

CLASSÉ AUDIO

CAP-150

REMOTE CONTROL
INTEGRATED AMPLIFIER

CAP-150

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, all amps and integrated amplifier) share exactly the same circuit design philosophy (excluding moving coil and moving magnet phono circuits). This means all amplifiers and all high level circuits of the preamps benefit from the same design goals. Similar circuits are then tailored to different power levels, etc. Differences between less expensive models and more expensive models are parts quality and complement, power supply extravagance and the amount of filtering, etc. as well as features and packaging.

This means that for years Classé has been constantly sonically fine tuning and technically upgrading this circuit design and its application, thus reaching a very high level of natural musical enjoyment, as well as excellent reliability which benefits all models - least expensive, most expensive, integrated amplifier, 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 provide Classé owners with years of proven trouble free reliability and musical enjoyment.

CAP-150
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TABLE OF CONTENTS

UNPACKING & SET-UP.....	4
A.C. LINE POWER.....	5
INPUTS.....	6
OUTPUTS	8
FRONT PANEL CONTROLS.....	9
PROTECTION CIRCUIT.....	13
FEATURES AND SPECIFICATIONS	21

UNPACKING & SET-UP

Your CLASSÉ **CAP-150** integrated amplifier has been carefully wrapped in heavy gauge plastic, packed in semi-rigid foam and contained in a special box. To remove the unit, open and spread the top flaps of the box. By its sides, lift out the entire unit with foam pieces intact. Remove each foam side by pulling straight out. Remove the plastic wrap and inspect the unit for any concealed damage. Apart from this owner's manual, please ensure the following has also been included:

- 1) DETACHABLE LINECORD.
- 2) ALLEN KEY FOR TOP COVER.
- 3) REMOTE CONTROL UNIT (Allen key and Batteries: AAA x 2 included).

Please report any damage or missing parts to your dealer promptly.

Place the **CAP-150** at or near its final set-up position, allowing 8 inches (20 mm.) at the rear for tightening the speaker output connectors and inserting the interconnects. For optimum sonic performance, we recommend the optional CLASSÉ REFERENCE A.C. LINE CORD. Consult your dealer regarding this accessory.

The power transformer in the **CAP-150** is located at the front/center of the unit. Ideally, a few feet should separate this area from components that are susceptible to pick up hum. These include turntables and interconnect cables. In terms of providing adequate airspace for cooling, a clearance of at least 6 inches (15 mm.) should be left above the unit.

Check the serial number sticker on the back of the unit for the correct operating voltage. The **CAP-150** has one A.C. line fuse, inside the unit, at the back left hand side (facing the unit) directly besides the small auxiliary transformer, the rating should be as follows:

FOR 100 TO 120 VOLTS : 4 AMPS SLO-BLOW 250V.

FOR 220 TO 240 VOLTS: 3 AMPS SLO-BLOW 250V.

A.C. LINE POWER

When the **CLASSÉ CAP-150** is first plugged in, only the auxiliary transformer is powered on. To actually turn the unit on, the **POWER** switch situated on the front right hand side of the panel (fig.3 page 14) has to be activated. When the power switch is pressed, the **MUTE** LED will be flashing for 30 seconds. During this period, there will be no response from any of the functions except for the **POWER** switch (please note that at this stage, the output terminals of the amplifier section are already 'connected' to the loudspeakers). While thoroughly musical shortly after turn-on, the integrated amplifier will exhibit "sonic growth" during its first 300 hours of use.

SAFETY FEATURE:

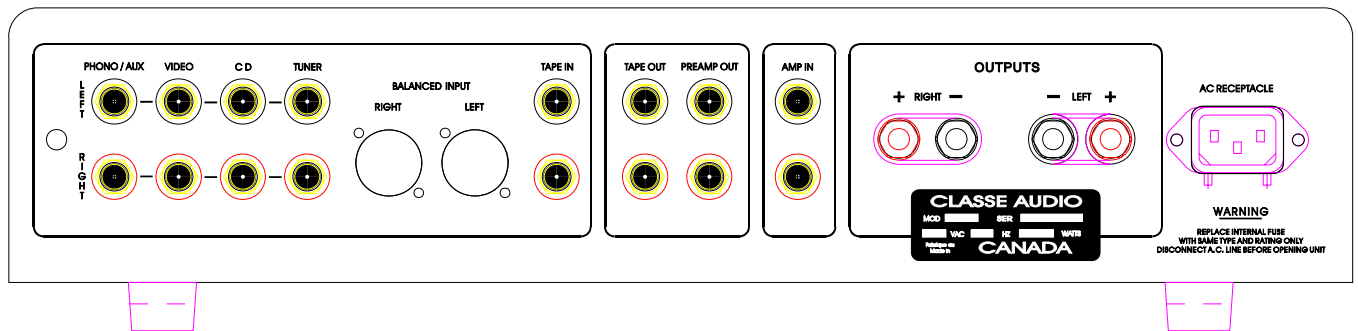
The **CAP-150** integrated amplifier is designed with an auto-shut down circuit that engages after an AC power failure. Press the power switch to re-activate the unit after a power shut down

This feature will prevent any turn-on surges or unstable output from reaching the integrated amplifier and possibly the loudspeakers. Similarly, make sure the **MUTE** is **ON** (STEADY GREEN) again when powering down the unit.

CAUTION:

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.

