

CLASSÉ AUDIO

CA-400

POWER AMPLIFIER

CA-400

OWNER'S MANUAL

CLASSÉ DESIGN PHILOSOPHY

1. REPEATED LISTENING DESIGN SESSIONS:

Fine tuning of sound by exchanging and mixing of parts (transistors, capacitors, wiring, PCB boards etc.), and adjusting many specific operating voltages within proper engineering ranges, producing an overall sonic recipe giving the most natural harmonic realism of music typical of instruments in a live performance.

2. UPGRADABLE SINGLE CIRCUIT DESIGNS:

All Classé products (all preamps and all amps) share exactly the same circuit (excluding moving coil and moving magnet phono circuits). This means all amplifiers and all high level circuits of the preamps are the same. The same circuit is tailored to different power levels etc. Differences between less expensive models and more expensive models are parts quality and compliment, power supply extravagance and the amount of filtering etc., as well as features and packaging.

This means that for years Classé has been constantly fine tuning and upgrading this circuit and its application, thus reaching a very high level of understanding and musical achievement which benefits all models - least expensive, most expensive, preamps and amplifiers alike.

3. EXTREME LONG LIFE IN REAL WORLD CONDITIONS:

Choosing the best attainable quality parts and materials combined with the advantages of the two above-mentioned areas provides Classé owners with years of proven trouble free reliability and musical enjoyment.

CA-400

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UNPACKING & SET-UP

Your CLASSÉ **CA-400** power amplifier is packed in high density, semi-rigid foam placed in a special cardboard box. To remove the unit, open and spread all the top flaps of the box and by its sides, lift out the entire unit and put it on a large flat surface. Take it out of the plastic bag and inspect the unit for any concealed damage. Apart from this owner's manual, please ensure the following have also been included:

- 1) Detachable AC Reference line cord
- 2) Allen key for top plate
- 3) Nut driver for output connectors

Please report any damage or missing parts to your dealer as soon as possible.

Place the **CA-400** at or near its final set-up position, allowing 8 inches at the rear for tightening the speaker output connectors. For optimum sonic performance, the optional CLASSÉ REFERENCE A.C. LINE CORD has been provided with this unit.

The power transformer in the **CA-400** is located at the front-center of the unit. Ideally, a few feet should separate this area from components which potentially could pick up hum. These include preamplifiers, turntables, and interconnect cables. In terms of providing adequate airspace for cooling, a good rule of thumb is to allow 6 inches above and 3 inches on each side of the unit.

Check the Serial Number sticker on the back of the unit for the correct operating voltage.

The **CA-400** has only one fuse, the rating of which should be as follows:

| <u>LINE VOLTAGE</u> | <u>FUSE RATING</u> |
|----------------------------|-----------------------------------|
| 100 or 120 V.A.C. | 15 AMP SLOW BLOW 125 or 250 volts |
| 220 or 240 V.A.C. | 12 AMP SLOW BLOW 250 volts |

GENERAL CONNECTIONS

A.C. LINE

Insert the linecord into the A.C. receptacle on the rear of the unit.

CAUTION: SAFETY INSTRUCTIONS

DISCONNECT AC LINE CABLE WHILE MAKING ALL CONNECTIONS. "FLOATING THE GROUND" OR DEFEATING THE GROUND ON A 3-PRONG LINECORD MAY CREATE A SHOCK HAZARD. CONNECT ALL INTERCONNECT CABLES BETWEEN THE ELECTRONICS BEFORE CONNECTING THE A.C. LINECORDS TO THE WALL OUTLETS. THIS WILL REDUCE THE POTENTIAL SHOCK HAZARD. SEE ALSO THE WARRANTY SECTION OF THIS OWNER'S MANUAL.

STEREO

Input and output connectors are clearly marked on the back of the amplifier. Left/Right connections are oriented from the front of the unit. Stereo output connections are marked above the connectors. Set the stereo/mono switch to the [LEFT] position. (Units are preset at the factory for STEREO.)

Use only high quality interconnect and loudspeaker cables, and make all connections tight. If the input plugs are loose, remove them and pinch down the ground leaves slightly with pliers. Observe correct phasing of the loudspeaker connections, and tighten.

