

icon Audio

Instruction Manual Covering:

CDX 2 Compact Disc Player



IMPORTANT!
THIS MANUAL CONTAINS
ESSENTIAL INFORMATION
FOR THE HEALTH & SAFETY
OF YOUR CDX2. PLEASE
READ & KEEP SAFE AND
REFER TO IF NECESSARY

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1 Introduction

Thank you for purchasing the **CDX2**. This advanced CD player uses the latest digital technology to decode the optical digital signal coming from the laser pickup, using 192 kHz upsampling and 24 bit resolution. That is where any similarity to other CD players ends. David Shaw and the Icon team have always felt that the potential sonic benefits of the Compact Disc have rarely been realised compared with many of the CD players on the market today, many are technically excellent but are often "lack-lustre" and mechanical sounding, whereas we believe that a CD player should be similar to our unique pure valve vinyl phono pre amps with a vivid layered and textured quality that keeps you wanting "more"! So the CDX2 not only needs to be technically good but to have the warm relaxed easy listening analogue sonic qualities that are so hard to achieve from the somewhat dated 1977 Philips/Sony Compact Disc system.

So after creating the initial design for the CDX2 many hours were spent auditioning different combinations of valves and components in order to achieve the desired results. It was self-evident that a good digital decoding system is pre requisite to good performance, but the analogue output stage rarely gets a mention. We feel that this final link in the audio chain is vital to audiophile performance and as such a well-designed valve stage will enhance the sound quality of the previous circuitry.

The excellent ECC82 also known as 12AU7 is used as the output valve. The "son" of the venerable 6SN7 double triode probably the best sounding hi fi valve ever. Its warm tonal balance is an excellent counter to some of the less desirable characteristics that digital systems present. It is very reliable and long lasting to maintain performance.

You will notice that the weight of the CDX2 is heavier and more solid than many other players using alloy plate and heavy gauge steel this is to provide mechanical stability and dampen unwanted resonances.

The CDX2 is hand built using carefully selected audiophile components. The transformers are hand wound using low oxygen copper and long grain iron. Finally each player is valved, carefully commissioned and tweaked for best performance in Leicester UK.

In order to get the best out of your CDX2, please read the enclosed notes. Even if you are experienced with hi fi **please read the 'quick set up guide'**. Should you be uncertain about anything please contact your dealer or us for advice.

Valve equipment does need a little more attention than its solid-state counterparts, such as occasionally replacing the valve but the sonic results are more than worth it. In this manual we have tried to include everything that you need to know.

Final Inspection - Your Guarantee of Quality

To assure you of optimum performance and reliability, this amplifier has passed our rigorous final inspection and listening test by the Icon Audio team in Leicester . During which the final set up and adjustments were made.

To get the best out of your unit and to save time please read this information & keep it to hand for reference

Date/...../.....

Model CDX2.....

Serial Number

Customer

Check finish

Internal wiring check

Check Triode mode N/A

Run min 12 hour test

Check input N/A

Output Valve Bias level N/A

Sound Quality

Channel Balance

Valve Microphony

Valve Seating

Noise level

RF Test

Display brightness

Serial No sticker and recorded

Mains voltage 110-120 / 230-240V

IEC Mains Fuse2 A

Mains plug Fuse (UK only)2 A

Remote Control Function

Sales invoice

Bottom label

Credit card receipt

Customer survey form

Bias meter N/A

Transformer Protection N/A

Upgrades:

HT delay fitted? N/A

Output Valves

Rectifier Valve N/A

Regulator Valve N/A

Capacitor upgrade (Audio)

Capacitor upgrade (Power)

Mains lead

Interconnects

Signed off by

Notes:

IMPORTANT READ THESE NOTES BEFORE CONNECTING TO AC MAINS!

2 SET UP GUIDE

1 Unpack unit carefully. Make sure that it is in good condition. If not report to your supplier immediately. It is important that you keep the packaging for warranty/service return.