INPUTS



CAP-150 REAR PANEL

The input jacks are clearly marked on the back of the **CAP-150** (fig.4 page 15). The following inputs are provided: AUX/PHONO, VIDEO, CD, TUNER, BALANCED, TAPE and AMP.

AUX/PHONO INPUT

When selected PHONO\AUX, this input serves as a high level input only. Use with sources such as VIDEO, CD, TUNER, etc.. The AUX/PHONO input could also be fitted with an **OPTIONAL PHONO BOARD** plug-in module. A ground screw is provided adjacent to the AUX/PHONO input jacks.

Please see page 19 to install or remove the phono board.

VIDEO, CD, TUNER

These are all high level inputs sharing exactly the same characteristics, and may be interchanged if so desired.

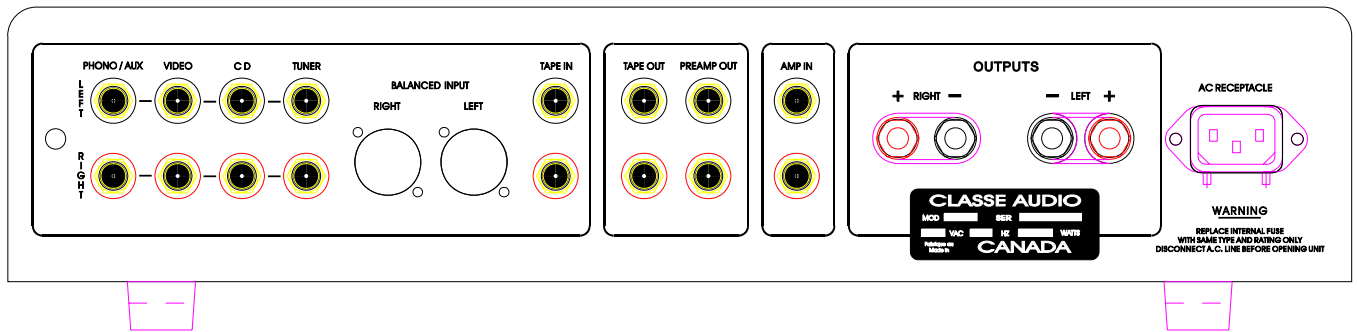
BALANCED

The BALANCED INPUT is a true differential high level input, wired as follows:

PIN 1: GROUND

PIN 2: POSITIVE (NON-INVERTED) SIGNAL

PIN 3: NEGATIVE (INVERTED) SIGNAL



CAP-150 REAR PANEL

The balanced input may be used with our CD players, which have balanced outputs, or another high level balanced source, such as our TUNER-1.

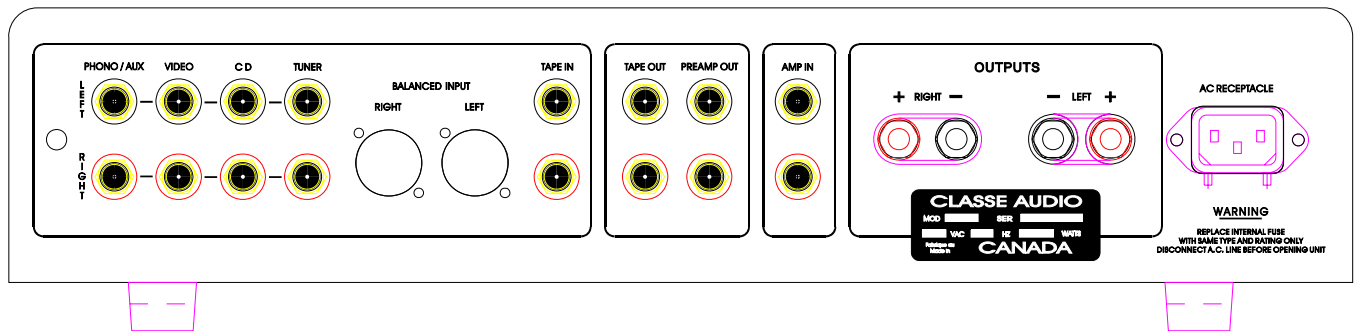
TAPE IN

The TAPE IN of the **CAP-150** integrated amplifier should be connected to the LINE OUT or TAPE OUT of the tape deck. The TAPE input does not appear on the selector switch. It is activated by the TAPE button. (See FRONT PANEL CONTROLS: TAPE BUTTON.)

AMP IN

The SEPARATE button can be activated if you wish to use the amplifier portion of the **CAP-150** by itself. By activating the SEPARATE switch, the preamplifier section is disconnected from the amplifier section and you can then connect a separate preamplifier, equalizer, cross-over or other input source to the AMP input.

