



CPA3000 Preamplifier



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CPA3000 Preamplifier

Thank you for buying a Chord Electronics product.

Before you start to enjoy your preamplifier, please take a couple of minutes to read how to connect your audio equipment and how to maximise your listening experience.

Product Description

Using similar technology as the highly successful CPA5000 reference preamplifier the CPA3000 features a high frequency switch mode power supply and ultra low noise circuitry to give the very best noise floor performance. Four pairs of balanced style XLR inputs allows for great flexibility with two additional RCA inputs for unbalanced sources. A single tape loop is available for playback and also to record from any of the connected sources. Front panel controls allow for easy input and output selection if required but changes can also be made via the supplied remote control. Cleverly situated under the main display, signal detection indicators have been replaced with highly accurate VU meters. These give both clear signal detection and accurate input level. Naturally via the front panel control, these may be selected or disabled as required. Two polished and nickel plated aluminium controls feature prominently to manually adjust the volume and the balance and give easy visual reference of the settings. Using the precision motorised Alps potentiometers levels can also be adjusted by remote control. All settings are clearly visible via the large easy to read vacuum fluorescent display and are retained even when power is removed.

Inventory

As well as your CPA3000 and this user manual, you should also have received the following items.

1. System Remote Control including user manual
2. Power cord
3. Chord guarantee registration card

When setting up

To ensure that your CPA3000 works efficiently and safely, please pay particular attention to the following issues.

ventilation

Your CPA3000 should have at least 5cm of clear space all around it to ensure a free flow of air at all times. We do not recommend that you place CPA3000 directly on a carpet. If you have the optional integra leg system fitted it is recommended that the power amplifiers sit above the CPA3000.

AC lead and plug

All Chord equipment comes supplied with the correct power lead and plug. This should be used at all times.

if you need to fit a plug for UK/Europe

Connect the blue wire to the neutral terminal

Connect the brown wire to the live terminal

Connect the yellow/green wire to the earth terminal

if you need to fit a plug for US/Canada

Connect the white wire to the neutral terminal

Connect the black wire to the live terminal

Connect the green to the earth terminal

earthing issues in Europe

In some European countries a hum may occur if your CPA3000 is connected to mains sockets that do not have an earth. If this is the case please ensure that:

1. Your transport is connected via a multi-way mains block, which contains an earth point at each socket outlet. This is to ensure that the chassis metalwork of each item is connected together.
2. We recommend that an earthing method for your building be implemented.
3. Use the connecting points on your Chord unit and connect to an available earth point.

Safety Warnings

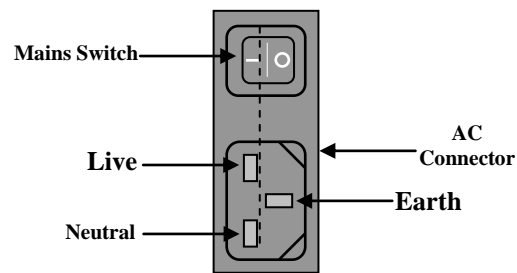
It is important that your CPA3000 is earthed at all times via its own mains lead. Failure to do this may be hazardous. The power supply components within the CPA3000 are designed to operate at lethal voltages and energy levels. Circuit designs that embody these components conform to applicable safety requirements. Precautions must be taken to prevent accidental contact with power-line potentials. Do not connect grounded test equipment.

There are no user serviceable parts within the CPA3000 Reference Preamplifier. Unauthorised tampering or dismantling of this product will invalidate the warranty and could cause injury.

AC Power connection

The AC power connector of CPA3000 is at the back of the unit. Plug the female end (socket) of the power cord into the power connector of the transport, and the male end(plug) of the power cord into AC wall socket or AC extension socket. The CPA3000 features a universal voltage high frequency power supply and will operate automatically from 65V to 260V AC, 50 or 60Hz.

For optimum operation it is recommended that the CPA3000 is connected directly to the wall socket via the power cord provided.



AC connector and switch

Powering up

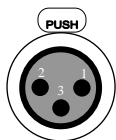
Press the rear panel switch marked power. The display and internal illumination will light up. The display will show the selected input.

Powering down

Press the rear panel switch marked power. The CPA3000 utilises soft start circuitry so the power can switched on and off as often as required. There is no need to leave the CPA3000 permanently switched on.

