# CYENNE audio

# CY-5100dsd

**MK-II version**

High performance Digital to Analogue converter

# USER'S MANUAL

# INDEX

## CONTENTS

# 1 SAFETY

**Caution**

This symbol indicates care should be taken otherwise damange occurs

**Warning**

This symbol indicates danger for fire and potentially fatal injury

There is risk of fire and lethal electric shock when mishandled. Read carefully for safe use.

a. Place the device in a clean and dry room.
b. Only use indoors, the equipment is not waterproof.
c. Do not use near to water, e.g. in a bathroom, swimming pool, moist basement etc.
d. Don't install in place hotter than 40 degrees Celsius, such as a kitchen, boiler room etc.
e. Power only from standard mains voltage, see backside label on product for correct voltage.
f. This equipment needs to be grounded with a safety earth from a 3 pin wall outlet. Do not interrupt the safety earth connection (e.g. to solve ground loop problems).
g. Place equipment on a stable surface in such way it doesn't fall and cause injuries.
h. Route the cables so people will not accidently step on them and make the equipment tip over.
i. Route the power cord in a way it cannot be worn out, gets pinched, gets walked over, to avoid damage to the power cord.
j. Handle the power cord with care. Unplug by holding the plug, never pull the wire.
k. Unplug the equipment immediately if the power cord looks damaged, the equipment doesn't work properly, has become wet or has been dropped, looks damaged. Contact a qualified service technician for help before using the equipment again.
l. Do note remove the cover, modify or disassemble the equipment.
m. Unplug the equipment when not in use for a long period of time.
n. To clean, use soft, damp, cloth; do no spray anything on the equipment or use aggressive agents like benzene, thinner, insect spray as this will damage the casing finish and might cause fire.
o. Don't place objects filled with liquids such as vases near the equipment.

**CAUTION**
**RISK OF ELECTRIC SHOCK**
**DO NOT OPEN**

**CAUTION:**
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

# 2  DESCRIPTION

The CY-5100 DAC is an advanced digital to analogue converter capable of playing digital audio up till 384 kHz/24bit samples by using USB or 192 kHz/24bit by using the other inputs. The build-in microprocessor will remember your settings and automatically adjust the internal components for maximum performance for every sample rate. All incoming digital audio is placed in a buffer memory and retimed to eliminate any jitter the input signal might have for the best possible sound.

## 2.1 Digital sound inputs

Digital audio is available from computers, CD players, most DVD players and media players.

A. Two SPDIF inputs with coax connector. Coax SPDIF is usually the best and reliable way to transport digital audio. This is the recommended way to connect your digital source.
B. Two optical connectors. This is mostly for computers and older CD players if they only offer optical signal.
C. One USB connector to connect your computer. When connected to a computer, the computer has access to it as a sound card device. The maximum sample rata support by the USB sound is 384 kHz PCM and DSD 256. To natively (so without conversion to PCM) playback DSD files on your computer, you need to install Foobar2000 with special plugins, see www.cyenne-audio.com/playbackdsd
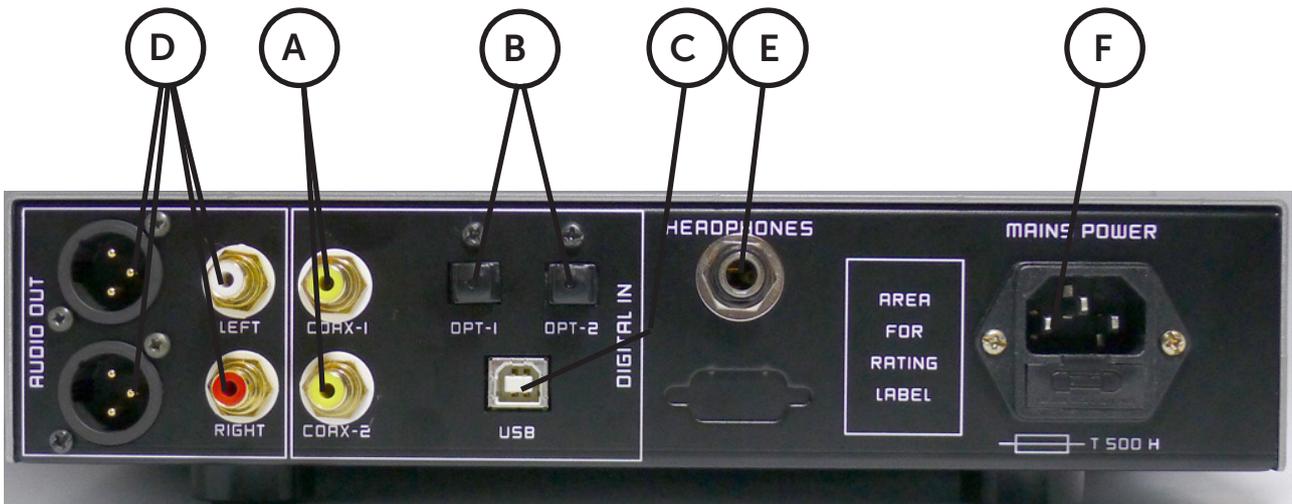
## 2.2 Analogue sound outputs