OUTPUTS



CAP-150 REAR PANEL

PREAMP OUT

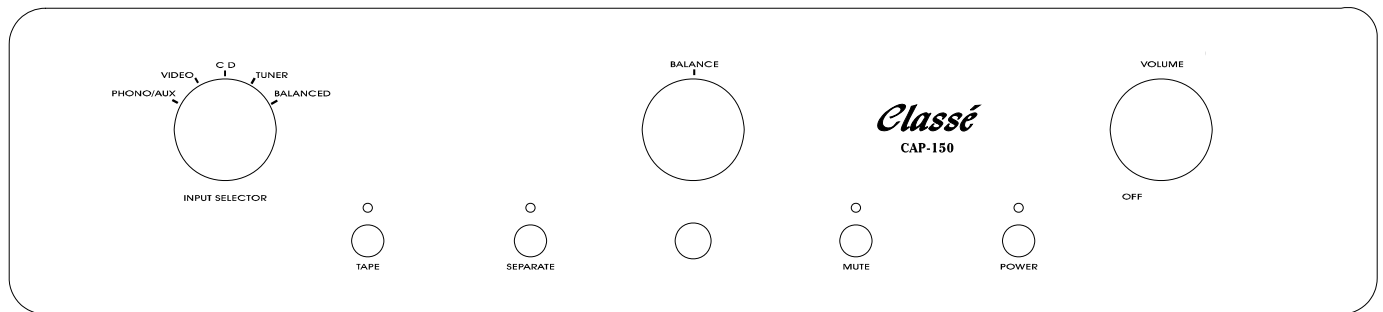
The Classé **CAP-150** integrated amplifier has a regular (single-ended) output that can be used with an external power amplifier. This output, which follows the gain control, is active at all times, regardless of whether the SEPARATE button is activated or not. You may use this output to drive a separate amplifier to bi-amplify a pair of speakers or drive an amplifier in a separate room. The signal is the same as is being output from the CAP-150's amplifier outputs.

TAPE OUTPUT

Whatever input is selected by the INPUT SELECTOR will be fed to the TAPE OUTPUT jacks. This should be connected to the TAPE IN or LINE IN of the tape deck.

LOUDSPEAKER OUTPUT

The Classé **CAP-150** is equipped with two pairs of 5Way binding posts, (one for each channel). Virtually all available types of speaker cable connectors can be attached.

FRONT PANEL CONTROLS**CAP-150 FACE PLATE****POWER**

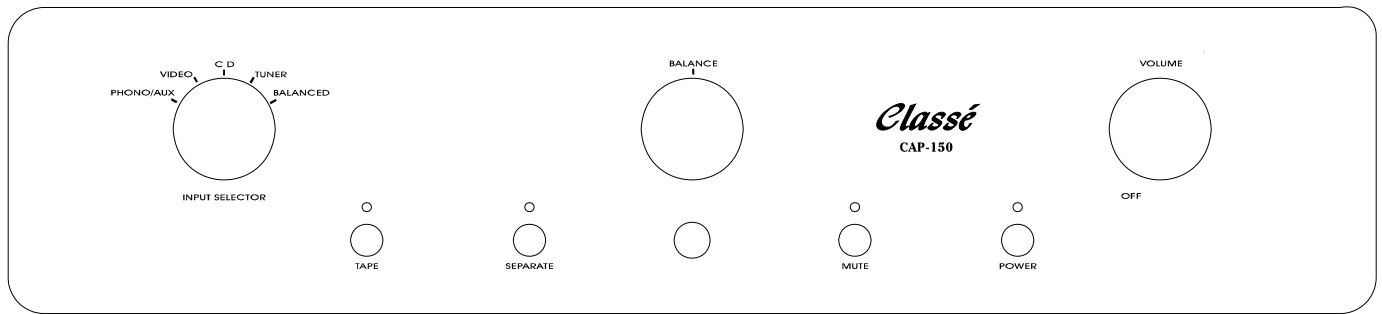
Pressing the POWER BUTTON initiates the start up mode. The MUTE LED will flash during the 30 second count down while the circuit warms up and settles. During these 30 seconds, there will be no response from the remote control functions, the mute button, the tape button or the separate button. Pressing the power button again during this sequence will turn off the unit.

INPUT SELECTOR

This selects one of the seven input connections on the **CAP-150**, except TAPE IN (see TAPE BUTTON) and AMP IN (see SEPARATE). The selector switch is silent and prevents pulses when changing inputs; however, it remains good practice to REDUCE THE VOLUME CONTROL LEVEL or to activate MUTE ON (steady GREEN LED) when changing the input.

TAPE

Pressing the TAPE switch in will light the green LED above it, and the TAPE IN jacks will be selected to play. Pressing the TAPE button again will extinguish the LED and the integrated amplifier will play the signals present at the jacks chosen by the INPUT SELECTOR.