MONO

Please read through the previous Stereo section for general notes on securing good connections, and safety tips. If the unit has been previously used in stereo, make sure it is OFF, and remove all connections, including the AC line cable. Make sure the STEREO/MONO switch is switched to the MONO position [RIGHT].

The MONO "Input" is the "left channel input", as marked. The unused right channel input is automatically disconnected. MONO output connections are marked below the connectors.

Repeat the above MONO settings and connections on the second **CA-400** to be used for the other channel.

Please remember that the negative output connection of a bridged amplifier is NOT a ground. Do not use a "common ground" or switchbox set-up. Do not use with electronic crossovers which have a common ground.

REMOTE CONTROL: (OPTIONAL)

With a simple connection from the receiver box to the remote jack at the back of the amplifier, (see Figure 1) the power amplifier can be turned ON/OFF from a distance (or from another room).

CONNECTIONS FOR REGULAR OR BALANCED INPUTS:

The CLASSÉ **CA-400** power amplifier is equipped with both regular and balanced inputs. Either one may be used SEPARATELY BUT NOT SIMULTANEOUSLY. The balanced inputs must be connected to a preamplifier which has balanced main outputs, and balanced interconnects with "XLR" connectors are also required. Regardless of the amplifier inputs used, stereo or mono operation is still possible on the **CA-400**.

REGULAR INPUTS

Switch the REGULAR/BALANCED switch to the position marked "REGULAR" [LEFT]. (The amplifier is factory set for regular use.) Connect the regular interconnects to the RCA input jacks on the rear panels of the **CA-400**. The balanced connectors are automatically disabled.

BALANCED INPUTS

Switch the REGULAR/BALANCED switch to the position marked "BALANCED" [RIGHT]. A balanced preamplifier and balanced interconnects are also required. For use with balanced preamplifiers other than Classé, the wiring of the 3-pin XLR connectors must be matched to that of the CLASSÉ **CA-400** which are wired as follows:

PIN 1: GROUND

PIN 2: POSITIVE (NON-INVERTED) SIGNAL

PIN 3: NEGATIVE (INVERTED) SIGNAL

If the pin configuration of the preamplifier differs from above, the balanced interconnects must be modified to accommodate the different preamp.

Having confirmed the correct connections, plug the XLR connectors of the balanced interconnects into the locking XLR connectors on the rear panel of the **CA-400**. (To remove the connectors, press the tab above the connector.)

MONO OPERATION

As stated before, regular or balanced inputs can be used in stereo or mono. Connect a single interconnect, either regular or balanced, to the left channel input of each amplifier. See the "Mono" section above for complete details.

PROTECTION CIRCUIT

The Classé **CA-400** is equipped with rail fuses to protect the output drivers (GDB 10, 10 amp fast-blow) and mosfet fuses to protect the mosfets (2AG1/2PT, 1/2 amp fast-blow), which are used as pre-drivers for the output stage of the amplifier. In the event that a short circuit or other problems would occur at the output of the amplifier, either or both of these fuses may blow in an attempt to protect the amplifier. In addition to the fuses, the unit has a circuit for the detection of unusual distortion characteristics and/or DC content in the incoming audio signal. There is also an AC line fuse protecting the unit. It is located at the back of the unit directly above the AC receptacle (see fig.1, page 9).

If the protection circuit of the unit is triggered or any of the fuses has blown, the FRONT PANEL POWER LED will go to BLINKING GREEN.

IF THE PROTECTION CIRCUIT HAS BEEN TRIGGERED, TURN THE CA-400 OFF. After the situation which triggered the protection circuit has been clearly identified and corrected, attempt to re-start the unit. **IF THE UNIT STILL GOES INTO PROTECTION MODE, OR IF IT APPEARS THAT PROTECTION FUSES DID BLOW, CONTACT YOUR LOCAL DEALER. DO NOT TRY TO CHANGE A BLOWN FUSE. REPLACING FUSES AND RE-STARTING THE UNIT WITHOUT CHECKING FOR COMPONENT FAILURE COULD RESULT IN FURTHER, SERIOUS DAMAGE TO VITAL COMPONENTS IN YOUR AMPLIFIER. CONTACT YOUR LOCAL DEALER or Customer Service at the Classé Audio factory--- (514) 636 63 85.**

