

Jundac Two

24 bit non-oversampling digital to analog converter

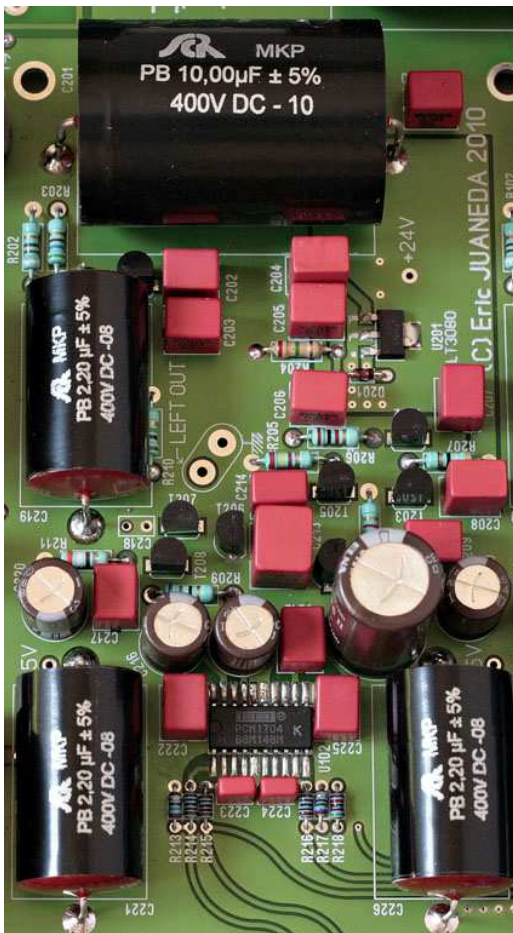
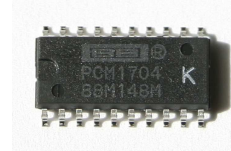


The Jundac Two is the result of many years of innovations and listening tests. During this period, we don't hesitate to compare our realizations to mythic references where Jundac Two have a comfortable place.

Technology

At high quality level, each stage must be treated with same minugia level. Our choice goes to a 24 bit non-oversampled converter (NOS, Non-Over-Sampling). The data coming from source are directly send to conversion stages, this avoid any form of coloratura introduce by any digital filtering stage. This result is an incredible realistic sound rendering, all form of "digital sound" disappear.

We could not use any "one-bit, bitstream..." converter where digital filtering is necessary. We use the PCM1704 (24 bit) from Texas Instruments/Bur Brown .



Conversion stage

It is known that an audio system could not sound better than its lowest equipment; a converter could not sound better than its lowest stage. For this reason, we particularly work on power supplies. On the Jundac Two, 80% of stages are dedicated to power supply. Not less than 13 regulators, and one specially dedicated to clock stage, are associated with the three oversized toroidal transformers (200VA and 20VA).