- 2** The contents of the box are:
1x CDX2,
1x mains cable,
1x remote control. (inc 2x AAA batteries)
1x CD retaining magnet,
1x instruction manual,
1x Allen key
1x star type screwdriver

No transit screw removal or setting up is required. The output valve is already fitted. The CDX2 is ready to use. Loosen back plate screws of remote control using supplied screwdriver and remove piece of tape insulating the batteries, ensure batteries are in place and re-tighten back plate.

3. Connect to amplifier, or pre amplifier as shown. USE THE "VALVE OUTPUT" RCA SOCKETS. If you are intending to connect directly to a power amplifier, you will need some form of volume control such as our "Passive" pre-amp. The connections marked "OP AUDIO OUTPUT" are transistor output only.

4. Before connecting to AC power, Check that the power switch on the front is "off". Then connect the supplied IEC mains lead to a 220-240v supply (or 115v USA) **If for some reason the UK welded plug must be removed, please remove plug fuse and dispose of immediately.** (As they can be a danger to children). The replacement plug should be wired in the following way Brown to Live terminal, Blue to Neutral terminal and Green/Yellow to Earth terminal.

5. Connect to your amplifier using the "TUBE" output RCA output sockets. The other outputs are not valve output.

6. Using the CD Player with a separate "DAC". Using the "COAXIAL DIGITAL OUT" connect a suitable DAC. Select the appropriate input on your DAC. Your signal will be now be decoded through your DAC without the CDX2 valve output circuit. Any conventional integrated or pre-amplifier may be used. Most "Passive" pre-amps including Icon Audio may also be used.

SWITCH ON! The grey fluorescent display should light up. To play a CD insert into the top compartment, place magnetic clamp on top, close door and press play when track information is displayed.

7 All these things are normal for the CDX2

A, Mobile phone 'breakthrough' is normal. Move the phone away from the CDX2

B, Some CDR CDs may not play

C, Some CDRW CDs may not play.

MP3 or other files are not compatible

SACD discs will only play the "CD" track if present.

