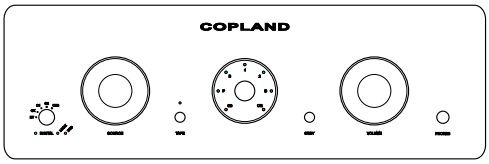
COPLAND

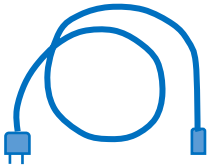
CSA150

USER GUIDE



What's in the Box

USER GUIDE



POWER CORD

AMPLIFIER

REMOTE CONTROL

GETTING STARTED

Open the carton and remove the amplifier from its plastic bag. Before placing the unit in your home, read this carefully.

CAUTION!

Various regulation agencies require us to bring the following information to your attention. Please read carefully.

WARNING ! To prevent fire or shock hazard, do not expose this unit to rain or moisture.

! Check that your supply voltage is the same as indicated.

! Dangerous voltage inside. Do not open the cabinet without disconnecting the mains power cord.

! There are no user serviceable parts inside. Repairs should be carried out by qualified service personnel only.

! Ensure that no objects or fluids pass through the ventilation openings. If liquid is spilled into the amplifier, disconnect from the mains and consult a qualified service technician.

Do not subject the amplifier to high mechanical vibration, the tube is sensitive to this.

Allow adequate clearance so that cool air can enter at the chassis ventilation holes.

Never place the amplifier on a carpet or similar surface that obstructs air circulation through the unit.

The trouble-free life of an amplifier is greatly extended by providing sufficient ventilation to prevent build-up of high internal temperatures that cause deterioration.

The recommended minimum ventilation space is 50 cm wide and 40 cm high.

Installation

Input / Outputs

Apart from the headphones, all connections are on the back panel of the amplifier.
Use shielded cables to connect the signal source to the amplifier input. To minimise the possibility of hum, the shielded cables should run parallel to each other or loosely twisted together. Locate the cables away from speaker leads and AC power cords.

AC Power

The amplifier AC power cord is plugged into an 115V/120V/230V/240Volt. 50/60 Hz wall outlet. The right voltage is indicated on the back panel beside to the AC power inlet.

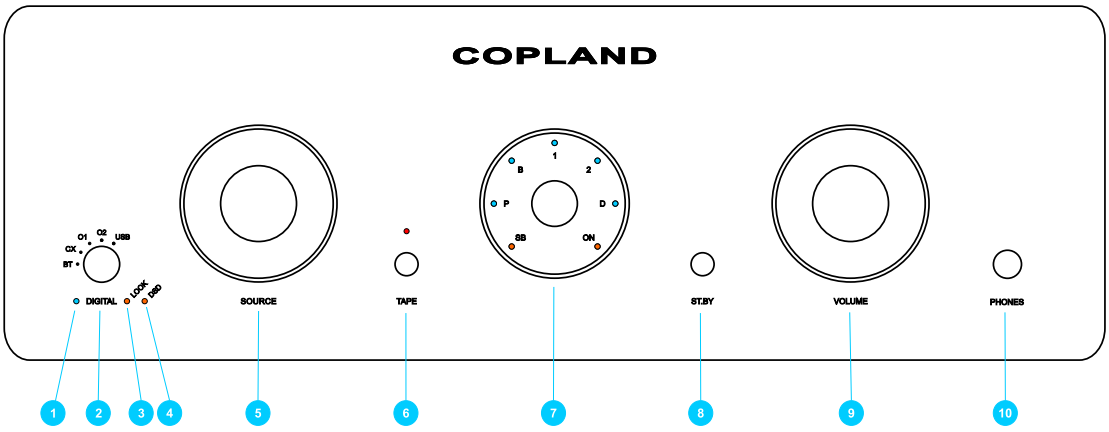
! Check that your supply voltage is the same as indicated on the amplifier back panel.

! CSA150. Speaker polarity.

The absolute signal phase at the speaker terminals of CSA150 is inverted (exactly 180 degrees, black speaker terminal grounded).
The phase invention is due to the electrical design of the tube line stage in the amplifier.
It is easy to get the signal to the speaker in phase. Just connect the speaker wires opposite to the colour indication, so that red speaker wire goes to black amplifier connector and black to red amplifier connector.
You may ask why we did not make the internal wiring of the amplifier so that the colours of the output connectors are corresponding to the speaker cables. It is because the black terminal of the amplifier should be recognised as the terminal connected to ground. Wrong colour indication of the grounded amplifier terminals may cause breakdown of the amplifier or the measuring equipment if service on the unit is needed.

Using an active subwoofer connected to the CSA150 pre-out terminals. The subwoofer phase selector should be set in the 180 degrees position as first choice.