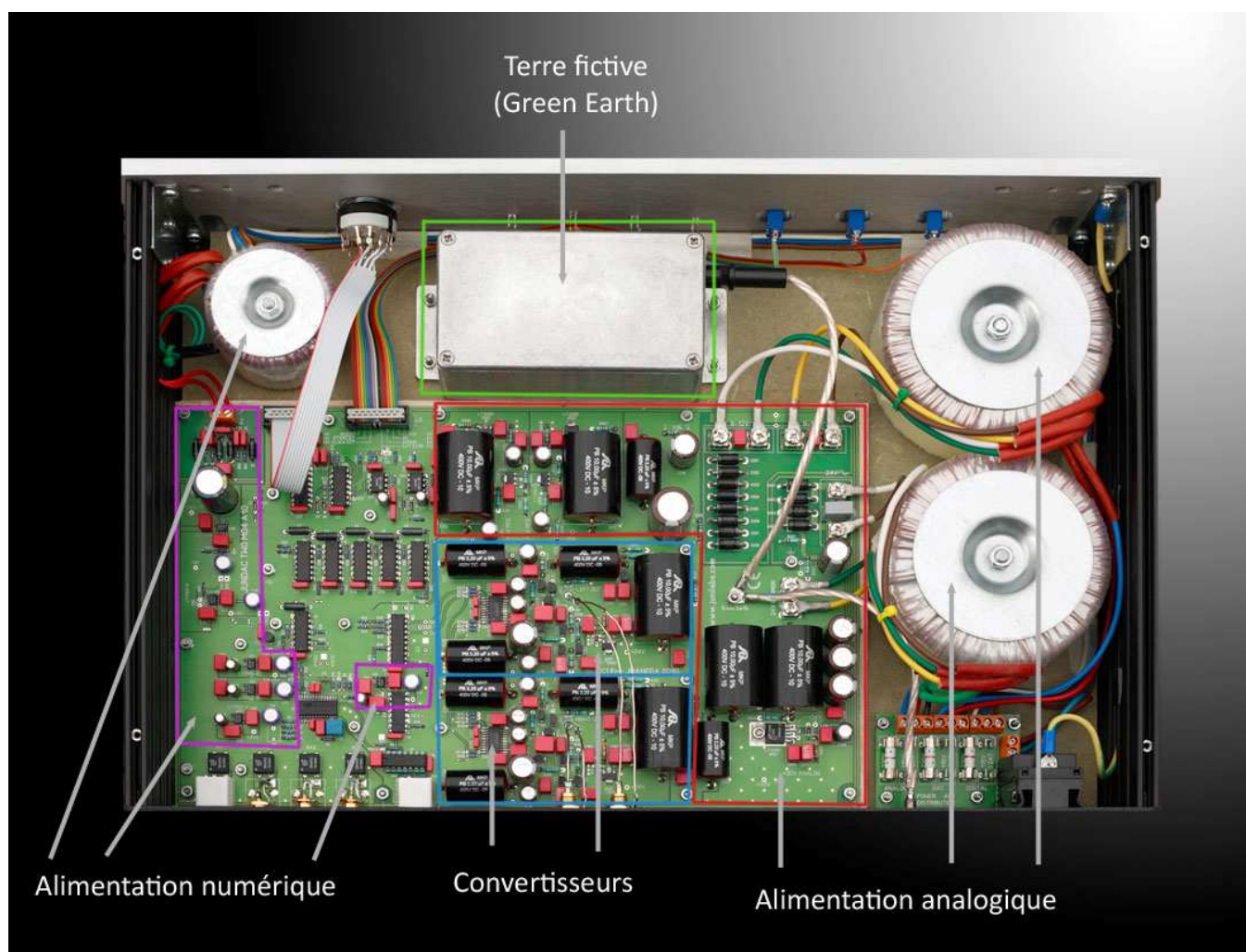
Jundac Two rear panel

Each part was selected for its sound qualities. So, you can find feedback free (open-loop) line stages using local regulator in a semi-parallel configuration, polypropylene or film polypropylene capacitors even in the power supply.

The silence in ground plane is improved by using a 'Green Earth'. This Junilabs' innovation is a box working as a fictive Earth eliminating residual high (HF) and low frequencies (main power main) distortions. An external plug allows linking the Jundac Two to a second and external Virtual Earth or to a main Earth via a big cable.

Each digital input uses an individual insulator transformer. One input uses a 75 ohm BNC connector, very appreciated by professionals. Other inputs use RCA by respect with S/PDIF specifications.

To push the refinement to the extreme, the Jundac Two can be coupled to its external clock (Juniclock) that set audio quality level one step further.



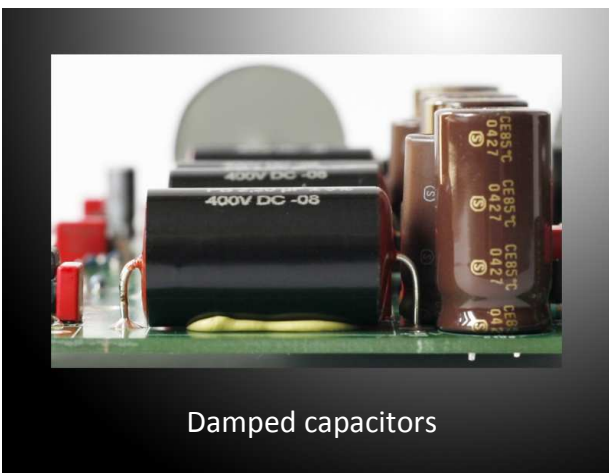
Mechanical

The aluminum chassis box (non ferrous) uses hard and soft material to avoid sound degradations due to mechanical vibrations. It sits on a massive oak support (No feet, no spike). With its granite, it weights no less than 24Kg!

