



# C10 Digital to Analog Converter

## Quick start Guide

Thank you for choosing the C10 DAC/Converter for your audio system. The C10, like all the other products designed by CH Precision, is highly versatile. Unlike many, more conventional DACs, in order to achieve the best results from your unit, it is important to read the user manual that contains all the information needed to set up, configure and use your C10. The current user manual is stored on the USB stick included in the accessory pack. The latest version of both the manual and the unit Firmware is also available to download at anytime from [www.ch-precision.com](http://www.ch-precision.com).

This guide will help you get started with your C10 DAC/Converter.

You will need a box cutter and somebody to help with the lifting. Both of the C10 chassis are quite heavy and we strongly recommend that they each be moved and placed by two people.

### 1. Open the boxes carefully (they're heavy!)

They should contain:

- The DAC's two units, one in each carton. The C10 power supply is especially heavy, so handle it with considerable care.
- The accessory box and manual.
- Eight CH composite Titanium spikes (located in the bottom piece of foam).
- Eight CH polymer footer discs.
- Eight small CH, dimpled polymer stacking caps.
- One C15 mains power cord.
- A suction cup (located in the top piece of foam) and other tools.
- The small, hand-held remote.
- A CH Precision USB drive.

If anything is missing or if the unit presents cosmetic damage due to transportation, please contact your dealer immediately.

### 2. Placing your unit (remember – it's heavy!)

- First check that the voltage selector located on the IEC socket at the back of your unit is displaying the voltage in use at your location. If different, do not continue with this procedure and contact your dealer for assistance.
- If using the integral ground/support spikes:
  - Remove the unit's four Top Covers using the provided suction cup.
  - Insert the CH Spikes into the wells and start them in the threads in the base, ensuring you don't insert them too far, so that the spikes show and might damage the supporting surface.
- Place the C10 DAC/Converter in its final position, ensuring there is sufficient airflow around, above and below it. If installing the CH Spikes, locate the four footer discs beneath the unit's feet (You can use an AirWedge or similar lifting bladder to help with this). Now, using the short screwdriver provided, wind the spikes down until they lift the unit clear of the support discs. Ensure that all four spikes are in even contact/show equal resistance when turned and that the unit is precisely level. Replace the top caps.
- If you are stacking CH units you need to replace the top-caps with the small, dimpled stacking caps provided in the accessory pack. The spikes of the upper unit should be retracted when placing that unit and should locate directly into the dimples in the caps when extended. Level the upper unit as described above.

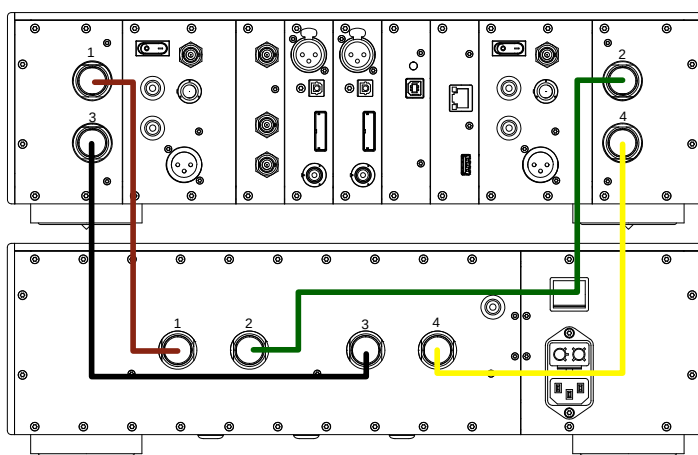
### 3. Power connections

- Before attempting any electrical connections, set the power switch at the back of the power supply unit to OFF (the 0 on the switch should be depressed).

- Connect the four cables between the power supply and the audio chassis. The wires are color coded (White/Brown/Yellow and Green). For Mono wiring refers to the main manual.

- ① Right Analog Power Supply, 12 pins, Brown
- ② Left Analog Power Supply, 12 pins, Green
- ③ Right Control Power Supply, 18 pins, White (Black for diagram)
- ④ Left Control Power Supply, 18 pins, Yellow

Wiring power supply



- Connect the unit to the mains grid using the provided power cord.
- If your units are cold due to transportation, let them warm up to room temperature before powering them up.
- Never connect or disconnect the cables that link the power supply to the audio chassis with the units switched on.
- Always complete the power cord and umbilical connections, but ensure that the C10 is turned off, before connecting any signal cables.

### 4. Audio connections

Never attempt to make or modify audio connections with your C10 DAC/Converter powered on. The unit's back panel switch must be in the OFF position while making audio connections. The mains power cords should be plugged into the wall socket so that the unit is grounded.

#### Making connections and operating your C10 using the CH Control App

##### Network Connection

- If you wish to use the free, Android compatible CH Control App (and we strongly recommend that you do, as this allows direct remote access to the C10 DAC/Converter full functionality) use a Cat 6 Ethernet cable to connect the ETHERNET-IN HD or CONTROL board (whichever is fitted) to the system network. The Control App can be downloaded from the C10 product page at [www.ch-precision.com](http://www.ch-precision.com) or from the GooglePlay App store.



