades and wires can be used for the connection. Connect the – speaker cable to the - terminal marked with black color. Connect the + speaker cable to the 8Ω terminal marked with red color for speakers with an impedance of 8Ω or higher, or to the 6Ω terminal marked with red color for speakers with an impedance of 6Ω or lower.

Note: When connecting speaker cables, the TUBE53 should be powered off. Screw the terminal caps tightly when using banana plugs. Insert the spades or wire into the terminal pole and screw the caps tightly. Using high-quality Audio RCA interconnect and speaker cables may improve sound quality.



Vacuum Tube Replacement

The vacuum tubes should be considered expendables. The tubes used in the TUBE53 are designed to last five years or longer under normal operating conditions. Should a filament be broken, or should you experience a malfunction (such as noise), you can replace the vacuum tube(s) following the procedure described below. Contact an authorized service center if you have any questions concerning the replacement of vacuum tubes.

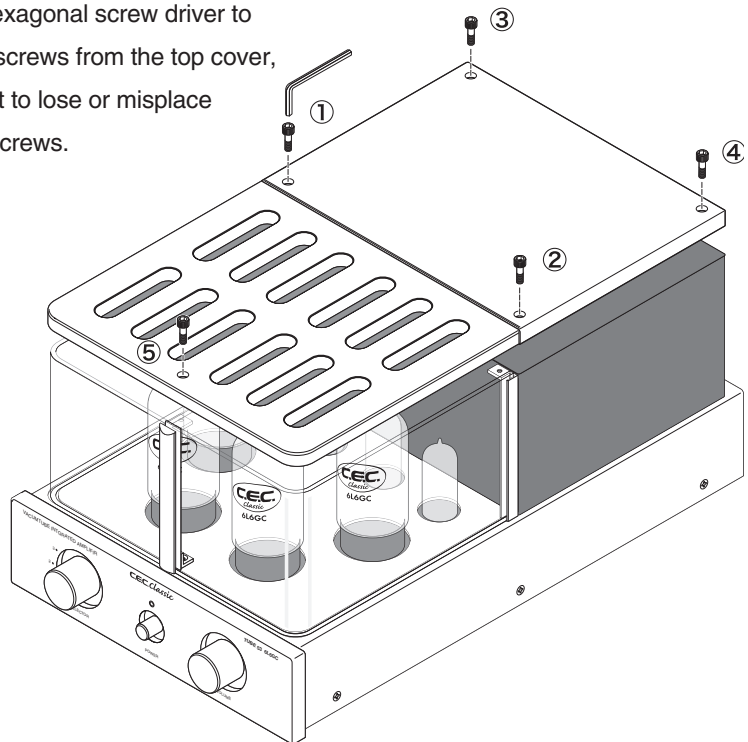


Unplug the TUBE53's AC power cord from the outlet in use when replacing vacuum tubes.



Do not attempt to replace vacuum tubes immediately after turning the unit off, as residual heat within the tubes may cause burning. Wait for the tubes to cool down before attempting replacement.

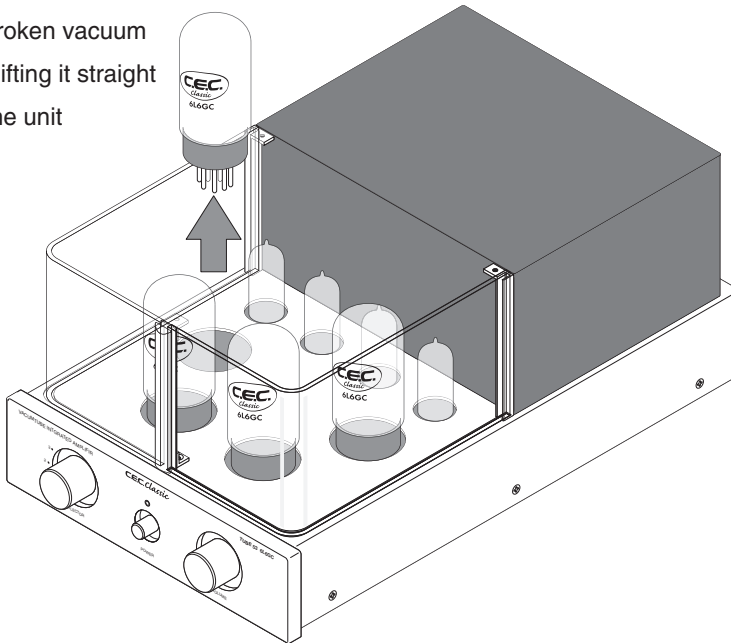
Use a 3mm hexagonal screw driver to remove the 5 screws from the top cover, taking care not to lose or misplace the removed screws.