To Connect the DAC to an amplifier or headphones.

D. Line-out to connect to amplifier. There are balanced XLR and unbalanced cinch outputs available. Using the volume control, you can directly connect to an end-amplifier if desired. If your amp has XLR inputs, use them as the sound will be better compared to cinch.
E. One headphones connector. Headphones should have an impedance of 32 Ohm or higher for good results. Check your headphones specifications. Do not directly connect loudspeakers as this result in poor sound quality and might damage the DAC after a while.

## 2.3 Power

F. To connect the power cord.

## 2.4 Front panel

The front has 4 main parts:

G.   Power push button to power on and off.
H.   Power indicator. Lights when power button is on.
I.    Information screen, gives information about sample rate, input and other settings.
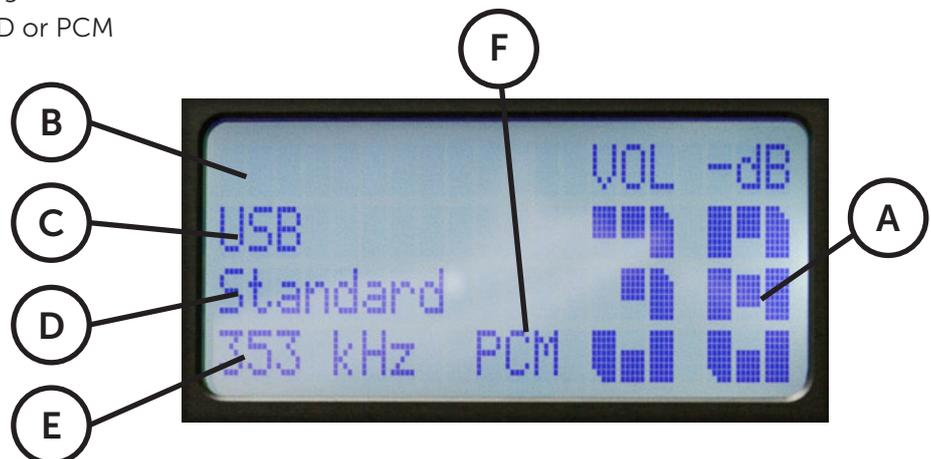J.   Multi-function-dial. Can work as volume knob or by pushing it, can change settings.

## 2.5 Remote control

a. Mute button. Makes volume low. Pushing again will restore the previous volume.
b. DIM button. Will adjust the backlight of the display. Dimming the display might be useful while listening at night.
c. POWER button. Puts the CY-5100 into standby mode. Sound will stop, display will go off, but power LED keeps being lit. Pressing POWER again will wake up the DAC. If you're near the DAC, pushing the volume knob also wakes-up the DAC.
d. COAX-1. Will switch the input to COAX-1.
e. COAX-2. Will switch the input to COAX-2.
f. NEXT. When headphones are plugged in, normally the sound will be outputted from the headset. Pushing 'next' causes the sound to be outputted from lin-out again.
g. OPTICAL. Will switch the input to the optical-1 input. Pressing this twice will switch to the optical-2 input.
h. USB. Will switch the input to USB input.
i. Volume -. Reduces the sound volume.
j. Volume +. Makes the sound volume louder.
k. Filter PREV. Select a lower filter number.
l. Filter NEXT. Select a higher filter number.