- The ETHERNET-IN HD card not only allows full control of the C10 from our control app, but it is also the preferred connection to network audio, including UPnP, Roon, and streaming services like Qobuz and Tidal.
- Use the Network section of the unit's menu to connect the C10 to your network. Default IP setting (auto - DHCP) should work for most home networks.

### Digital Audio Inputs

- If pairing the C10 with a CH precision CD/SACD player/transport, connect the proprietary CH Link-HD cable between the units.
- You can connect the standard digital inputs to both CH and non-CH Precision source components. The C10 is equipped with an AES/EBU balanced 110 Ohm, an RCA S/PDIF 75 Ohm and TosLink optical inputs. You can add a second Digital-IN HD card if more digital inputs are required.
- Always ensure that you use properly specified digital interconnects. Standard analog balanced or single-ended audio interconnects will not match the digital impedance standards and can seriously degrade performance.
- If you wish to use a USB Audio source, make sure that you specify the USB-IN card.

**NOTE:** The USB Type A socket on the C10's ETHERNET-IN HD or CONTROL card is NOT a digital audio in or output. It is used to update the unit's firmware when necessary.

### Analog Outputs

- Each channel offers a balanced XLR socket, a single-ended RCA and a 50Ω output on BNC. The balanced XLR connections are generally preferred.

The C10 has three predefined output levels

|                           | 1V <sub>rms</sub> | 2.5V <sub>rms</sub> | 5V <sub>rms</sub>  |
|---------------------------|-------------------|---------------------|--------------------|
| Single-ended (Unbalanced) | 1V <sub>rms</sub> | 2.5V <sub>rms</sub> | 5V <sub>rms</sub>  |
| Differential (Balanced)   | 2V <sub>rms</sub> | 5V <sub>rms</sub>   | 10V <sub>rms</sub> |

To change the output level, enter the unit menu, navigate to the SETUP >> AUDIO section and select your output level.

### Clock priorities and connections

- When using the C10 with a CD/SACD Transport or other digital component with a clock input (such as the CH Precision D1.5), you can use the C10 as the system's clock master (using the Clock Source menu in each unit).
- When a high quality clock generator (like the T1/T10) is available, the C10 can synchronize to it.
- Clock connections should be made using 75 Ohm BNC cables.
- Please see the attached system topology diagrams for details of optimum clock connections and menu settings.

### 5. Switch on

Once you have made all of the power and audio connections, you can turn on your C10. First, power up the power supply unit using the rear switch. You will see the red LEDs in the front-panel CH

logos (top left) blink a few times and then illuminate. Now, press the top button on the audio chassis once. The power LEDs will start to flash and the main display will indicate that the power supply is charging. Once the power supply has charged, the display will switch to show the input status. You are now ready to operate/configure your C10.

### 6. Audio, display or input/output specific settings

The C10 allows you to configure several aspects of its operation and display (output level, local or global feedback, input names, display color and brightness). These options can be set using the front panel buttons or the CH CONTROL App.

The available options are listed in the main manual.

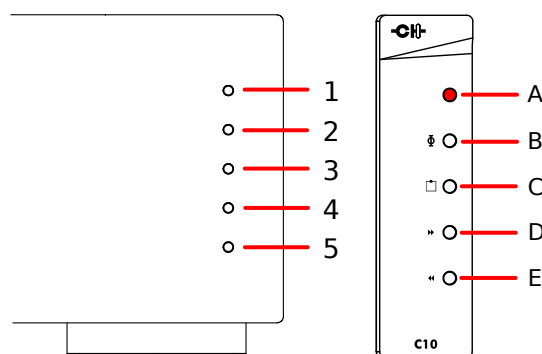
### 7. Advanced settings

There are a number of advanced/global settings and connections that can be applied to your C10. These include:

- The ground switches/sockets located on the back of the unit.
- Choice of default display settings and power LED status.
- Firmware updates.
- Network remote control of any CH Precision component.

Please see the full manual for information on these important options.

### 8. Basic Operation (Front-Panel Buttons and IR Remote Control)



| Button | Normal push                   | Long push             |
|--------|-------------------------------|-----------------------|
| 1      | Mute/Unmute <sup>(1)</sup>    | Operate/Standby       |
| 2      | Up                            | -                     |
| 3      | Next/OK                       | -                     |
| 4      | Down                          | -                     |
| 5      | Cancel/Exit                   | -                     |
| A      | Mute/Unmute <sup>(1)</sup>    | Operate/Standby       |
| B      | Phase in/Out of phase         | -                     |
| C      | Stereo/Mono                   | -                     |
| D      | Select next enabled input     | -                     |
| E      | Select previous enabled input | Local/Global feedback |

(1) Wake-up from standby