Connecting your equipment

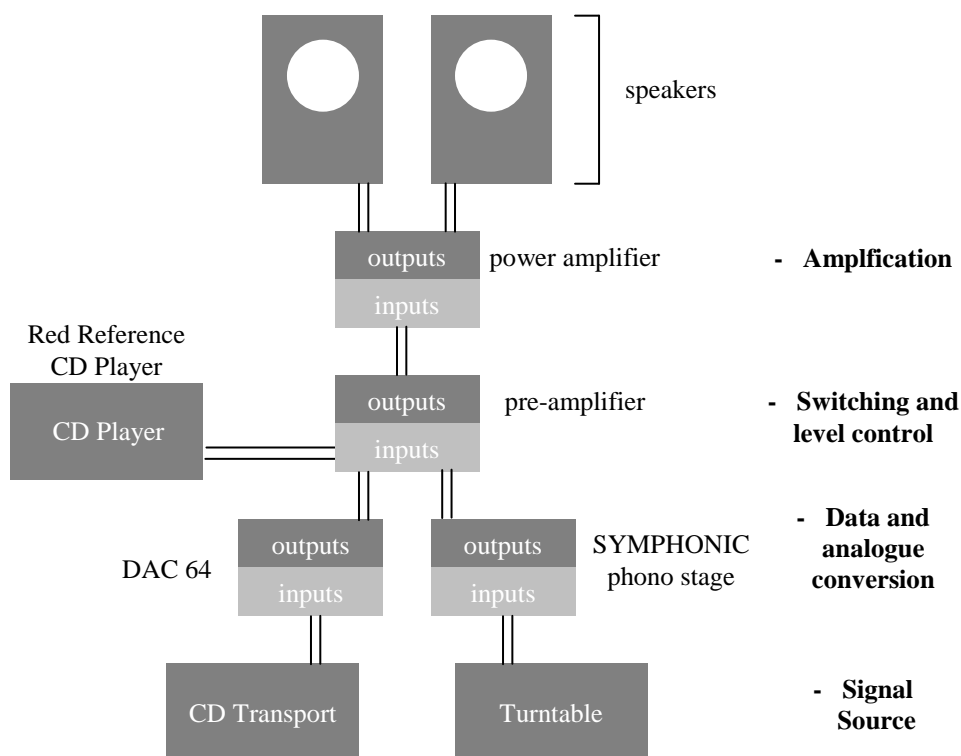
Chord amplifiers are supplied with and designed to be connected using balanced inputs. The interconnecting cables you use will depend on the available input and output sockets on your other equipment. We have installed unbalanced inputs on all Chord equipment, thus enabling you to mix Chord Electronics and other manufacturer's equipment.



Balanced inputs carry twice the strength of signal of unbalanced inputs and are able to be fed down long lengths of cable with less deterioration of signal. They are also less prone to interference than unbalanced inputs. Balanced inputs have three pins and use Neutric XLR style connectors. Pin 1 is earth, pin 2 is positive and pin 3 is negative.



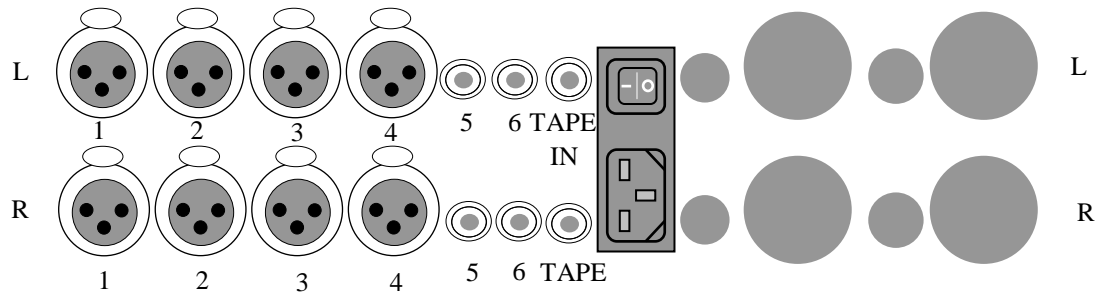
Unbalanced inputs use RCA phono connectors, which are gold plated with teflon high performance dielectric insulators for optimum performance.



Basic system diagram

Input Connections

You can connect up to 7 items of source equipment. Included is a tape loop for recording purposes. All input connections are on the rear panel and are marked with the corresponding Line number. Lines 1 to 4 are balanced inputs, Line 5, 6 and TAPE are RCA phono style inputs. Left channel connections are at the top, right channel connections are at the bottom.