## Display

A. Volume attenuation level. 00 is the loudest (bypass).
B. Line for menu and status messages. Is usually empty.
C. Current selected input
D. Current digital filter in use.
E. Sample frequency of the digital audio.
F. Digital audio data type, DSD or PCM

# 3 UNPACKING & CONNECTIONS

⚡ **Review the safety chapter before proceeding**

Unpack the product carefully. The box should contain:

- CY-5100 DAC
- Remote control
- Power cord
- USB cable (type A to B)
- This instruction manual

If anything missing, check the box again carefully. Some content might have shifted during transport and might be on the bottom of the box. If there really is something missing, contact your dealer or us for advice.

## 3.1 Placement

The DAC doesn't require much ventilation. However, don't place it on top of something hot, like an amplifier, as high temperature degrades the sound quality.

## 3.2 Connect your amplifier

⚠️ Make sure your amplifier is switched off before making any connections!

⚠️ When using direct connection without volume control on your amp, set the CY-5100's volume to -40dB or lower before playing music for the first time.

There are 2 ways to connect the DAC to your amplifier, chooice one:
1)  Use your amplifier to set the volume. Using an input on your pre-amplifier or integrated amplifier. Set the CY-5100 volume to 0dB. If you play pop music, setting volume to -3dB might sound better.
2)  Connect directly to an end-amplifier or to the pre-amplifier input of an integrated amplifier. This gives somewhat better sound quality. Adjust the volume with the CY-5100.

Note: the CY5100 has both XLR and cinch outputs. Use XLR when possible as the sound will be better compared to cinch, especially when using long cables.

## 3.3 Connect your headphones



Instead of an amplifier and speakers, headphones can be used to listen to music. The headphones connector is located on the back side.
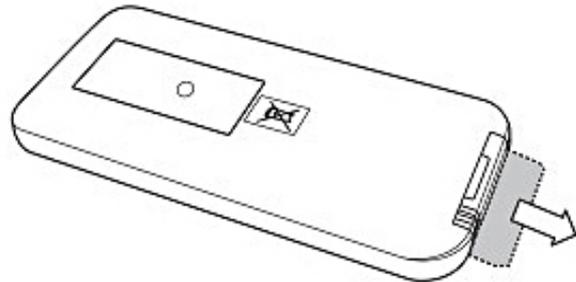
Plugging-in headphones switches the CY5100 to the headphone mode. The CY5100 remembers the volume from the last time your used headphones. If this is the first time, the volume will be set to -30dB. Removing the headphones will restore the volume setting as it was before pluggin in the headphones.

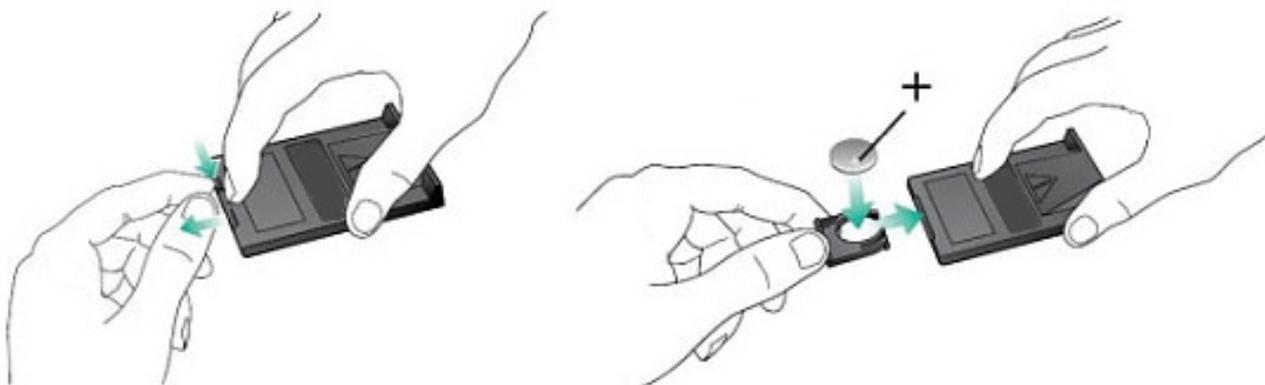When headphones are used, the sound from Audio-out is muted.