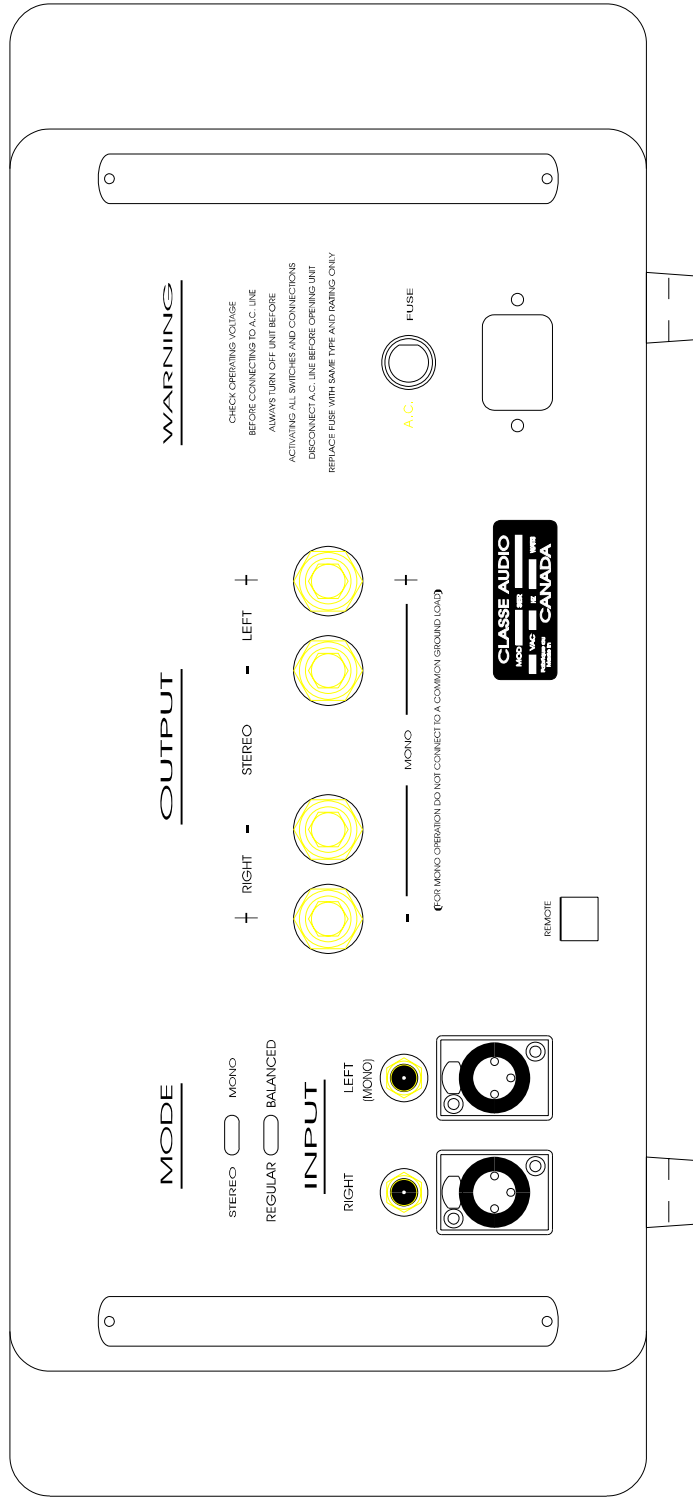


Fig 1: CA-400 rear view

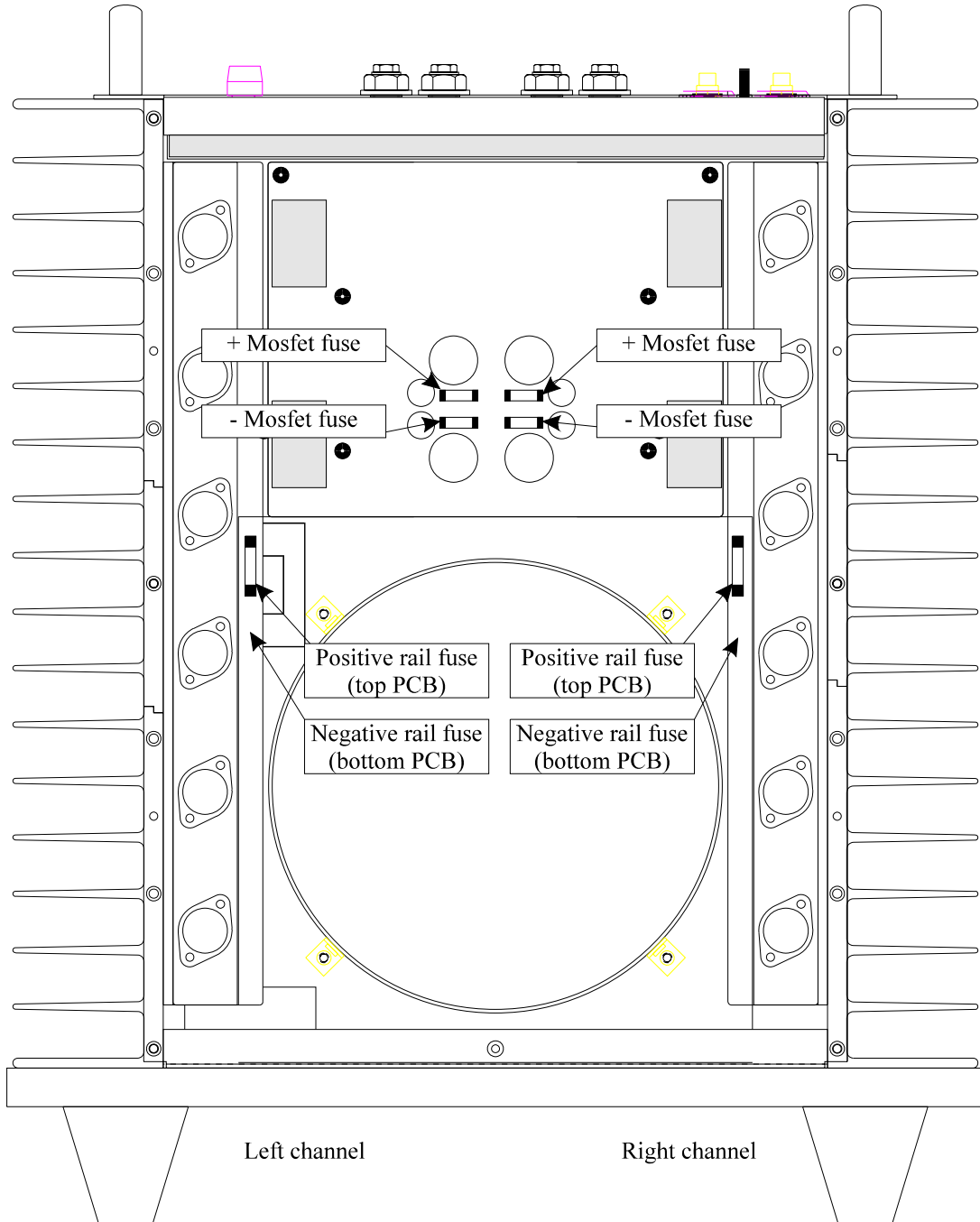


Fig2: CA-400 top view

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CLASSÉ CA-400

ULTRA HIGH CURRENT STEREO/MONO POWER AMPLIFIER FEATURES AND SPECIFICATIONS

CA-400 FEATURES:

Newly developed special Classé "UHC TRANSFER" power supply section. Current capacity increased 50% above standard units. Magnetic flux controlled transformer cover in a brushed and anodized finish. All new Classé PCB circuit boards with "UHC TRANSFER" characteristics. Reduction of wiring and connections up to 70%. True differential amplifier circuits from input to output. Both regular and balanced operation are externally switchable. 3/4" thick brushed faceplate with contoured handles. Available in both Satin Black and Soft Shadow Silver finishes.

CA-400 SPECIFICATIONS:

| | | |
|---------------------|-------------------------------|------------|
| Frequency response: | 20 Hz to 20 KHz +/- 0.1 dB | |
| Sensitivity: | 1.9 Volts in for rated output | |
| Input Impedance: | 75 Kohms | |
| Output Impedance: | 0.01 Ohm | |
| Gain: | 29.02 db | |
| S/N Ratio: | 137 dBR | |
| THD+N: | 0.004% | |
| Rated Output: | Stereo | Mono |
| 8 Ohms: | 400 | 1400 Watts |
| 4 Ohms: | 800 | 2400 Watts |
| Dimensions: | Gross: 27" x 24 1/4" x 14" | |
| | Net: 19" x 23" x 9 1/2" | |
| Weight: | Gross: 135 lbs. | |
| | Net: 120 lbs. | |



Notice to all Classé Product owners:

Thank you for your purchase of a Classé Audio component.