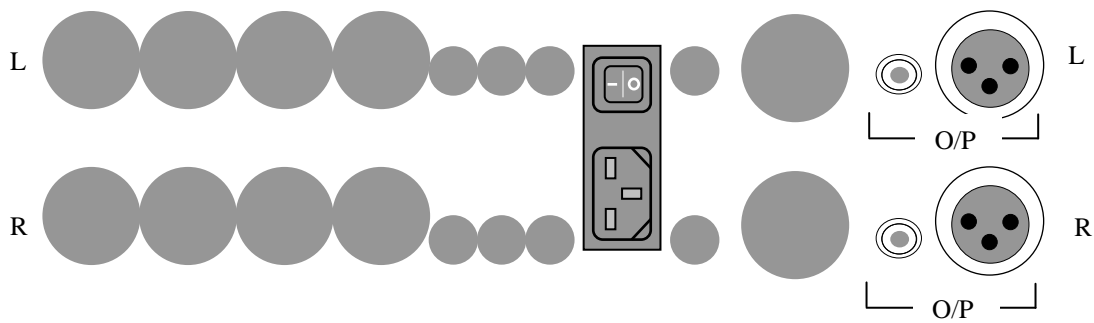
It does not matter which input you choose just select the same type of connection that your source has.

Note: Moving coil turntables without an internal amplifier will require an external phono stage amplifier such as the Chord Symphonic before connecting to the CPA3000.

Output Connections

You need to connect the outputs on the back of the CPA3000 to a power amplifier in order to drive your loudspeakers. There is one pair of balanced XLR outputs or one pair of RCA phono outputs each of which will drive a 68 ohm load. Choose either depending on the appropriate input connection on your power amplifier. Left channel connections are at the top, right channel connections are at the bottom.

Note: For optimum performance it is recommended that the balanced outputs are used where possible.



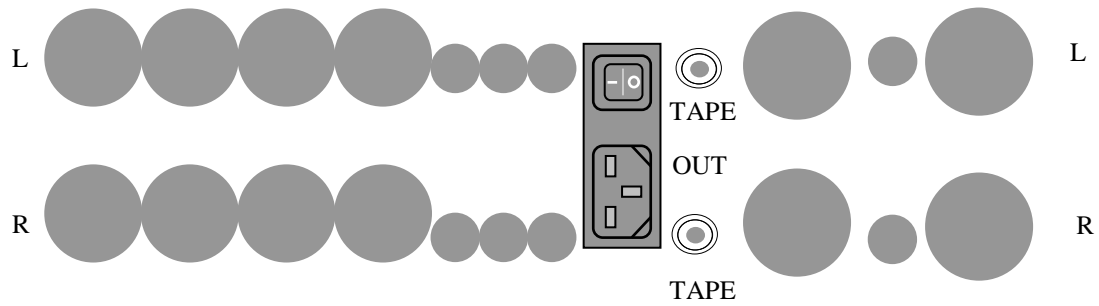
If you wish to bi-amp then ask your interconnect manufacturer to provide you with a balanced or RCA cable splitter. This will split the single output from the CPA3000 into two signals one for each amplifier.

Recording

You can record an input from any of the connected audio sources to the tape output. If you've been using a tape recorder as an input source, it will already be connected to the TAPE IN socket. Connect the tape recorder input to the TAPE OUT RCA connection to record the selected audio source.

connecting to a Tape recorder to tape an audio source

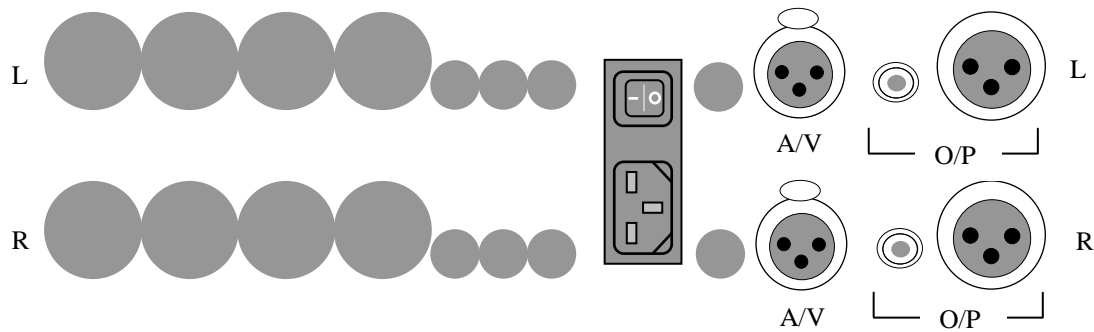
Use RCA connectors to the left and right pairs marked OUT TAPE.