Note: If headphones are in use but you want to switch playback to Audio-out without unplugging them, e.g. because your CY-5100 is in a rack and the plug is difficult to reach, press the 'NEXT' button on the remote.

# 3.4 Prepare the remote control for use

For transport, the battery of the remote control is protected with a plastic strip. This strip has to be pulled out to start using the remote. See illustration.

The internal battery will typically work for at least one year. If the battery needs replacement, see picture below how to replace. Replace the battery with type CR2025. Lithium 3V.

Warning: Lithium batteries are hazardous when misused. Risk of burns and explosion.

a.  Don't allow them to get wet.
b.  Don't puncture or disassemble.
c.  Dispose properly; check your local rules for proper disposure.
d.  Don't short circuit; don't carry in your pocket together with other metal objects, e.g. keys.
e.  Notice the correct orientation of the battery.
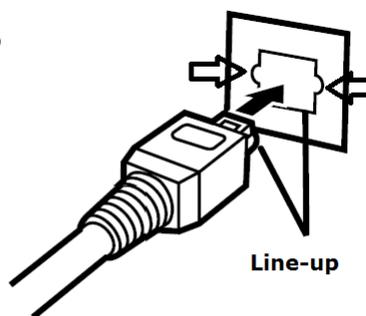f.  Replace only with the same type and voltage.

## 3.5 Connecting your sources





Digital audio coax cable



Digital audio optical cable



Line-up

There are no digital cables included. Those can be bought from your dealer. Do not use a regular cinch audio cable with red-white plugs for COAX digital audio, this degrades reliability and sound quality.

Using COAX gives usually the best result. Connect the digital out (often called SPDIF-out) of your source equipment, like CD player or media server, to the DAC.

Note some optical cables have small transparent plastic caps on the ends to protect them during transport, those caps need to be removed otherwise the cable will no fit and work properly. Refer to the documentation that came with the cable.

## USB

The USB will work as an additional sound card with most computers using Windows, Mac or Linux. The USB requires a driver to be installed. Visit our website at www.cyenne-audio.com to download the latest driver.
For playback over USB, select the "Cyenne DAC" sound output in your playback software on your computer.

To natively playback DSD files and bitperfect PCM, use the free Foobar2000 player with the SACD plug-in.

For MAC-OX, not driver is needed, but the CY5100 will sound better if special high-end audio playback software is used, like Audirvana.

# Connect the power



Use the included cable only. Connect one side to the DAC and then plug the other side into the wall outlet.

 Read the safety hints in chapter one.

 The power cord is not certified to be run through a wall, under a floor, trough conduct, under carpet etc. Consult a certified electrician if there is no power socket nearby.

# 4 BASIC USE

The CY-5100 can be used without any adjustment. Just switch on and choose the correct input.

## Caution: avoid hearing damage!
Set the volume to -30dB before using the first time.

a.  Push the power button. The display will light-up and shows information.
b.  Adjust the volume down using the remote control or the function knob on the front.
c.  Use the remote control to select the correct input. Like COAX-1 if that was used to connect the digital player. If digital signal is being received, the display will show the sample rate. If the display stays on "No signal", check If the correct input is used and check if the source (like CD player) is connected correctly and powered on.
d.  Start the music and raise the volume a bit until you hear sound. If there is no sound, set the volume back first before trying anything else. Note the CY-5100 cannot play Dolby nor DTS signals. The display will show "Incompatible" and there is no sound when such a signal is send.
e.  Use the remote control to adjust the volume if needed.
f.  When finished listening, press the "POWER" button on the remote control to switch the CY-5100 to standby. The CY-5100 will go into standby mode automatically after 30 minutes of no sound.
g.  When the CY-5100 is not to be used for several days, switching off using the front power button.