All of us at Classé have taken extreme care to ensure that your purchase will become a prized investment. We are proud to inform you that all Classé Audio components have been officially approved for the European Community CE mark.

This means that your Classé product has been subjected to the most rigorous manufacturing and safety tests in the world, and have proven to meet or exceed all European Community CE requirements for unit to unit consistency and consumer safety.

All of us at Classé Audio wish you many years of musical enjoyment.

As of July 18, 1996, Classé Audio has been granted Certificate No: C401CLA1.MGS, which indicates CE approval for all models of the Classé Audio product line.

CLASSÉ CA-400 LIMITED FACTORY WARRANTY (North America only).

Classé Audio Inc. warrants this amplifier to be free from defects in materials and workmanship for a period of FOUR YEARS from the date of manufacture, provided that any claim in virtue of this warranty be made in writing within such period.

Subject to all of the conditions stated herein, A LIMITED FACTORY LIFETIME WARRANTY IS EXTENDED ONLY TO THE ORIGINAL OWNER WHO PURCHASED THE AMPLIFIER IN NORTH AMERICA AND WHO CLAIMS UNDER THIS WARRANTY IN NORTH AMERICA.

IMPORTANT: WARRANTY REGISTRATION, AND A COPY OF THE "AUTHORIZED DEALER BILL OF SALE", MUST BE RECEIVED AT THE CLASSÉ FACTORY (address below) WITHIN TWENTY (20) DAYS OF PURCHASE, TO VALIDATE THIS WARRANTY.

In the event of failure of this amplifier, resulting from defects in materials and workmanship, Classé Audio Inc. will repair, recalibrate, or at its discretion, replace the unit providing that all the conditions contained in this warranty are met.

In order to initiate service of any kind, it is necessary to OBTAIN PRIOR FACTORY AUTHORIZATION, AND SHIP THE UNIT PREPAID TO THE CLASSÉ FACTORY. For units coming from outside Canada, contact the factory for our forwarding address. Units shipped directly to our Canadian address from outside the country will be stopped at the border, causing extensive delays or return of the unit to the sender.

The warranty shall be void and of no effect in the event of any of the following:

- 1) Operation not in accordance with this manual;
- 2) Accident, abuse, tampering, or unauthorized modification, as determined by Classé Audio Inc.;
- 3) Removal, defacing, or falsifying the serial number plate;
- 4) Shipping without the complete factory packaging;
- 5) Transfer or sale of this amplifier by the original owner;
- 6) Non-compliance with any of the other conditions hereof.

CLASSÉ AUDIO INC. SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING FROM OR RELATING TO THE SET-UP, OPERATION, FAILURE, TROUBLESHOOTING, OR REPAIR OF THE AMPLIFIER AND/OR ANY OTHER EQUIPMENT USED THEREWITH.

THIS WARRANTY, ALL CLAIMS MADE IN VIRTUE HEREOF, AND ALL ISSUES RELATING TO ANY SUCH CLAIM SHALL BE GOVERNED BY THE LAWS OF THE PROVINCE OF QUÉBEC.

WARRANTY REGISTRATION

You must fill out and return the form below, along with a copy of the authorized dealer bill of sale, to the factory within twenty (20) days of purchase. This will allow us to provide expedient service, information regarding updates and new products, and validate the Classé warranty.



CA-400 SERIAL NUMBER _____

PURCHASE DATE _____

AUTHORIZED DEALER _____

PURCHASER'S NAME _____

STREET ADDRESS _____

CITY _____ STATE/PROV. _____

COUNTRY _____ ZIP/POSTAL CODE _____

I BECAME AWARE OF THIS PRODUCT BY: _____

(DEALER, MAGAZINE, FRIEND, ETC.)



SEND TO: CLASSÉ AUDIO INC.

Product Registration

5070 François Cusson

Lachine, Quebec, Canada

H8T 1B3