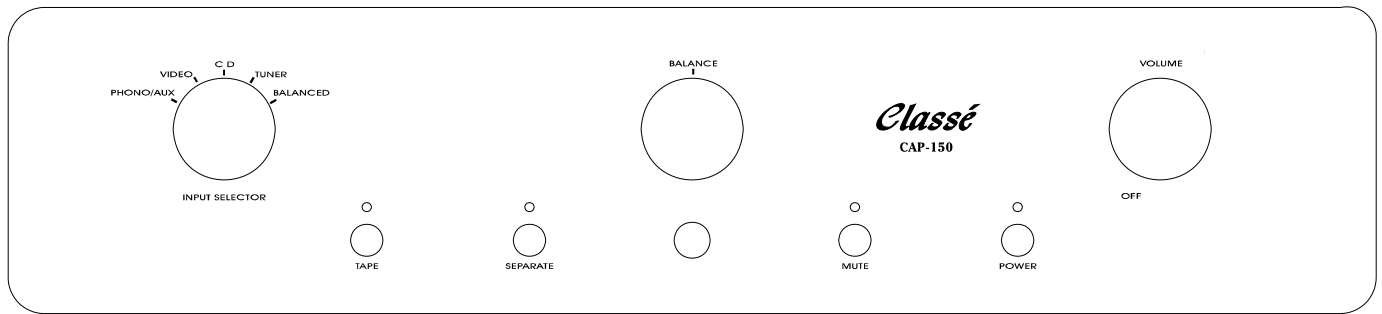
CAP-150 FACE PLATE

SEPARATE

The **SEPARATE** button literally provides a means to separate the amplifier and preamplifier sections of the **CAP-150** from each other. By selecting the **SEPARATE** function, you can utilise the amplifier and the preamplifier of the CAP-150 as independent components. For example, this would allow you to use the CAP-150's amplifier along with a separate crossover and another amplifier in a bi-amplified system (all current Classé amplifiers have identical gain, so that this is a perfect match for use with any other current model Classé amplifier). Alternately, you might wish to use an equaliser or other component between the amplifier and preamplifier sections---the **SEPARATE** function allows you complete flexibility to use the CAP-150 in the way most convenient for your own system needs.

This ability also allows the **CAP-150** to be the ideal building block for a great system today, and an even more sophisticated system tomorrow. No matter which position the **SEPARATE** function is in, the preamplifier's outputs are always available (although they are muted at any time when the mute function is activated). The **SEPARATE** button controls only the internal inputs between amplifier and preamplifier sections of the **CAP-150**.

PLEASE NOTE THAT WHEN THE SEPARATE FUNCTION IS ACTIVATED, THE CAP-150 WILL AUTOMATICALLY MUTE THE AMPLIFIER AND PREAMPLIFIER SECTIONS TO



CAP-150 FACE PLATE

SEPARATE (Continued)

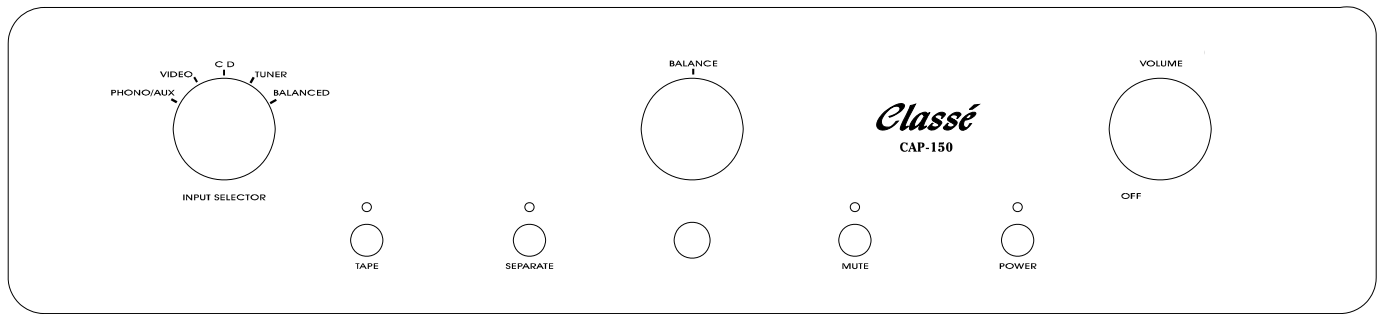
PROTECT THE UNIT AS WELL AS ALL ASSOCIATED COMPONENTS. TO UN-MUTE THE **CAP-150**, SIMPLY PRESS THE MUTE BUTTON ON THE UNIT OR THE WAND. THE AMPLIFIER'S INPUTS AND PREAMPLIFIER'S OUTPUTS WILL BOTH BE AVAILABLE FOR USE Both the amplifier and preamplifier sections will be in mute mode when SEPARATE is selected, and the Green LED above MUTE will be lit.

BALANCE CONTROL

The custom analogue balance control permits equal output of each channel in the center (detented) position. No gain is added to the signal to increase the volume of the selected channel. When the gain control is shifted to the left or right the gain is to reduce the output of the opposite channel is reduced.

VOLUME CONTROL

The **VOLUME CONTROL** varies the output level of both channels simultaneously. It can be operated remotely using the hand held control unit (see fig.1 page 13) or manually turning the volume control knob on the face plate.



MUTE SWITCH

Switching between PLAY and MUTE can be done by either manually pushing the MUTE button in momentarily on the **CAP-150** faceplate or pressing the MUTE button on the hand held remote control wand.

When MUTE is selected, indicated by a STEADY GREEN LED, the output of the preamplifier section is completely cut off. In the PLAY (MUTE OFF) selection, which is indicated by a STEADY RED LED, the signal is allowed to pass to the power amplifier section of the **CAP 150** as well as to the PREAMP OUT jacks on the rear panel. When MUTE is turned off volume returns to the previously set level.

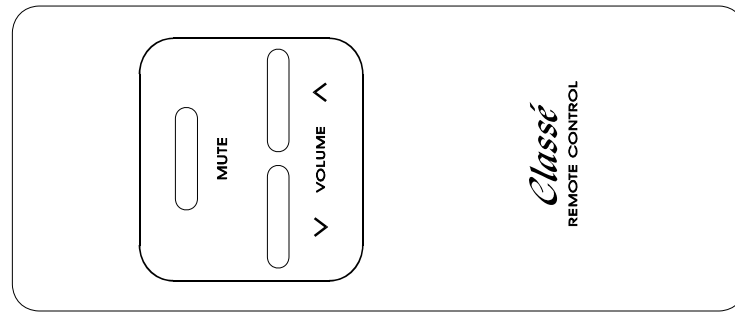
CAUTION: Make sure the CAP-150 is OFF when making or changing any connections. This includes all inputs and outputs, as well as A.C. linecord.