Note: In these examples we have used a tape recorder but you can use any recording device with a phono input. Minidisc, CD/DVD recorders and PC soundcards are all normally compatible.

AV Bypass

AV Bypass mode allows the output of an AV surround sound processor to be connected and then routed directly to the output of the CPA3000. The volume control and signal processing are bypassed so that the signal from the AV processor reaches the power amplifier exactly as if it were connected directly. This has the advantage of allowing the CPA3000 to remain in an AV system to give the best possible stereo two channel playback whilst still being able to switch to AV bypass mode to allow the processor to playback multichannel film content.



Connect the front left and right outputs from your AV processor to the inputs on the back of the CPA3000 marked A/V. Connect to the power amplifier as normal via either the balanced or RCA output on the CPA3000. Press the RESET button or Bypass on the remote control to activate the bypass option.

Note: The volume control in the CPA3000 will be bypassed so please check before switching on your AV processor that the volume is turned down. When switching back please check that the volume on the CPA3000 has not inadvertently been turned up before playing any music.

Everyday use of your CPA3000

Turning on your CPA3000

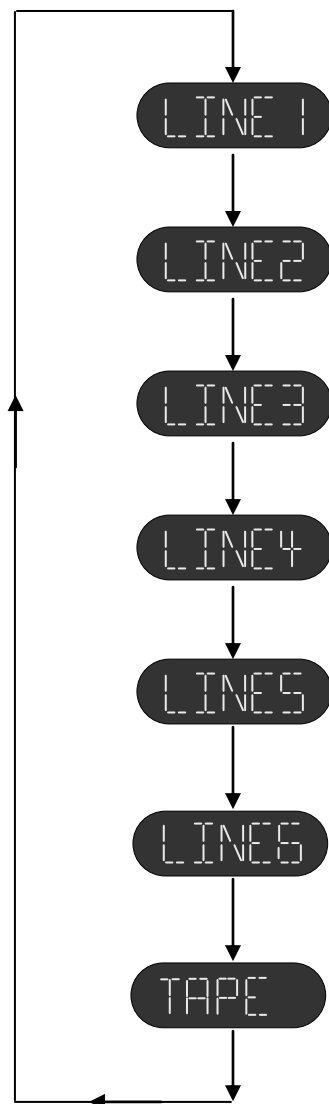
Press the power button on the back of the CPA3000. Press again to switch off.

Select the input source

Press the INPUT button on the front panel to select the input source.

The options are shown in the diagram below.

The selected input will automatically be sent to the tape recording TAPE phono outputs:



Cycle of input selection options

Select the output

Press the RESET button to select the output.



adjusting the volume

Use the volume knob to adjust the volume manually. A clockwise turn of the knob will increase the volume and an anti-clockwise turn of the knob will decrease the volume. The volume range runs from 0 to 98 and is displayed on the CPA3000 display as you change the volume. If the outputs are muted, a volume change will un-mute the outputs to prevent large changes in volume from damaging your loudspeakers. The volume level is shown on the display as the word VOL and a two digit level as shown in the example diagram below.



Volume display

changing the balance

Use the balance knob to shift the balance between the left and right loudspeaker. A clockwise turn of the knob will shift the balance to the right speaker and an anti-clockwise turn of the knob will shift the balance to the left speaker.

Switching the VU meter

Press the front panel button marked VU to switch the VU display on and off.

Using the remote control

The CPA3000 is supplied with the system remote control that is a universal controller for all Chord products, televisions and DVD players. Full instructions can be found in the System Remote Manual supplied but for the purposes of controlling the CPA3000 the main functions are listed on the next few pages.



Press the HIFI key



to begin controlling the CPA3000.

Selecting the input source

Press the Line- or Line+ keys on the centre control to cycle through the inputs.

For convenience you can directly access the first 5 inputs using the buttons at the bottom of the remote control.

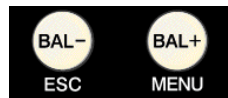


Adjusting the volume

Press the Vol+ button on the centre control to increase the volume, press the Vol- button on the centre control to decrease the volume.