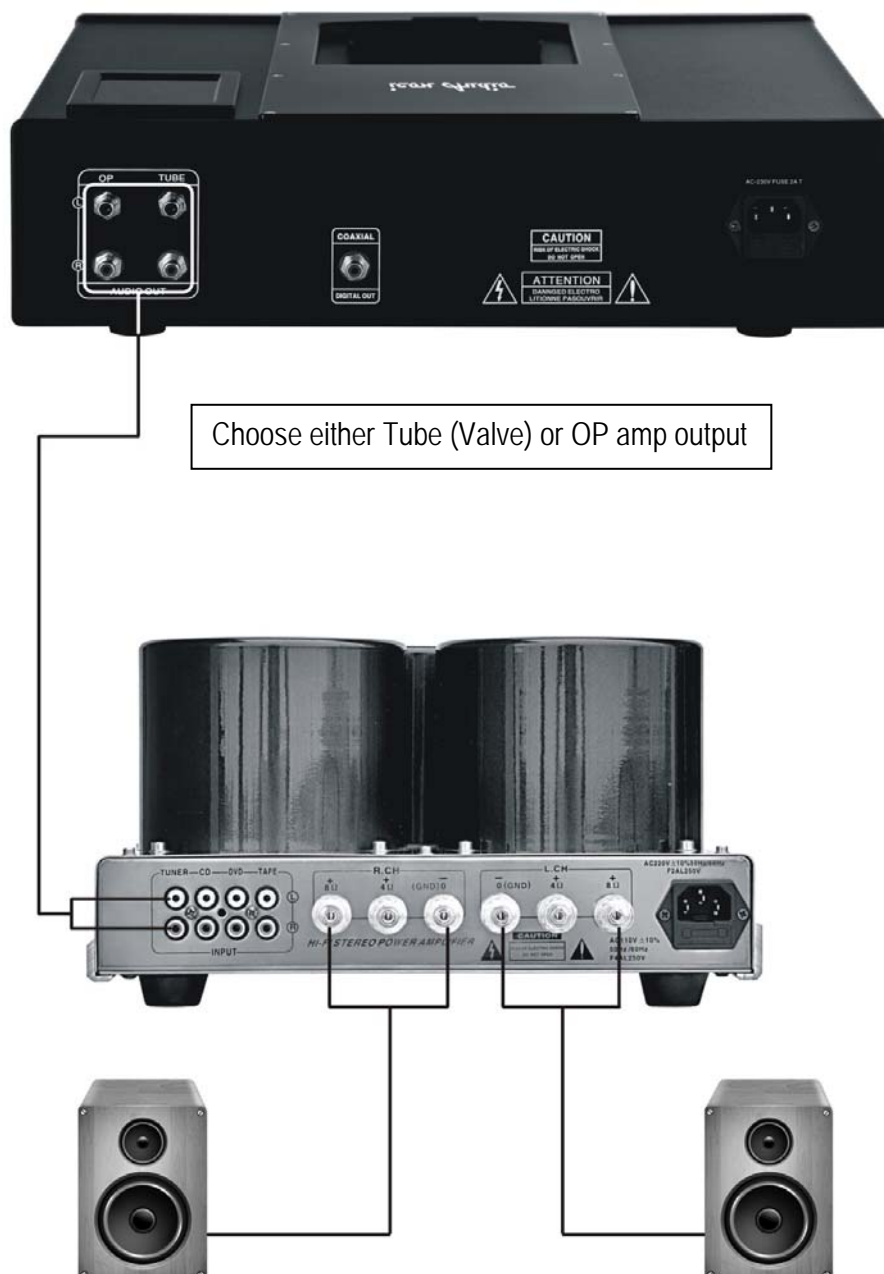
8 Health and Safety. Always unplug from power when making adjustments. **Like all electronic devices there are potentially lethal high voltages inside, which when switched off can take time to discharge.** Do not remove the cover unless you are a competent engineer. There are no user serviceable parts inside. **Like other household electrical appliances do not leave unattended whilst switched on.** Do not use valves other than specified.

Back Elevation



1. OP amp output
2. Valve/Tube output
3. Coaxial digital signal output (connect to DAC audio decoder)
4. Power input socket and fuse (Fuse should be 20mm F 2A, (Fast or QB) AC230 v \pm 10%)
FOR USA 115v use 20mm F4A

Wiring Diagram



3 Connecting inputs & outputs

Many problems associated with electronic equipment involves connecting leads, which are usually either **'BAD CONNECTION'** or a **'WRONG CONNECTION'**. So it's worth making sure that you have good connections and that your leads are the right way round.

Outputs

For normal use you should connect suitable interconnects to the "TUBE OUTPUT" Left and Right sockets on the rear, this will give the best sound quality as this uses our specially designed valve circuit.

Interconnect and mains Cables

In our experience Icon valve equipment is very tolerant of cables the CDX2 having a very low output impedance; therefore the benefits of some very 'exotic' cables may be less apparent. But this is also personal taste.

As all interconnect cables have losses, therefore keeping the cables under 2-3 meters will be advantageous. However the CDX2 is designed to work with cables up to 10m with virtually no loss.

Front Elevation



- ① POWER button ② ► PLAY button ③ || PAUSE button ④ ■ STOP button
⑤ ◀◀ Replay. button. one previous song with one press of the button.
⑥ ▶▶ Next button. One next song with one press of the button.
⑦ Function displayer and window remote control sensor


Top View.