PROTECTION

The Classé **CAP-150** is equipped with rail fuses (GDB4, 4 amps fast-blow, see fig.5 page 17) to protect the output drivers and mosfet fuses to protect the mosfets (2AG 1/2PT, 1/2 amp fast-blow, see fig.5, page 17), 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. There is also an AC line fuse protecting the unit (see fig. 5, page 17).

If any of the fuses have blown, THERE WILL BE DISTORTION OR NO SOUND IN EITHER OR BOTH CHANNELS. CLEARLY IDENTIFY AND CORRECT THE SITUATION WHICH HAS TRIGGERED THE PROTECTION.

IF ANY OF THE PROTECTION FUSES HAS BLOWN, TURN THE CAP-150 OFF.
CONTACT YOUR LOCAL DEALER. DO NOT TRY TO CHANGE A BLOWN FUSE.
REPLACING A BLOWN FUSE 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 84.**



CAP-150 REMOTE HANDSET

REMOTE HANDSET

The remote handset (wand) supplied with the **CAP-150** controls the volume, and switches MUTE ON and MUTE OFF. To access the batteries, unscrew the back plate of the remote handset (fig. 2 page 13) with the supplied hex key.

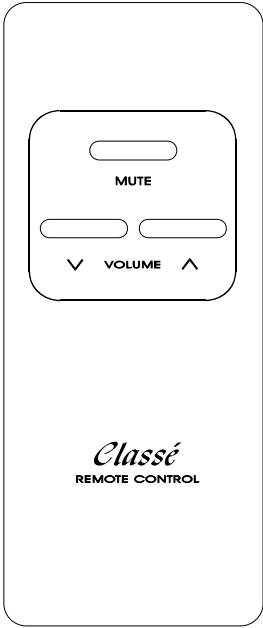


Fig.1: Remote control unit (top view)

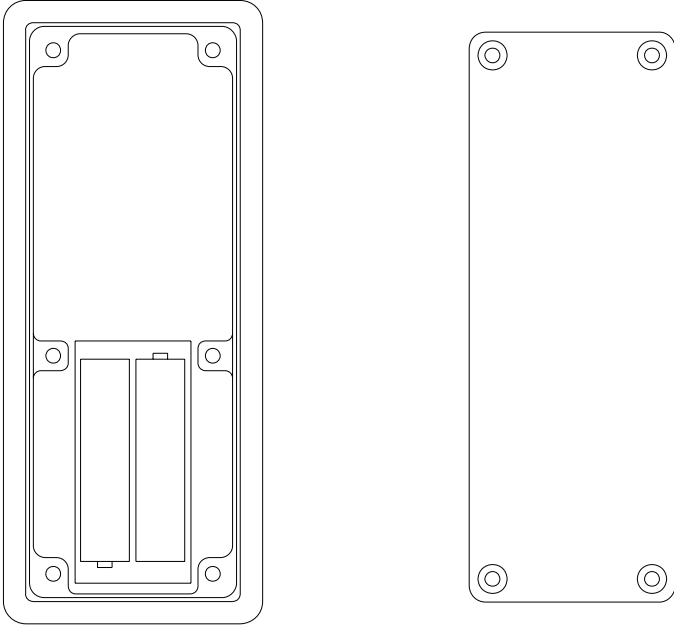


Fig.2: Remote control unit (bottom view)