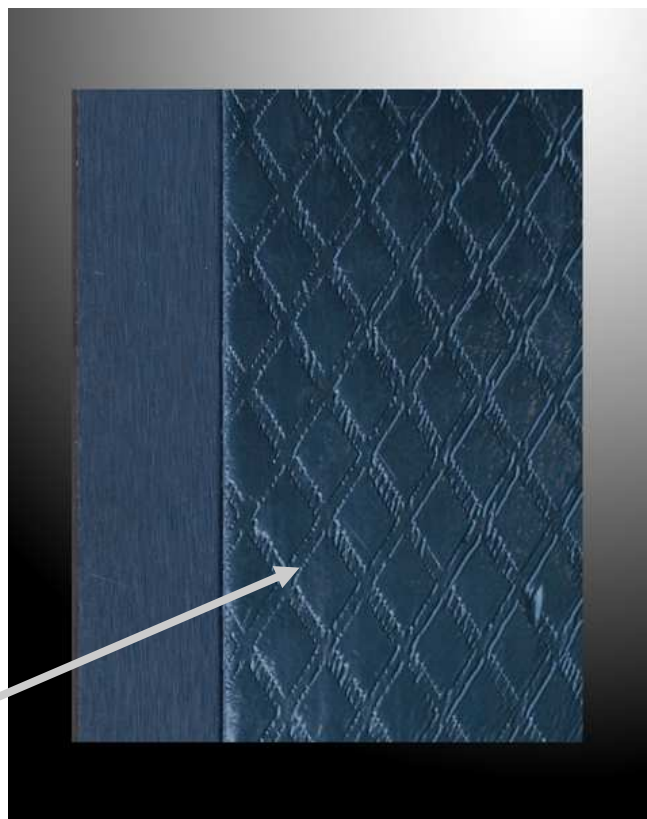


The PCB is fixed with mixed materials (hard and soft); each transformer is damped with sand and absorbers.

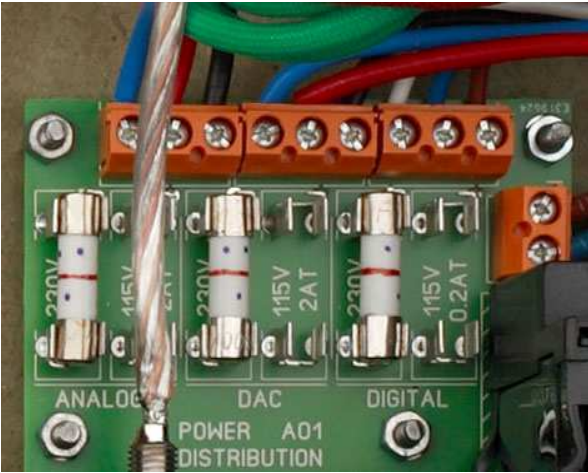
Managing vibration allows a high definition level and comfortable bass.



Anti vibratory material fixed on the top chassis box.



Adaptable



The Jundac Two includes 110V/220V transformers. The position of each fuses allow using 110V or 220V voltage. Thus, it is possible to use Jundac Two in all countries.

Technical specifications

Number of inputs: 4x S/PDIF + external clock

Input format allowed: S/PDIF 75 ohm, 0,5Vcc to 5Vcc, 16 to 24 bits, 32KHz to 192KHz stereo.