Front Panel



1. Digital Source Selector: Selects the type of digital input signal source.

2. LED: Blue light indicates that the Digital Source Selector is activated.

3. LED: Orange light indicates that a Digital Source is locked and activated.

4. LED: Orange light indicates incoming DSD signal.

5. Source Selector: Selects the appropriate input signal source.

6. Tape Monitor: If you have connected a tape recorder to the "tape in" on the back of the unit, then switching 'Tape' will make it possible to listen to tapes.

If your tape recorder has a monitor capability (usually requires a separate playback head), you can monitor your tape recording as it is being recorded by switching the tape button.

The Tape Monitor function can also be useful when adding an Equalizer / Room-correction unit in the signal chain.

A red lamp right above the tape key indicates Tape Monitor activated.

NOTE: When the Tape Monitor is engaged, it bypasses the Selector Switch. Regardless of which source the selector is set for, you only hear the tape input.

7. Display: The display shows the selected source input.

PH = LED indicates activated Phono input.

B. = LED indicates Balanced Inputs

1. = LED indicates Analog Input no.1

2. = LED indicates Analog Input no.2

D. = LED indicates that the Digital Source Selector is activated.

A flashing 'ON' lamp indicates that the amplifier is under its 30 seconds start up procedure.

When the 'ON' lamp stops flashing, the amplifier sound stages starts operating after another 20 seconds.

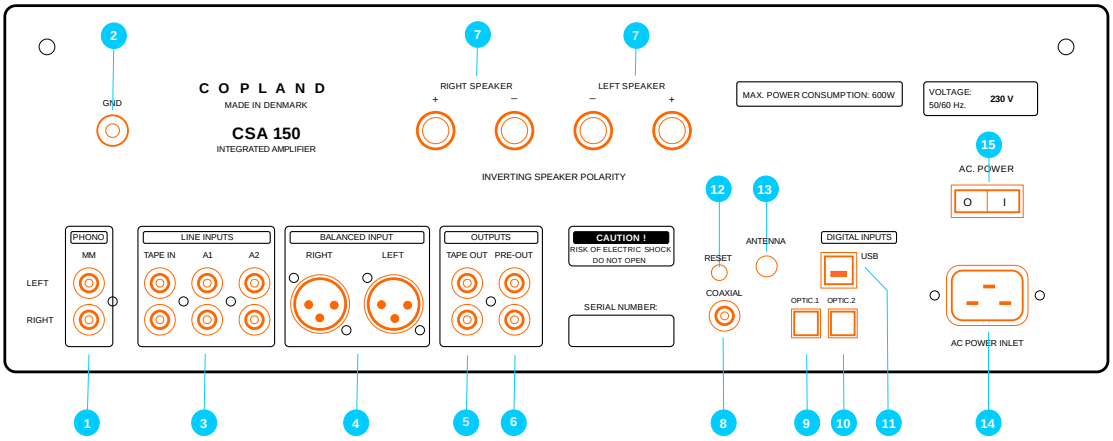
8. Power Switch: Pressing the key, the amplifier will switch cyclically between operation and standby mode. Power 'On' and 'Stand By' are indicated in the display.

NOTE: When the amplifier has been switched off, wait half a minute before powering on again.

9. Audio level. Turn the control clockwise to increase the volume.

10. Headphone. Output for Headphones

Back Panel



1. **Phono/RIAA Section:** Accepts input from a Turntable. / MM magnetic pickup (cartridge)

2. **Ground:** Earth connection for any device that needs to be grounded.

3. **A1, A2, TAPE IN:** Standard analog inputs.
   TAPE IN: Connects with the playback outputs of a tape recorder.

4. **Balanced Input:** Balanced analog input.

5. **Tape Out:** (Line Out) The record output jack permits recording directly any signal being reproduced by the amplifier.

6. **Pre-Out:**

7. **Speaker Output Terminals:** Left & Right Channel.
   ! Note: Signal phase is inverted at the speaker terminals - se the information on page 4.

8. **Coaxial input:** S/PDIF (Sony/Philips Data Interface) input from a CD player.
   It is a single ended square wave of amplitude around 0.5 V pp.

9. **Optical input 1:** TOSLINK - fibre optic transmission of S/PDIF.

10. **Optical input 2:** TOSLINK - fibre optic transmission of S/PDIF.

11. **USB Input:** Use a certified USB2.0 cable. Connect the cable to the CSA150 amplifier and then to the external USB source.

12. **Reset Button:** (*Optional Extra. Copland aptX HD Bluetooth board)*

13. **Antenna:** Connector for SMA Antenna. (*Optional Extra. Copland aptX HD Bluetooth*)

14. **AC Power connector:** 115V/120V/230V/240V AC, depending on country.
    ! Check that your supply voltage is the same as indicated on the back panel.

USB playback

The CSA150 asynchrony USB converter module has a power supply and power transformer secondary winding of its own. It is capable of working with 32-bit files with 384 kHz signal frequency.