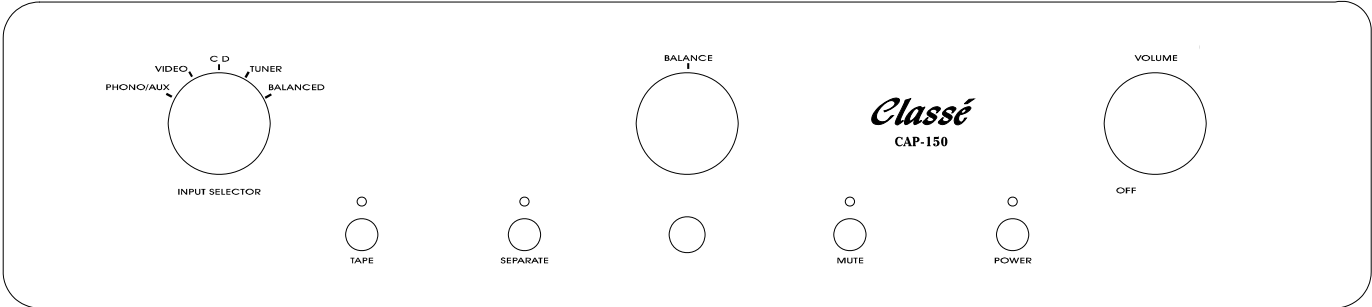


Fig.3: CAP-150 FACE PLATE

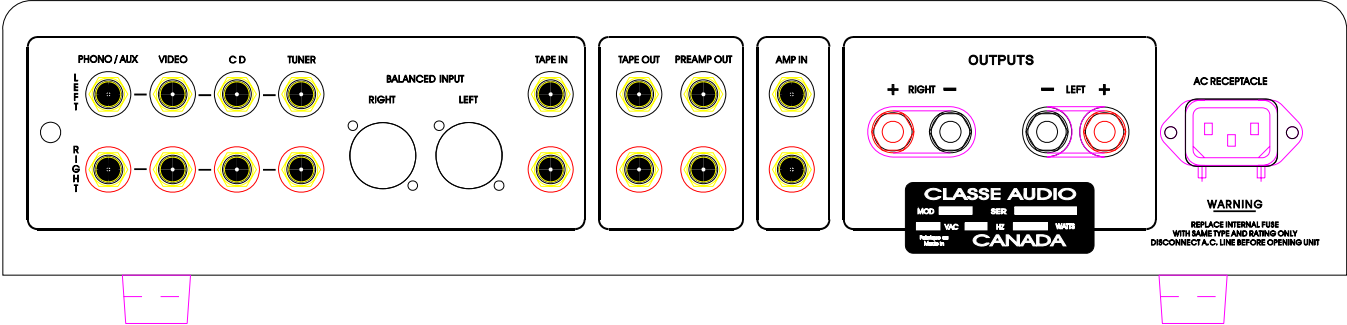


Fig. 4 CAP-150 rear panel

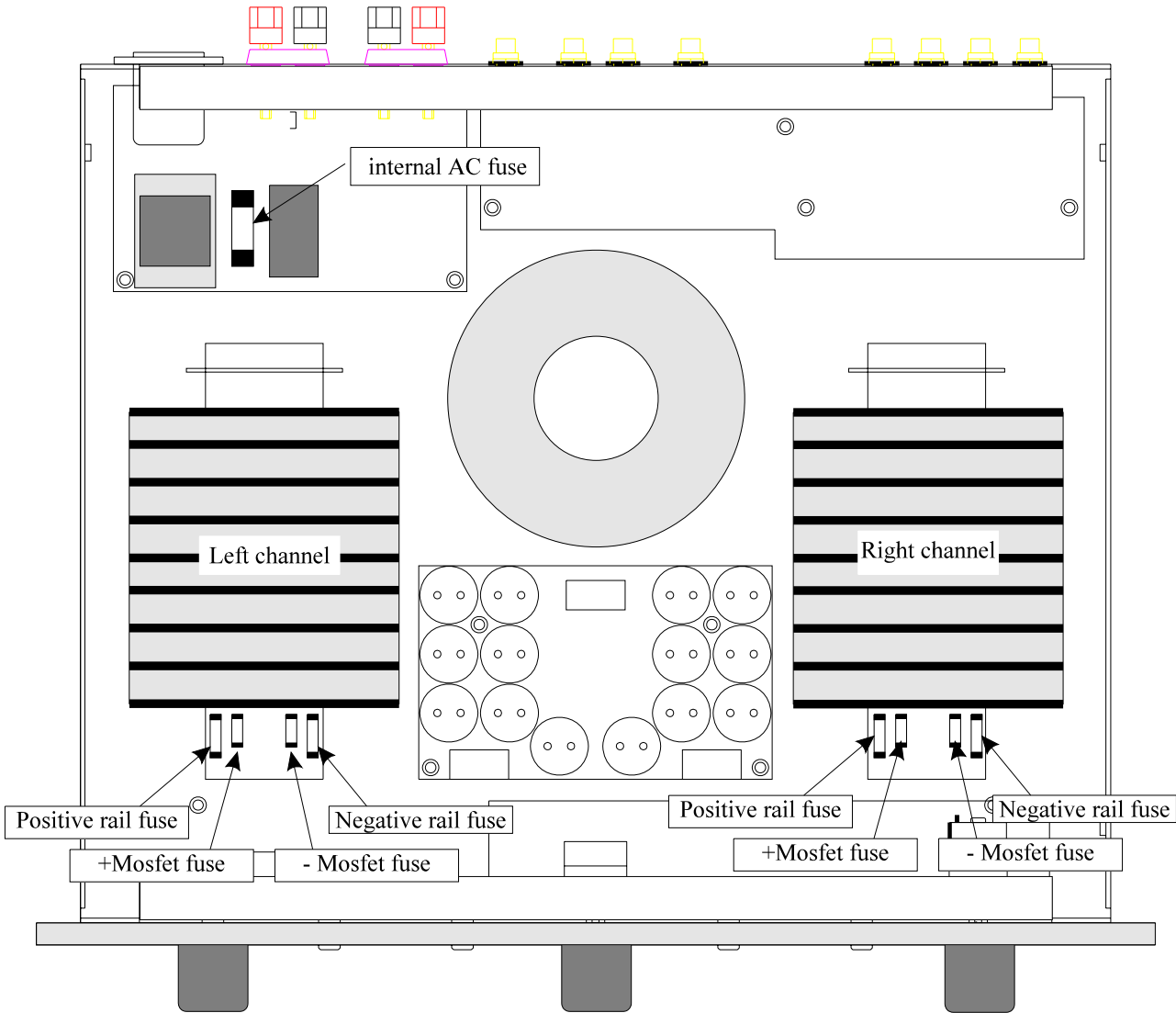


Fig5: CAP-150 top view

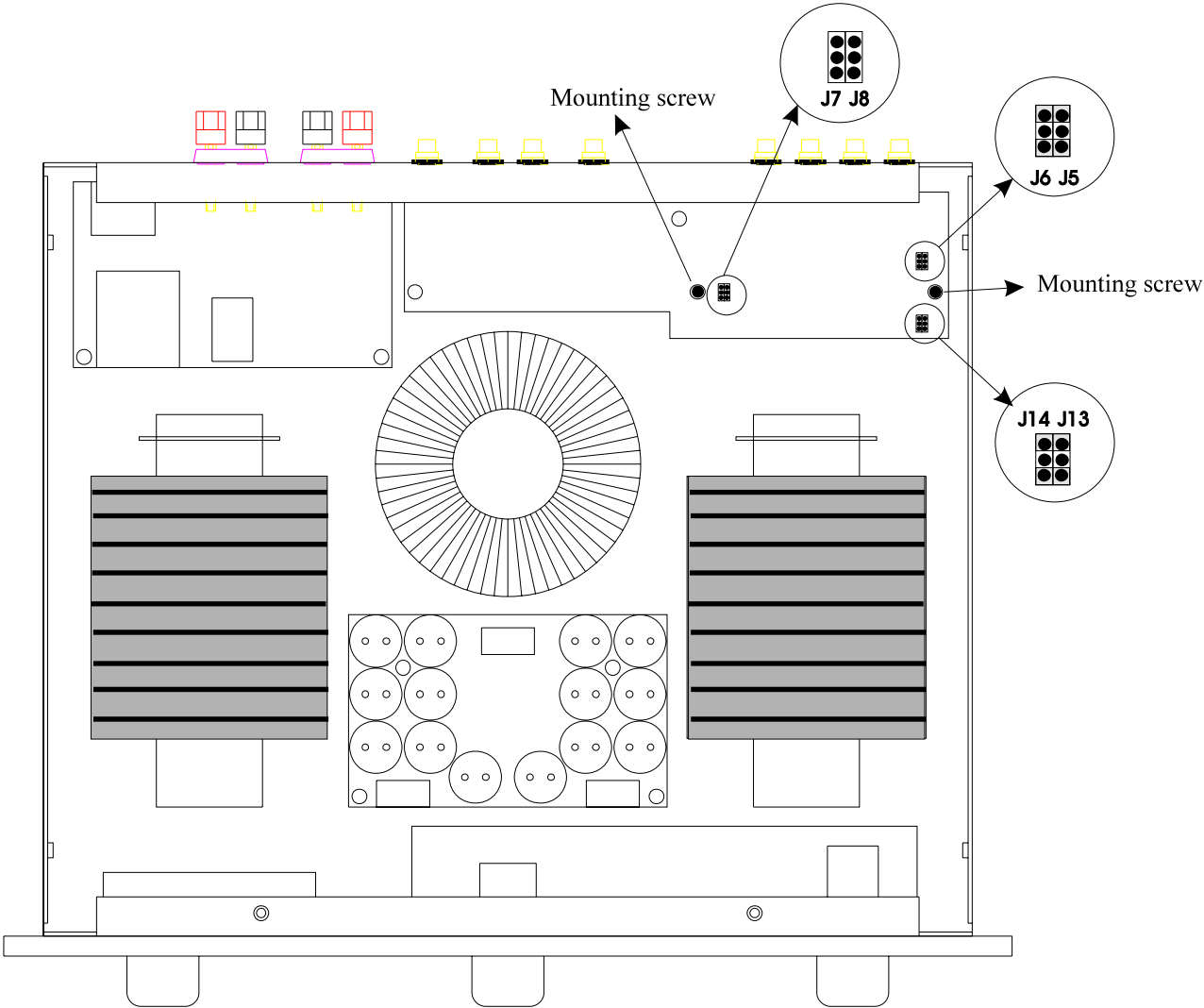


Fig 6: Phono jumper locations

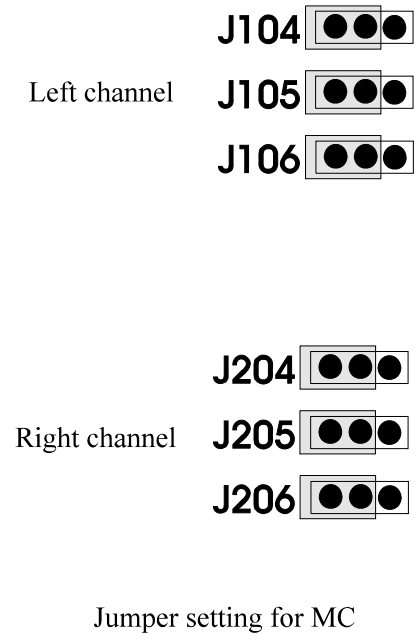
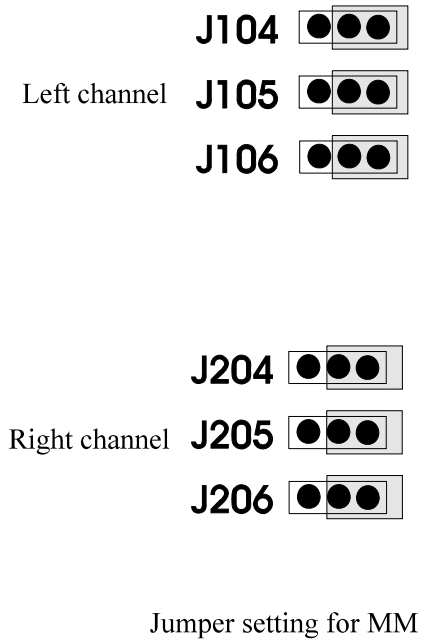
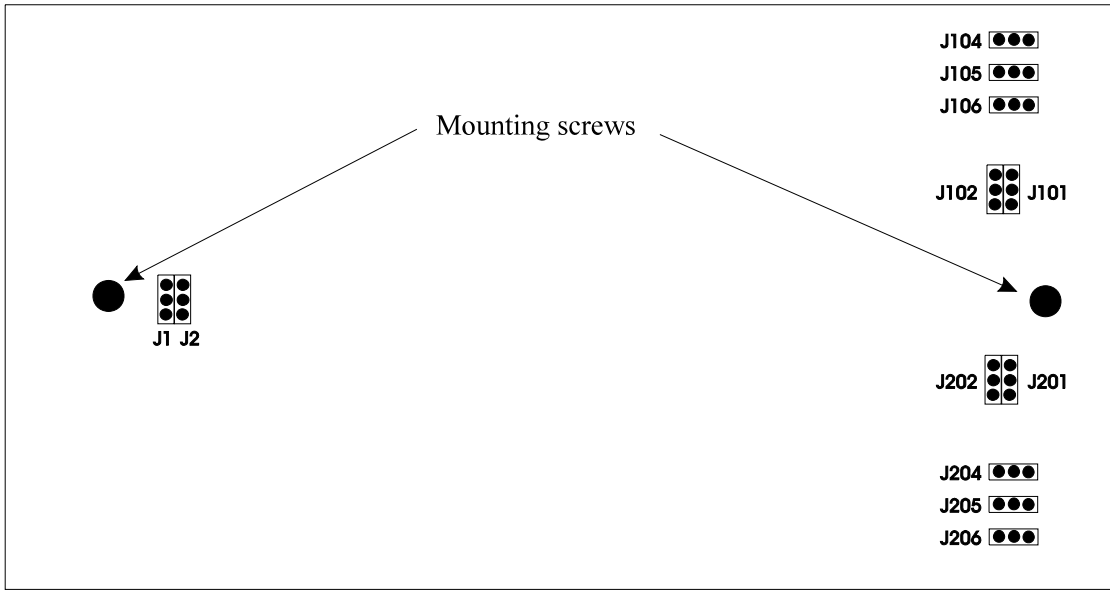


Fig 7: Optional phono board

INSTALLATION OF THE PHONO BOARD

- 1) Disconnect the A.C. line cord from the wall outlet.
- 2) Remove the top cover with the supplied Allen key.
- 3) Locate and replace the two mounting screws (see fig.6, page 18) with the supplied stand-offs.
- 4) Remove jumpers J5, J6 and J13, J14 (see fig.6, page 18). **Check if the extension sockets are in place on the reverse side of the phono board.**
- 5) Install and secure the phono board using the screws removed previously in step 3, **make sure that all connectors are properly aligned.**