Clock input: 5V TTL, 128 x fs

Analog output: Stereo RCA 2V RMS

Main voltage: 220V or 110V

Power: 11W

Dimensions: 440cm x 80cm x 30cm

Weight: 12kg alone, 24Kg with its optional granite

Fuses for power supply 220/240V

ANALOG 3.15AT

DAC 3.15AT

DIGITAL 1AT

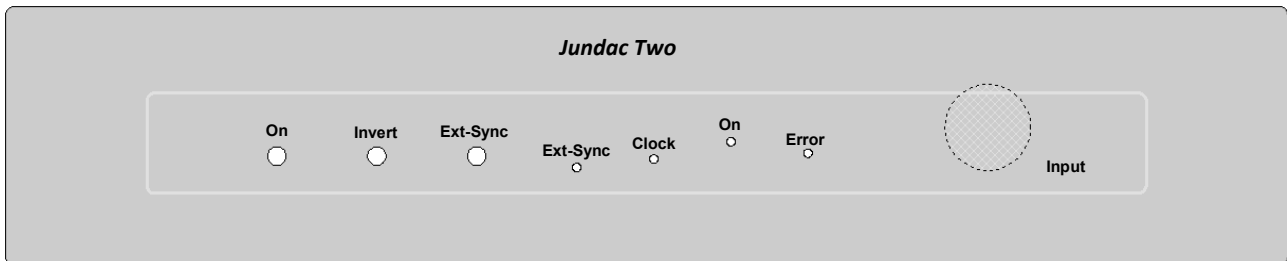
Fuses for power supply 110/115V

ANALOG 6.3AT

DAC 6.3AT

DIGITAL 2AT

Utilisation



On	On / Sleep
Invert	Invert audio output signal
Ext-Sync	Synchronization to external clock (Juniclock)
Ext-Sync	External clock active
Clock	A clock signal is present
On	Operate
Error	No link with digital source
Input	Input selector

Power on

The Jundac Two integrates two powers ON switches. A first one is on the rear panel, under the main power cable. This button is the general switch on/switch off. A second one is on the front panel (On) it is a sleep button. In sleep mode, a part of digital circuits are set in power save mode. The analog stages and clock stage are always powered. When the Jundac Two is ready, the 'On' led is lighting.

The "Error" led lights during one second, even if the duration of encountered error is less. This allows showing furtive errors as electrical perturbation due to switching on other equipment or detecting a failed digital cable.

Connect digital source

The Jundac Two integrates 4 S/PDIF digital inputs; "digital inputs" 1,2,3 and 4. an input selector in front panel (Input knob) allows choosing the desired input. When the Jundac Two is synchronized with digital source, the red led is off.

Don't connect any digital source on "Ext clock" input; this BNC connector is reserved to external digital clock such as Juniclock.

The LED "Error" is lit when the Jundac Two don't detect the digital source or loose, temporarily or permanently, the digital link.

The green LED "Clock" indicates a valid clock, without valid clock, there is no audio output signal. This LED controls the presence of external clock signal when button "Ext sync" is on. This function is useful when using a Juniclock.

Without any digital source, you can see that the green LED "Clock" is lit with small twinkling. With left open digital input, digital stage uses a free clock and allows circuits to work properly.

« Ext. Sync » button

This button allows synchronization with low jitter external clock like Juniclock. For more information, see www.junilabs.com.

« Invert » button

This function allows analog phase reverse. Some CD can be recorded by reverse phase, or some equipment (preamplifier, amplifier, loudspeaker...) can reverse analog phase. A in-phase audio signal is more dynamic and natural than phase-reverse signal.

Connect digital sources



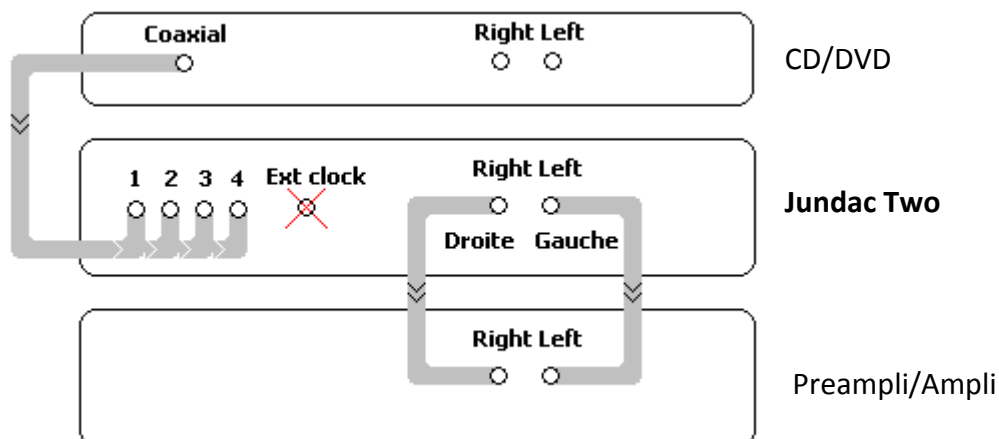
1	Digital input S/PDIF 75 ohm BNC
2, 3, 4	Digital input S/PDIF 75 ohm RCA
Ext clock	External input clock, TTL 75 ohm, 128fs
Analog Out	RCA analog output unbalanced
Green Earth	Link to virtual ground or Earth's power main
	General switch on/off button

