



CORE SERIES

Professional Amplifiers

User Manual

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1. INTRODUCTION

Congratulations on the purchase of your new Core amplifier and sincere **THANK YOU** for your confidence on **CELTO Acoustique**. This premium piece of equipment was designed with quality, performance and reliability in mind. We hope it will become an enjoyable companion for many years. Turn it ON, feed it with great music and Enjoy !

2. FEATURES AT A GLANCE

- Linear with Aluminum toroidal transformer
 - Low distortion Peak Limiter
 - Class H (C2.6/C2.10) and Class TD (C2.20) output stage
 - Genuine parts exclusively from world class suppliers
 - 2 years warranty
- Protection, soft-start, short-circuit, over-voltage, over-current, over-load, DC output, zemperature
 - Simple layout and assembly for easy servicing
 - Compact and lightweight 2U low depth format

3. SAFETY PRECAUTIONS



Caution!

Keep this device away from rain and moisture!



Health hazard

By operating and amplifying system, you can produce excessive sound pressure levels that may lead to permanent hearing loss.

This device has left our premises in perfect condition. In order to maintain this state and to ensure a safe operation, it is necessary for the user to follow the safety instructions and warning notes written in this user manual.

Damages caused by the disregard of this user manual are not subject to warranty.

Unpacking

- Please make sure that there are no obvious transport damages. Should you notice any damages on the connection panel or on the casing, do not take the device into operation and immediately consult your local dealer.
- Keep the packaging. To protect the device against vibration, dust and moisture during transport or storage, use the original packaging, or better use it inside a rack.

Protection Class

- This device falls under protection class I. The power plug must only be plugged into a protection class I outlet. The voltage and frequency must be the same as stated on the device. Wrong voltages or power outlets can lead to destruction of the device and to mortal electrical shock.

Power Cord

- Always plug in the power plug last. Make sure that the plug is tightly connected with the outlet.
- Never let the power cord come into contact with other cables! Handle the power cord and all connections with the mains with particular caution! Never touch them with wet hands, as this could lead to mortal electrical shock.
- Never modify, bend, strain mechanically, put pressure on, pull or heat up the power cord. Never operate next to sources of heat or cold. Disregard can lead to power damages, fire or mortal electrical shock.
- The cable insert or the female part in the device must never be strained. There must always be sufficient cable to the device.
- Make sure that the power cord is never crimped or damaged by sharp edges. Check the device and the power cord from time to time.
- If extension cords are used, make sure that the cord diameter is sufficient for the required power consumption of the device. All warnings concerning the power cords are also valid for possible extension cords.
- Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power cord by the plug. Never pull out the plug by tugging the power cord. Otherwise, the cable or plug can be damaged, leading to mortal electrical shock. If the power cord or the power switch is not accessible, the device must be disconnected via the mains.

Serial Number

- Never remove the serial number from the device as this would make the guarantee void.

Liquids

- There must never enter any liquid into power outlet, extension cords or any holes in the housing of the device. If you suppose that even a minimal amount of liquid have entered the device, it must be immediately disconnected. This is also valid, if the device was exposed to high humidity. In any doubt, it must be checked by a specialist if the liquid has reduced any insulation. Reduced insulation can cause mortal electrical shock.

Foreign Objects

- There must never be any objects entering into the device. Malfunction or short-circuits caused by metal parts may cause mortal injuries.

Avoiding Hum

- Never install the amplifier next to highly sensitive devices like tape-decks, as the strong magnetic field of the amplifier can produce hum in these devices.

Ambient Conditions

- The ambient temperature must be always be between -5°C and +45°C. Keep away from direct insulation (particularly in cars) and heaters. The relative humidity must not exceed 50% with an ambient temperature of 45°C.
- This device must only be operated in an altitude between -20 and 2000 meters over NN. Never use the device during thunderstorms. Over voltage could destroy the device. Always disconnect the device during thunderstorms.
- This device must never be operated or stockpiled in surroundings where splash water, rain, moisture or fog may harm the device.

Cleaning and Maintenance

- Disconnect from mains before cleaning. Never use solvents or aggressive detergents in order to clean the device! Rather use a soft and damp cloth.
- They are no serviceable parts inside the device. Maintenance and service operations are only to be carried out by authorized dealers. Should you need any spare parts, please use genuine parts.
- Please note that damages caused by manual modification on the device or unauthorized operation by unqualified persons are not subject to warranty.