Pull the broken vacuum tube out, lifting it straight up from the unit. Insert a new vacuum tube into the socket, making sure the pins are lined up adequately. Check that the tube is plugged in firmly and completely.

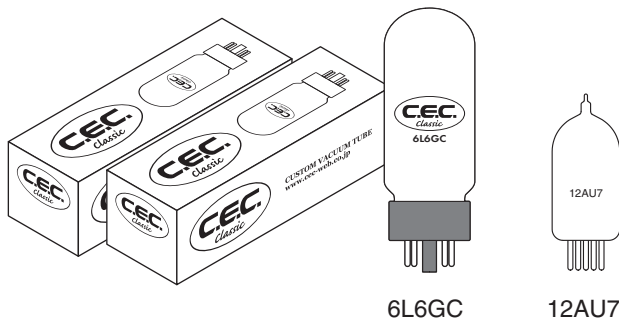
Note: Avoid handling the vacuum tube with bare hands. Handle with gloves or a dry cloth to prevent leaving fingerprints on the tube, as this may cause the vacuum tube to overheat at the fingerprint(s) and increase the risk of malfunction.

Pull the broken vacuum tube out, lifting it straight up from the unit



Note: Use genuine C.E.C. vacuum tubes for replacement. Any malfunctions caused by the use of generic tubes will be exempt from warranty.

Only the malfunctioning vacuum tubes need to be replaced.

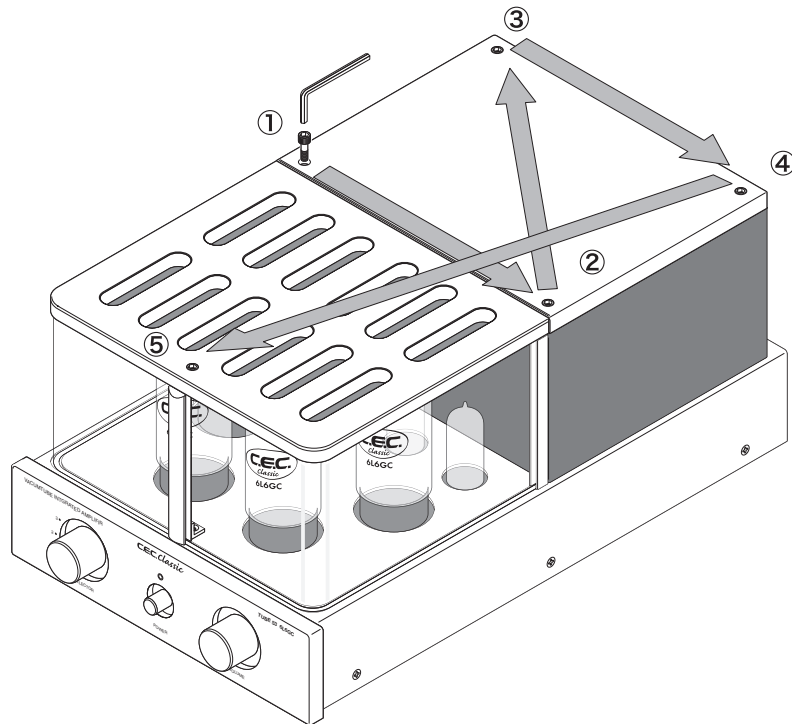


6L6GC

12AU7

Replace the top cover on the unit and fix the 5 screws gradually, in the order instructed in the diagram below.

Caution: Do not screw too tightly or unevenly. Extreme or uneven tightening may cause the glass side panels to crack due to excessive pressure.