Note: The CY-5100 starts with the last selected input and volume setting when power up.

Note: The CY-5100 will sound better after warming up for a few minutes after switching on.

# **5** ADVANCED USE

## Digital filter setting

Not all digital music is recorded in the same way. Also the sound character and signature depends on the combination of DAC, amplifier, speakers, listening room and recording method.

In order to get the best possible sound, the CY-5100 has 3 different digital filters:
· Standard half band, linear phase (NORMAL, like most CD players)
· Smooth, linear phase, (SMOOTH, no ringing, leaves some ultra sonic noise)
· Minimum phase, (MP NORMAL, like standard, but no pre-ringing)

(MP NORMAL only available on special edition models)

What is pre-ringing?

Pre-ringing is a side-effect from the filter being designed to be phase linear as not to introduce frequency dependent phase shift into the signal. Pre-ringing means if there is a very sudden peak in the music there will be some signal output before the actual peak starts. When it is audible, it will sound unnatural.

Using the filters MP NORMAL or SMOOTH avoids pre-ringing.


Filter sharpness

Very sharp filters will filter out all unwanted signals. However, for some types of music, sharp filters might take away some of the subtile dynamics of the sound. The SMOOTH filter avoids this.

What is best depends on the rest of the equipment and to lesser degree on the recording itself. Try and listen!

The filter setting has the most impact on CD recordings. For 96 kHz and above, there will be less audible difference between the filters.

# Adjusting settings without remote control using function dial.

Short press on the function knob: mute the sound. Press again to unmute (or rotate the dial). If the DAC was in standby mode, it will wake up when pressing the dial.

Press and hold: look at the top line of the display as it cycles through the menu options. Release the dial to select the function, then turn the dial to make the adjustment. Note: some adjustments, like changing the input, need some time to process. Turn the dial slowly.

Ther automatic power down function can be swiched on and off here, just hold the knob until the option "AUTO POWER" is displayed. Then release the knob and rotate to change the setting.

The sensitivety of your headphones can be set here as well.

When doing nothing for 20 seconds or a brief press, the dial will return to the volume function.

# Custom installer notes

For integration with home control & automation systems such as Creston, AMX, Control4, an optional custom installer upgrade is available. The set will add a serial RS232 port to the CY-5100 for 2-way contol.

Instead of the upgrade, the CY-5100 can also be controlled (one-way) by IR remote signals. There are discrete codes for input and power. When in standby mode, the unit will power-up when receiving set input command from the remote.

If you're interested in home automation integration for the CY-5100, contact us.

# **6** **ENVIRONMENT**

## Recycling

This product's packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with the local recycling regulations. When discarding the unit, comply with local rules or regulations. Batteries should never be thrown away or incinerated but disposed of in accordance with the local regulations concerning chemical waste. This product and the accessories packed together constitute the applicable product according to the WEEE directive except batteries. The 230V version of this product is RoHS 2013 compliant and leadfree.

# Declaration of conformity

We, the manufacturer / importer,

## Cyenne Audio Co. Ltd.

**Declare that the product**

**Kind of product**:      Audio Digital to analogue converter

T**ype designation**:     CY-5100

Is in compliance with the essential requirements and other relevant provisions of the following directives:
RoHS Directive (2011/65/EU)
EMC Directive (2004/108/EC)
Low Voltage Directive (2006/95/EC)
ErP Directive (2009/125/EC)

**The product is compatible with the following norms / standards:**
EN 55013 (2001+ A1:2003+ A2:2006)
EN 55020 (2007+ A11:2011)
EN 61000-3-3 (2008)
IEC 61000-4-2 (2008)
IEC 61000-4-4 (2004+ A1:2010)
EN 60065 (2002+ A1:2006+ A11:2008+ A2:2010+
A12:2011)
EN 50564 (2011)
CE mark was first applied in: 2014

**Intended use**: indoor

Importer:

Check **www.cyenne-audio.com** for more information.