WEEE Directive



When to be definitively put out of operation, take the unit to a local recycling plant for a disposal which is not harmful to the environment. Do not dispose of as municipal waste. Contact your retailer or local authorities for more information.

4. FUNCTIONS

4.1 Front panel



1. Power Switch

The power switch turns the amplifier ON and OFF.

2. Power LED (blue)

The Power LED turns ON when the amplifier is ON.

3. Status LEDs

- PROTECT (red): Turns ON when protective circuit is active.
Cause may be DC, temperature or overload.
- LIMITER (orange): Turns ON when the TrueRMS VCA limiter enters into action
- SIGNAL (green): Turns ON when -40dB input signal is present

4. Gain Control

There are two independent gain knobs. It is good practice to set your gain to maximum in order to minimize the risk of overloading the input stage. Setting the gain to a lower level WILL NOT limit nor protect your amplifier or loudspeaker.

5. Removable Panel / Airflow Vent

The amplifier is equipped with a removable panel, attached to the chassis by neodymium magnets. Behind it, a dust filter avoids particles to enter the device internals. It is recommended to clean the filter at least once a year, more if the device is used in a dusty place.

Important: The airflow goes from front (air intake) to back (air exit). In other words, cool air is pulled from front panel airflow vent and is expelled out the rear airflow vents. This device is equipped with variable speed controlled fans.

6. Rack Mount Holes

Four rack mount holes are provided to install the device in industry standard 19" rack case.

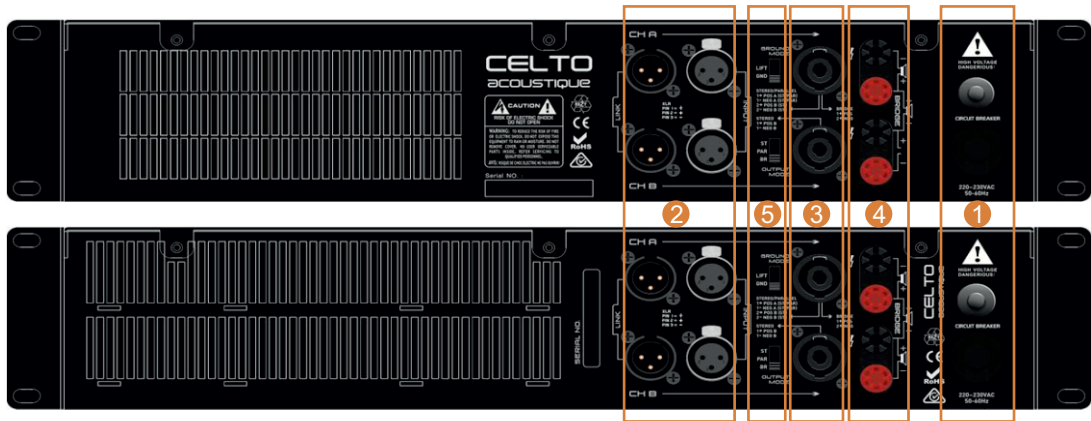
Note: It is recommended to use M6 cage nuts, machine screws and plastic washers to avoid scratching the face plate.

4. FUNCTIONS (CONTINUED)

4.2 Rear Panel

C2.6 and C2.10
Rear panel

C2.20 Rear panel



1. Power input

The amplifier has a power supply that accepts voltages from 220 to 230 V at frequencies from 50 to 60 Hz. A power cord is included. The power plug must be wired as below:

Cable	Pin	International
Brown	Live	L
Blue	Neutral	N
Yellow/Green	Earth	

The earth has to be connected! The device must only be connected with an electric installation carried out in compliance with the IEC standards. The electric installation must be equipped with a Residual Current Device (RCD) with a maximum fault current of 30 mA.

The amplifier is equipped with a resettable. DO NOT attempt to bypass the fuse in any manner!

2. NEUTRIK® XLR Inputs with feed-through

The input section of the amplifier offers electronically balanced NEUTRIK® XLR connectors with feed-through (link) outputs.

3. NEUTRIK® Speakon outputs

Speaker outputs are done by NEUTRIK® Speakon lock-on connectors. Use CH A for connecting a speaker in bridge mode.

4. Screw terminals

Additionally, pairs of screw terminals are provided for connecting speakers. Use + (red) of CH A and – (black) of CH B for connecting a speaker in bridge mode.

5. Output mode selector

Use this selector switch to choose the desired mode: ST = stereo operation (both channels are operated independent of each other), PAR = (CH A is switched in parallel to CH B; level control is via CH A) or BR = bridge operation (CH A is switched to CH B; level control is via CH A).