- 6) Set MM/MC jumpers to the desired position. All six of these jumpers are located at the far right of the phono board (see fig.7, page 19). **Please note that for ALL HIGH OUTPUT MC Cartridges, the jumpers have to be SET AT MM.**
- 7) Replace the top cover.

REMOVAL OF THE PHONO BOARD

- 1) Disconnect the line cord from the wall outlet.
- 2) Remove the top cover with the supplied Allen key.
- 3) Remove the screws securing the phono board, remove the phono board and the stand offs, replace the screws where the stand offs were removed (see fig.6, page 18) to secure the main board.
- 4) Replace jumpers J5, J6 and J13, J14 (see fig.6, page 18) on the main board. Jumpers from the phono board can be used for that purpose.
- 5) Replace top cover.

CLASSÉ AUDIO

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CLASSÉ CAP-150

REMOTE CONTROL BALANCED LINE INTEGRATED AMPLIFIER

FEATURES AND SPECIFICATIONS SHEET

CAP-150 FEATURES

Remote control featuring adjustments for both volume and mute. Contoured slimline chassis. Inputs featuring AUX/PHONO, VIDEO, CD, TUNER, BALANCED inputs, PREAMP OUT outputs to be used with an external power amplifier, AMP IN inputs to be used with an external preamplifier. Front panel controls include INPUT SELECTOR, BALANCE, VOLUME, TAPE, SEPARATE, MUTE and POWER. Special Classé front panel available in both Satin Black and Soft Shadow Silver finishes.

CAP-150 SPECIFICATIONS

PREAMPLIFIER SECTION

Frequency response:	20 Hz to 20 KHz, \pm 0.1 dB
Maximum Output:	20 Volts Peak to Peak
S/N Ratio:	-110 dB "A" weighted
THD+N:	0.006%
Input Impedance:	12 Kohms for balanced 33 Kohms for single ended
Output Impedance:	50 ohms
Gain:	17 dB
Crosstalk:	-75 dB at 1 KHz

AMPLIFIER SECTION

Output impedance:	0.17 ohm
Input impedance:	118 Kohms
Gain:	29 dB
S/N ratio:	-110 dB "A" weighted
THD+N	0.002%
Output power:	150 Watts/channel into 8 ohms 225 Watts/channel into 4 ohms

COMBINED

S/N ratio:	-90 dB "A" weighted
THD+N:	0.005%
Crosstalk:	-75dB
Dimensions: Gross:	24" x 10.25" x 21.25"
Net:	19" x 5" x 17"
Weight: Gross:	40 lbs.
Net:	35 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.**