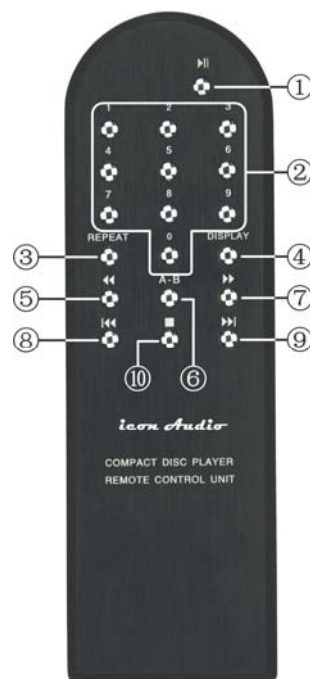
ECC82/12AU7 tube



Open / Close Cover

Remote Control

- ① Play / Pause Button
- ② 1st-9th Track selection buttons. From the 10th song, press 1 and then the other number. (eg: To play the 13th track, press 1 and then 3)
- ③ Replay Button. The first press of this gives a single replay with a symbol “∞” appears in the lower-left corner of the display screen. To replay all tracks indefinitely, press again, then an “ALL” will appear. Press once more will disable this function and there shows an “OFF” on the screen.
- ④ Track timing button. Every single press will separately indicate single timing, single countdown and total countdown.
- ⑤ Press this button continuously to rewind (no sound will be heard whilst you do this).
- ⑥ To replay from part A to part B in the track infinitely, press this button and there will be a  on the lower left corner of the screen; Press again, this function will be removed.
- ⑦ Press this button continuously to fast forward.
- ⑧ Previous Button. One press (or two) of this button will play the previous track
- ⑨ Next Button. One press of this button moves forward to play the next track
- ⑩ Stop Play Button.



Note: The PLAY button will only work AFTER the CDX2 has read the TOC (Table Of Contents) from the disc and displayed them in the display window.

The remote control has a range of about 6m. But this may be disrupted by certain types of Infra Red light from fluorescent tubes and bright sunlight and reflections etc.

REPLACEMENT BATTERIES/CELLS

If the function of the remote control becomes intermittent or stops working, replace the batteries with good quality leakproof ALKALINE batteries. Remove batteries from remote control if stored for a long time to prevent leakage and corrosion.

SAFETY PRECAUTIONS

WARNING

To prevent electric shock when making adjustments. Switch off the power supply, and remove the plug from the AC socket. Refer to your dealer or Icon Audio for maintenance and service.



Do not put anything containing water on the top of this machine

This will damage the player if it gets inside.



Do not let any foreign objects drop into the machine

If any metal or inflammable liquid articles get inside through the cover may cause fire or electric shock.



Do not cover the CD Player

Allow ventilation around the CD Player and keep away from flammable material.



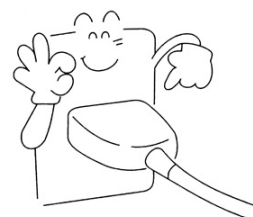
Do not disassemble the machine

No user serviceable parts inside, Refer to Icon Audio or a suitable service agent. (If replacing the valve, refer to section 6)



Connecting power line

Insert the IEC plug firmly. Avoid using multi-sockets if possible.



Volume adjustment

Beware of adjusting the volume level too high. Because of the low noise and high dynamic range of the CDX2 player, a change in recording level may overload the amplifier and or speakers causing damage. We suggest you adjust the maximum volume carefully.

Moving and Placement

Do not put this machine on uneven place, like shelf.

Be sure to switch off the power and pull out the plug before moving.

* Specifications and external appearance are subject to change without notice as a result of product improvement.

4 Getting the best performance from your CD Player

DO NOT LEAVE PERMANENTLY SWITCHED ON!

Whilst it is common for solid state equipment to left on 24/7 without switching off, there is no advantage in doing this with the CDX2. It only takes a few minutes for the CDX2 to fully warm up. Long periods on "idle" will consume valve life.

We would always advise that any item of home electronics is switched off when unattended.

'Burning in'

Although the CD Player should sound good within about 5 mins it can take up to an 30 mins to sound at its best and will take several months of regular use before it is fully 'run in'.