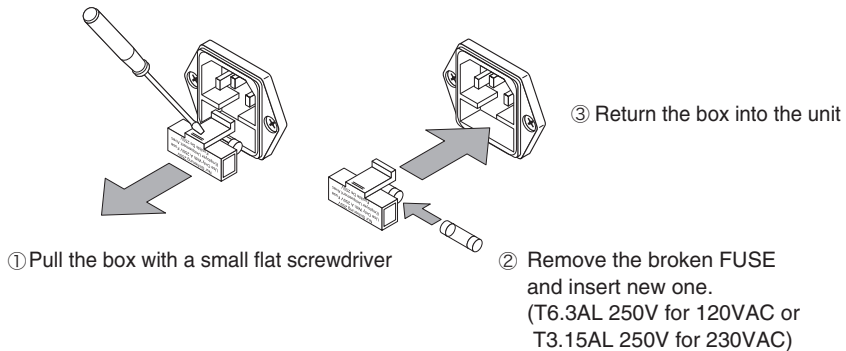


Cautions regarding Handling

- Amplifiers produce heat. Prolonged usage will cause heat to accumulate within the aluminum top cover and glass side panels. To avoid burning from residual heat, do not touch the top cover and glass side panels while the TUBE53 is powered on. Make sure to install the TUBE53 out of reach of small children.
- Install this amplifier with plenty of surrounding space, so as to allow heat generated by the TUBE53 to dissipate into the surrounding air.
- Do not place any other devices on the TUBE53, or block the air vents in the top cover. Ensure that there is plenty of space between the TUBE53 and other devices and/or walls.
- If you wish to install the TUBE53 in an audio rack, ensure that there is at least 15cm of clearance above the unit's top cover. It is recommended that you install the TUBE53 on an audio rack or board of sufficient mass, so as to prevent vibrations from reaching the unit and draw out the TUBE53's full potential.
- Avoid installing the TUBE53 in a dusty environment, as the accumulation of dust at the base of the vacuum tubes may cause excessive heat, shorting and fire.
- The TUBE53 must be handled with care as it operates at high voltage. Do not open the bottom cover of the unit. CEC cannot be held responsible for any injuries or burns suffered as a result of opening the TUBE53's top, side and bottom panels, and/or coming into contact with the TUBE53's internal components.
- To avoid causing cracks in the side panels, which are made of semi-tempered glass, do not hit the panels with sharp and/or hard objects, or apply excessive pressure to the panels. Pay particular attention not to screw the top cover back on too tightly or unevenly when replacing vacuum tubes.
- Turn the TUBE53 off when connecting and disconnecting cables to avoid electrical surges that may cause damage to the vacuum tubes and speakers.
- Never cause a short circuit between the (+) and (-) speaker output terminals. This may damage the TUBE53.

Maintenance

- The TUBE53 should not require any periodic maintenance, and contains no user serviceable parts except for the vacuum tubes and fuse. If the surface of the TUBE53 is soiled, wipe with a soft cloth or use diluted neutral cleaning liquid. Be sure to remove any fluid completely. Never use thinner, benzene or alcohol as these may damage the surface of the unit.
- If the FUSE located below the AC INLET is broken, gently pull the box with a small flat screwdriver. Replace the FUSE with a new one. Replace the box inside the unit.
If the new FUSE continues to break after replacement, there may be a malfunction with the internal circuitry. In this case, please contact the dealer where the TUBE53 was purchased, or an authorized service center to arrange for repairs.



Troubleshooting

If you suspect a malfunction in the unit, please check the following chart before calling your dealer.

No power

Check the connection at the both ends of the AC power cord. Make sure there is power at the wall outlet.

Replace the fuse at the AC inlet if it is broken.

No sound

Check the connection from the external source device (e.g. CD player).

Check the operation of the external source device (e.g. CD player).

Turn the unit off and unplug the AC power cord from the outlet. Wait for a minute before plugging the AC power cord back in and turning the unit back on.

Noise on sound

Check that the interconnect cables are plugged in adequately.

Replace any broken vacuum tubes.

Specifications

Output Power	2 x 20W (8ohm)
Frequency Response	20Hz ~ 20kHz + / -0dB
S/N Ratio	more than 90dB
THD	less than 0.5% (8ohm / 1kHz)
Input Terminal	3 x RCA
Input Sensitivity	400mV
Input Impedance	100k ohm
Output Terminal	1 (8 ohm or 6 ohm)
Tube	4 x 12AU7, 4 x 6L6GC
Fuse	T6.3AL 250V for 120VAC or T3.15AL 250V for 230VAC
Power	AC120V/230V, 60Hz/50Hz (specified on the rear panel)
Power consumption	160W
Dimensions	approx. 217.5(W) x 410(D) x 183(H) cm
Weight	approx. 16kg
Color	Silver
Accessories	AC power cord, Owner's Manual

* Design and specifications are subject to change without notice.

* Illustrations within the Owner's Manual may differ slightly from the actual unit, due to design improvements

CEC.

CEC Co., Ltd. Japan