We use a modified version of the “Amanero” USB module. The USB module requires a driver for Windows to recognize it.
You will find a link to the Windows driver and a guide for installation on page 8 in this manual.

MAC OS and LINUX computers works without drivers.

Only use USB 2.0 rated cable, i.e., a maximum length of 3 metres.

The capability of CSA150 to play the high resolution of 384 kHz does not mean that you need recordings or up sampling of that resolution.

We recommend that you listen to the recordings at the resolution settings they were originally made.

Using CSA150 with a MAC OS

MAC OS does not require any driver installation.

After turning the amplifier on and plugging it in by the USB, the device should show up on the MAC.

Note: The MAC will not describe the device as CSA150 but as Amanero Combo module.

To verify what is going on, please go to the “apple sign” in top left corner of the screen and choose PREFERENCES and then the loudspeaker icon – SOUND then go to OUTPUT - on the list of devices for sound output the Amanero should appear as enabled.

Next thing to set the MIDI SETTINGS of the MAC computer. Go to the top right corner of the screen and press search icon “SPOTLIGHT”: Type MIDI SETUP and enter.

To select the sample rate: Click “Combo384 Amanero” and select the sample rate.

Using CSA150 with a PC- (Windows)

The USB module requires a driver for Windows to recognize it.

The USB driver should be installed without the DAC USB connected to PC.

1. Download USB Driver.

   The USB driver can be found at this link:
   http://www.amanero.com/drivers/combo384_drivers_xp_w7_w8_w10_1057.zip

   ! You can also find a direct link to the driver at the product pages of DAC215 or CSA150 at the Copland Website. www.copland.dk

2. Unpack the downloaded package in a folder

3. Run driver setup.

Note: When the driver is installed the PC will not describe the device as CSA150 but as Amanero Combo module.

To verify that the PC has recognised the driver:

1. Go to **Settings / Control panel /**

2. **Click Hardware and Sound**

3. Click" Manage Audio Devices". "Amanero Technologies USB Driver" appears as the default device.

If "Amanero Combo module" does not appears as the default device, enable it. A check mark appears by the default selection.

4. To select the sample rate: Double click "Amanero USB Driver"

5. Under "Digital outputs properties" click "Advanced" and select the sample rate.

Media Players

A music player program to convert and organize your music collection and play it back is useful to transfer music and media files to folders on your computer's hard drive, either by converting the files from your CD collection "ripping", or by purchasing files downloaded from the internet.

Specialized programs can be used as media players, they are available from for example Foobar (Windows), iTunes (Apple and Windows), J.River Media Center (Apple and Windows).

Maintenance

The CSA150 is built for a long lifetime, and no special care needs to be taken, except from what is already described under installation. However, the heart of the line amplifier is a tube, and like a light bulb, it has a limited lifetime. After a period, it may affect the performance of the amplifier. The tube is operated around 25% of its full nominal power, which considerably increases its life expectancy. The lifetime of the tube should be at least 4000 hours, assuming that the amplifier is switched on and off a couple of times per day.

Fuse

The CSA150 employs a 20 mm glass fuse circuit breaker located in a PCB-fuse socket inside the amplifier.
The fuse value is 3,15 A.F (6,3 A.F for USA)

Warranty and Service

Copland provides a warranty to the first purchaser for a period of three (3) years.
Copland usually commissions the Copland agency in the country in which the amplifier was purchased to carry out any warranty work.
Following consent from Copland in a particular case, the warranty service may also be claimed at an agency in another country.

Specifications

Output power:	2*145W into 8 ohms load. 2*230W into 4 ohms load.
Nominal speaker impedance:	4 & 8 ohms
Analog Inputs:	1*balanced (XLR) 3*unbalanced (RCA)
Digital Inputs:	1*coaxial S/PDIF. 2*optical S/PDIF. 1* USB. 1* aptX HD Bluetooth (Optional Extra)
Line output:	1*unbalanced (RCA) 1* Pre-out /unbalanced variable (RCA)
Line input impedance:	50 K ohms
Phono input impedance:	47 K ohms (MM)
Phono input Capacitance:	200 pF
Line Inputs sensitivity:	250 mV
Phono sensitivity:	3.0 mV
Frequency response:	10 Hz - 150 kHz -3dB
T.H.D:	Better than 0.03 %
Signal / noise IHF-A):	Better than 90dB
Phase:	Inverting
Headphone amp. Gain:	22 dB @ 100 ohms load impedance
Headphone amp. Out imp.	40 ohms
Headphone amp. T.H.D.	Better than 0.05 %
Headphone amp. Freq. resp.	10 Hz – 150 kHz / -3dB
Vacuum tubes:	1 pc. 6922
Power consumption:	Max.700 W
Dimensions:	435mm (w) x 165mm (H) x 370mm (D)
Shipping weight:	15 Kg.