The Jundac Two accepts many digital sources (CD, DVD, PC, MAC...) providing an S/PDIF signal. Some computers, PC or MAC, are not natively able to provide this signal. It exist external adapters allowing this connection. Those devices will plug on USB port and provide an S/PDIF output.

For more information see: www.junilabs.com

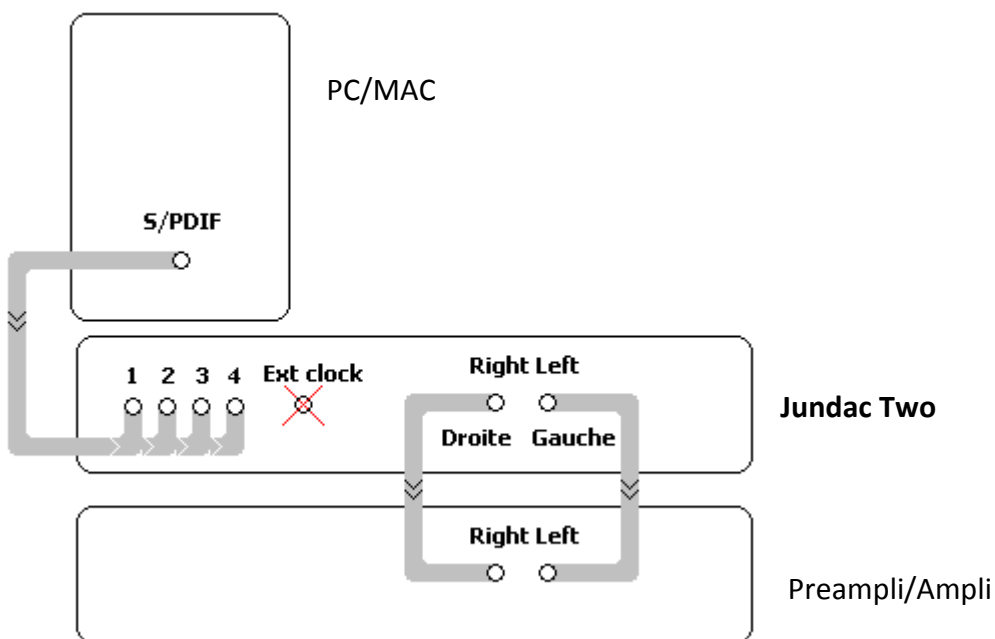
Connect a CD or DVD

The S/PDIF output (coaxial) is link to one of the four Jundac's input. The analog outputs (Left and Right) are linked to amplifier/preamplifier.