Adjusting the balance

Press the Bal+ button to move the balance towards the right. Press the Bal- button to move the balance to the left.



Changing the output

Press OP1 to select the main output. Press BYPASS (OP2) to select AV Bypass output. OP1+2 has no function on the CPA3000.



Mute

Press the mute key to mute the CPA3000.



To un-mute

Press the mute key again, or select an output, or change the volume.

Maintenance

adjusting the settings

Always remember to make any changes to settings with the volume set low or an instant burst of sound could damage your loudspeaker.

cleaning

To clean finger marks and other blemishes from your amplifier spray clear glass cleaner onto a soft lint free cloth and then use the cloth to gently clean your amplifier.

changing the batteries in the remote control

Simply push the button on the bottom of your remote control to release the battery cover. Replace with four new AAA batteries as shown inside the battery compartment.

servicing

There are no user serviceable parts in your Chord amplifier, and it should only be serviced by Chord Electronics Limited or their expressly approved Service Agents.

Frequently asked questions

why aren't any of the remote control buttons working?

Press the HIFI button to set up the remote control for pre-amplifier functions.

I've connected all the wires up but I can't hear any sound?

Ensure that you've selected the correct input (e.g. Line 1) and the correct output (e.g. Output 1).

why is there humming coming from the loudspeakers?

Check that you've earthed the unit. The interconnects need to be properly screened and placed away from mains cables. Interference can be reduced by using balanced inputs and outputs instead of RCA phono types.

the sound coming from the loudspeakers is distorted

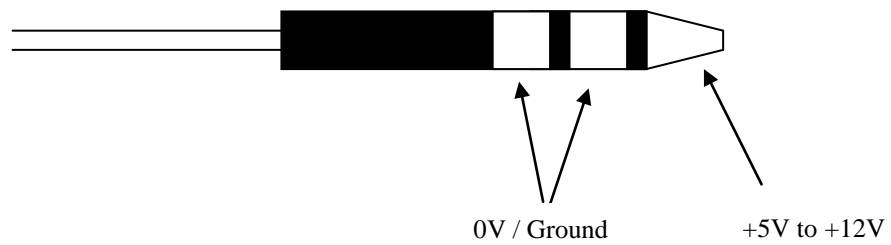
Check that the speakers are connected properly. It may be that the volume is turned up too loud for your speakers.

Trigger Outputs

The CPA3000 features two trigger outputs that can be used to remotely trigger other Chord equipment. The external trigger should be connected via a standard 1/8th inch / 3.5mm (mono or stereo) jack plug to the socket fitted to the rear of the unit.

The CPA3000 should be switched off, the trigger lead inserted, then the unit switched back on.

The connections are as follows:



The tip of the plug is the +5V to +12V dc connection, the centre and rear connection are the 0V or ground connection.

Product Specification

Unbalanced Inputs:	Line 5, Line 6, Tape. 3 x pairs RCA Phono style, gold-plated with Teflon dielectric insulation.
Balanced Inputs:	Line 1 to Line 4. 3-pin female pairs of female Neutrik XLR inputs.
Outputs:	1 x pair of 3-pin male Neutrik XLR output with 1 x pair of gold-plated RCA Phono wired asymmetrically in parallel.
AV Bypass input:	1 x pair female 3-pin Neutrik XLR input
Intermodulation Distortion:	-100dB all inputs
Signal to Noise Ratio:	-93dB all inputs
Frequency Range:	2.5Hz – 200kHz (-3dB)
Nominal Gain:	Fixed at x 1.1
THD:	0.002% 20Hz – 20KHz
Channel Separation:	10 Hz 90dB, 1kHz 90dB, 10kHz 90dB, 20kHz 85dB
Channel Balance:	0.01dB
Input impedance:	Unbalanced 47kOhms, Balanced 94kOhms
Output impedance:	100 Ohms short circuit protected
Output Offset:	0mV both channels
Max Input Voltage:	10Vrms balanced, 5V rms unbalanced
Max Output Voltage:	15V rms balanced, 7.5V rms unbalanced
Potentiometer Performance:	0dB 0.5dB, -20dB 0.2dB, -60dB 0.24dB (13 secs for full travel)
Power Consumption:	50W
Operating Voltage:	85 – 270V AC (50-60Hz) auto switching
Dimensions:	420mm (w) x 355mm (d) x 88mm (h)
Weight:	10Kg



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