# TROUBLE SHOOTING

1) No power. Power LED is off

   a.  Try pushing the power switch again
   b.  Check if the power cord is firmly fit
   c.  Try another wall outlet
   d.  Check / replace fuse on backside (this is rare)

2) Remote control doesn't work or have poor range

   a.  Make sure the power LED lites, otherwise see (1).
   b.  Push the remote control button again (keep holding the button doesn't work).
   c.  Move closer, the remote control is guaranteed to work over 3 meters.
   d.  Try another button, maybe the function, like input, was already selected.
   e.  Maybe the remote control battery needs replacement.
   f.  There is strong interference from sunlight, plasma TV, CFL lighting etc. Move the DAC to a different location.

3) No sound, display says "Incompatible"

   a.  The CY-5100 can only play PCM data over COAX and Optical. Not WMA, AC3, DTS etc. Set the source to decode internally and output PCM data only.
   b.  Try different source.

4) No sound, display says "No signal"

   a.  No input signal, check source, cables.
   b.  Digital cable was inserted into the wrong plug on source. Like digital cable inserted into video output or one of the analogue audio outputs of the DVD player.
   c.  Source is powered off, check if source is on.
   d.  Wrong input selected, select correct input.
   e.  Incompatible sample rate, e.g. 24 kHz. Or 192 kHz on long optical cable.
   f.  Some sources only output a digital signal when playing, start playback.

5) No sound, display shows normal sample rate

   a.  Source is not playing anything, start playback
   b.  Wrong input selected (e.g. from another idle source), select correct input.
   c.  Volume is way down. Set volume higher (=lower dB value)
   d.  Wrong amplifier input selected, check
   e.  Amplifier volume very low or muted, check
   f.  Cables from DAC to amp loose or wrongly connected. Check and fix. Try another analogue source to test the amp and it's input (e.g. from CD player).

6) There is a buzz or hum in the sound. Probably due to ground loop.

    a. Connect the CY-5100, the sources and the amplifier to the same power strip.
    b. Use XLR cables to connect your equipment if you can, XLR is less sensitive to ground loops.
    c. Check if cables are connected properly and not half inserted etc.
    d. Your setup includes a TV, many TV's are grounded trough the aerial or cable connection.
    e. Disconnect the TV to test. If hum is gone now, ask your dealer for a antenna isolation transformer

7) USB playback stutters or hangs, plays with no sound etc.

    a. Important: Try playback with Windows Media player or iTunes. If that works without problems, check your playback software settings like buffer size and latency.
    b. Windows: Set your playback software to output DS (Direct Sound) to the "Cyenne DAC". The sound quality will not be optimal, but might be acceptable as temporary solution.
    c. DAC was plugged into USB hub. Use direct connection without hub.
    d. USB controller busy, stop other activities such as webcam.
    e. Try another USB port.
    f. If there are other USB audio devices on the computer, unplug them.
    g. USB cable too long (>5M). Use included USB cable.
    h. Outdated OS drivers. Install updates. Visit Cyenne website for updated drivers.
    i. Conflict with other similar USB audio device which was connected and installed before (e.g. USB headset). Try if the other device has software un-installer.
    j. Try different computer, even if only to make sure the DAC is working correctly.
    k. Try removing all audio related internal drivers (requires expert...) and reinstall them.
    l. Unfortunately, especially on Windows, some driver software conflict problems can only be solved by re-installing Windows.
    m. In Windows, DSD file playback requires a setup with Foobar2000. Visit www.cyenne-audio.com

8) Display shows unusual characters, doesn't respond

    a. Power had brown-out or other large disturbance. Switch power off and on using the power knob.
    b. Wrong mains voltage, check the backside of the CY5100 if it matches your local power supply

**More information is available at http://www.cyenne-audio.com/en/7_support**

If none of the above solves your problem or you still have questions, contact your dealer.