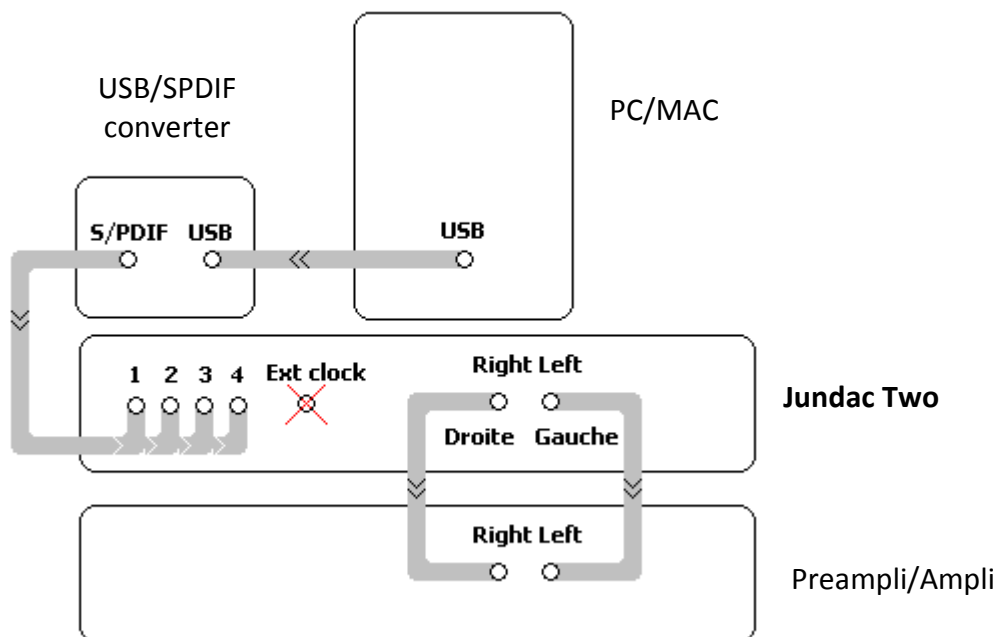
Connect a computer with integrated S/PDIF output

The S/PDIF output of the PC/MAC is connected to one of the four input.



Connect a computer without integrated S/PDIF output

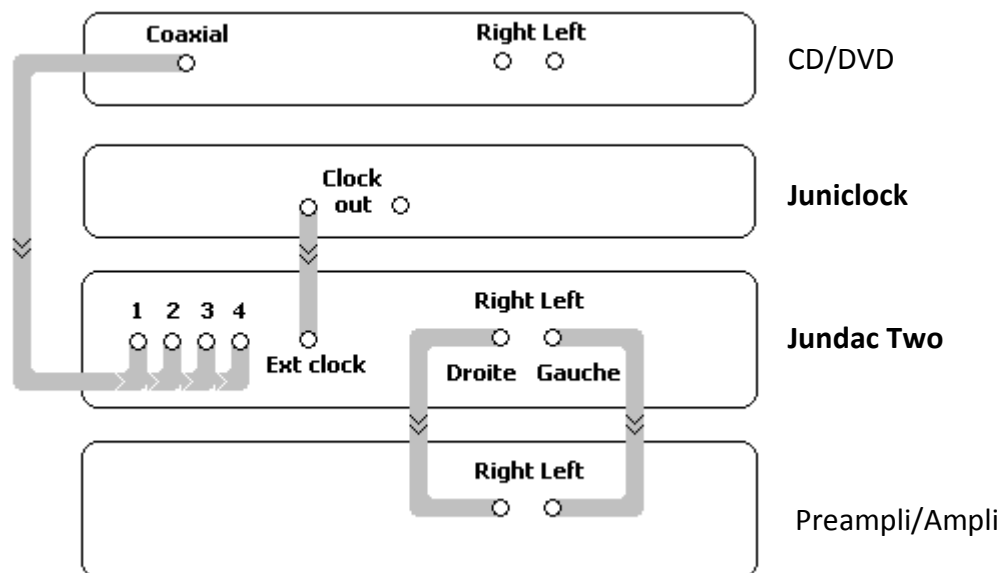
The S/PDIF output of the USB to S/PDIF adapter is connected to one of the four input.



Connect an external clock (Juniclock)

The Jundac Two can be connected to a low jitter external clock like Juniclock.