Ground lift selector

Position LIFT: signal ground and housing ground are separated.
Position GND: signal ground and housing ground are connected.

Process for setting up your amplifier:

- Always make input connections prior to applying power to the amplifier.
- Connect the outputs from the signal sources (e.g. preamplifier, mixer) to the XLR inputs.
- For parallel connection of further amplifiers, the feed-through XLR Links can be used.
- Connect the speakers to the Speakon connectors. When connecting multiple speakers, always insure correct polarity and total load impedance of at least 4Ω per channel.
- Finally connect the amplifier to the mains with the mains cable.
- Always make sure that power amplifiers are the last items turned ON and the first turned OFF .

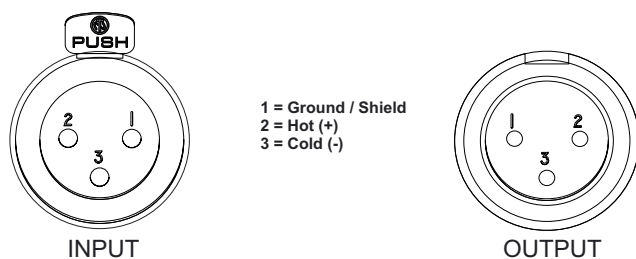
5. TECHNICAL SPECIFICATIONS

MODEL	C2.6	C2.10	C2.20
Max output Power EIA 1kHz 1% THD (EIA = 33ms ON / 66ms OFF)	2x 400W 8 ohms 2x 600W 4 ohms 2 ohms not recommended 1x 1200W 8 ohms (Bridge)	2x 750W 8 ohms 2x 1100W 4 ohms 2 ohms not recommended 1x 2200W 8 ohms (Bridge)	2x 1200W 8 ohms 2x 2000W 4 ohms 2 ohms not recommended 1x 4000W 8 ohms (Bridge)
Overall gain	37.3dB (58 times voltage)	40dB (100 times voltage)	42dB (126 times voltage)
Sensitivity at 8 ohms	0.775Vrms (0dBu)		
Signal to Noise Ratio (A weighted, 0dB)	>110dB	>108dB	>110dB
Frequency Response (-1dB)	20~20000Hz		
Typical THD (half power, 1kHz, 8 ohms)	<0.1%		
Typical IMD (1kHz at 4:1, -20dB)	<0.3%		
Crosstalk (1kHz)	>65dB		
Slew Rate	>15V/us	>20V/us	>30V/us
Input Impedance	20 kΩ		
Damping factor (1kHz, 8 ohms)	>500		
Protections	Soft-Start, Short-Circuit, Over-Voltage, Over-Current, Over-Load, DC Output, Temperature		
Operating Voltage	220~230VAC 50-60Hz		
Preamp	Low noise and low distortion circuit, PeakStop Opto-Limiter		
Power Supply (PSU)	Linear topology with toroidal transformer		
Output stage	2-step Class H without cross-rail distortion (70% efficiency)		Class TD (82% efficiency)
Cooling	Front to back airflow Temperature regulated fans Copper heat-sink for maximum heat transfer		
Rear Panel	2 NEUTRIK XLR Input with latch, 2 NEUTRIK XLR Link 2 NEUTRIK Speakon NL4 2 speaker Binding post terminals Stereo / Parallel / Bridge switch Ground / Lift switch Magnetic Breaker Power cable directly soldered (3x1.5mm without plug terminal)		
Speakon Wiring	SPK1 = 1+1- CH A / 2+2- CH B SPK2 = 1+1- CH B / 2+2- Not Used		
Chassis	19" 2U height, 378mm total depth		
Weight Net / Gross	14kg / 16kg	16kg / 17.5kg	19.5kg / 21kg

6. CONNECTIONS

6.1 Signal Input

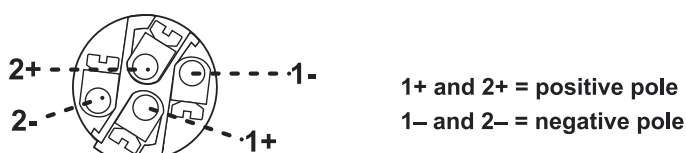
Balanced use with XLR connectors



Note: For unbalanced use, Pin 1 and 3 have to be bridged.

6.2 Speaker Output

NEUTRIK® Speakon connector wiring diagram





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