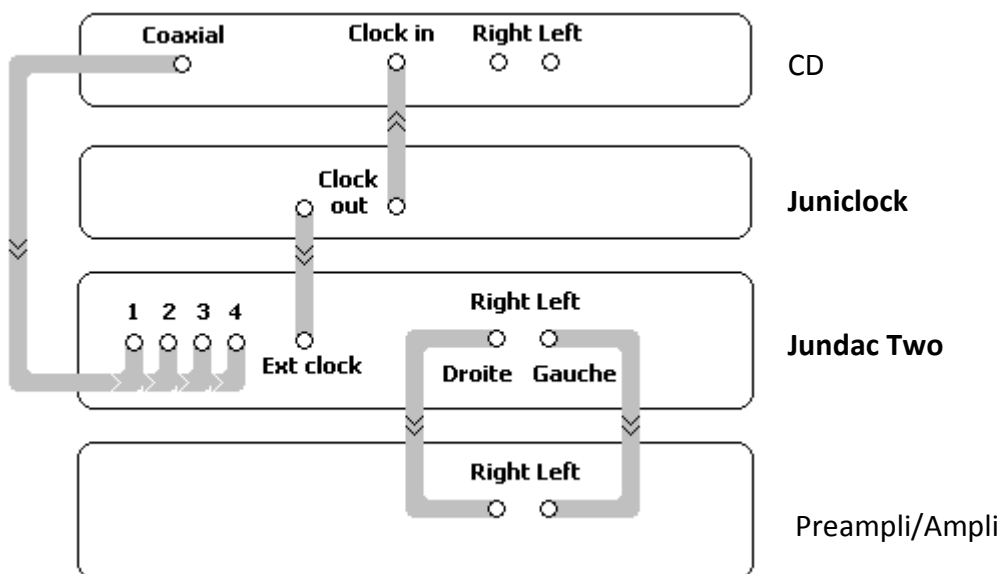
Connect the S/PDIF output (coaxial) of the CD/DVD to one of the four inputs. Connect the clock output on the clock input (Ext clock).



A single master clock for all digital equipments

Some CD players or sound cards integrate an input clock. A single master clock can be used to synchronize all digital flux. It is the optimized solution.

Connect S/PDIF (coaxial) S/PDIF output from CD to one of the four inputs. Connect the first clock output 1 (clock out) to Jundac DAC (Ext clock) and clock output 2 (clock out) to CD clock input.



How to get the best from Your DAC

Running-in period and heating time

The converter that you buy is new. To reach its optimal quality level, a 600 hours period is necessary. During or after this period, your converter will give the best of itself when it is hot. This heating period is reached at least after 24H00; we recommend a 48H00 or more heating period.

Digital cord

The quality of the digital cord is very important. The Jundac Two is provided without digital cord. Having a high quality digital cable is necessary. We recommend "Sechat" French cable. It is a great cable and we design Jundac Two DAC with this cable. The matching is ideal.

This cable is available only at:
www.hificables.fr



Power cord and fuses

The quality of the power cord will act on audio rendering. The Jundac Two is provided with standard power cord, it is recommended to change and replace it by a high quality cable.

The Jundac Two is provided with audio grade fuses. It is not necessary to replace it.

Ground optimization

Green Earth

The Jundac Two's chassis box is linked to Earth via its IEC plug. To optimize sound rendering, a second connector named **Green Earth** is available in rear panel. It is internally wired to audio ground.

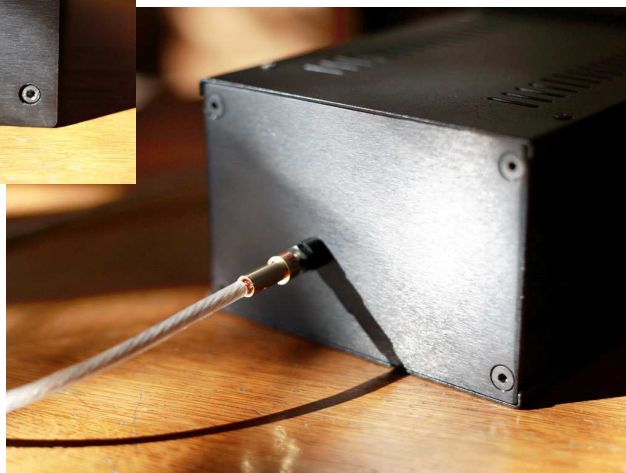


You can improve Jundac Two's audio rendering by linking the **Green Earth** to:

- A virtual ground, (see picture)
- A Main Earth via a big cable,
- The preamplifier's chassis box.



Here is an example of virtual ground where the **Green Earth** can be connected. The link was made by big cable (loudspeaker cable).



For any other questions, do not hesitate to contact us, or goes to our web site.

The Junilabs' team
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www.junilabs.com