Connecting Cables

INTERCONNECT: The CDX2 output is very strong, therefore does not require special interconnects, even if they are long. Although Exotic cables may change the sound.

POWER CABLE: The CDX2 only needs a few watts of AC power, the supplied cable can handle 3000! So is perfectly adequate for the CDX2, but feel free to experiment!

A level solid surface will always sound better. Keep at least a small distance away from other electronic items to minimise RF noise.

The CDX2 is designed to play normally recorded CDs the recorded density of CDR and CDRW discs is lower so quality and playability may vary THIS IS NOT A FAULT! Scratched or soiled discs may not play properly. If a disc cannot be read it will not play. If a known good disc will not play try re-inserting at a 90° angle or clean the disc.

Cabinet Care

To remove dust, brush with a soft paintbrush. Other marks can usually be removed with a damp cloth. Never use anything wet on the amplifier, and always clean with the power disconnected.

5 Trouble Shooting

Symptom	Possible Reasons	Solutions
No sound through speakers.	<ol style="list-style-type: none"> ① The power switch is off; ② The audio cable or the speaker is not connected. ③ The amplifier volume is turned down. Or wrong input selected. ④ Valve failed in CD player 	<ol style="list-style-type: none"> ① Turn on the power switch. ② Connect as diagram. ③ Increase the volume, or select correct input on amplifier. ④ Try OP output
CD cannot be read.	<ol style="list-style-type: none"> ① Poor copy CD, or not compatible ② There are scratches, dust, jam or deformation on the CD. ③ CD is upside down or not positioned properly. ④ CD player has difficulty with known good CDs. ⑤ Check magnetic clamp is in place 	<ol style="list-style-type: none"> ① Please use genuine CD. ② Clean the CD or try another CD in better condition. ③ Invert or replace the CD. ④ Possible Laser fault seek service. ⑤ Fit magnetic clamp
Power indicator does not light up.	The fuse has blown.	Replace with 20mm F2A (F4A 115v USA) If the replacement fuse blows seek service
Remote Control does not work.	<ol style="list-style-type: none"> ① Beyond the remote control distance. ② It's not aimed at the CD player. ③ The batteries are dead or incorrectly inserted. ④ There are obstacles in the way. 	<ol style="list-style-type: none"> ① Reduce the distance ② Aim it at the window of the CD Player. ③ Replace batteries or check inserted correctly. (2x AAA Alkaline) ④ Remove the obstacles.
The Position of the Sound Field is wrong	Both speakers cables do not follow the + and – convention. One is the wrong way round	Check speakers are "In Phase" by checking speaker wiring, or poor CD recording, try another CD
If there is hum or other noise	<ol style="list-style-type: none"> ① You are using unshielded cable ② Noise from adjacent equipment ③ The "grounding" of the cable or system is at fault. 	<ol style="list-style-type: none"> ① Change to shielded/screened cable ② Move equipment or connecting cables ③ Correct the system or seek advice.

Service: Should you suspect a problem, you could return the unit to your dealer or Icon Audio for a periodic service or return the valve for testing free of charge. Use the original carton and packing this will protect your CD player. Or ensure well packed to prevent damage.

Mains Supply

This amplifier is hard wired to work on 230/240v ac. Some models may be re-configured for 110/120v ac by a qualified engineer. Contact for more information.

6 Valve Replacement

Health & Safety: High voltages are present inside the unit and on exposed valve sockets when valves are removed, so take suitable care. Beware valves get hot in operation!

Only if you feel confident should you attempt to dismantle the CDX2 by first isolating from the mains power by removing the plug from the back panel.

How do I know when to replace valves?

Valve life will depend upon such things as hours of use and number of on/off cycles. It is not good practice to remove the valves unnecessarily as this can strain the pins and cause tiny air leaks.

Generally speaking the ECC82/12AU7 valve should give about 2-3 years of normal use. With heavier use this valve should be replaced every 12 months.

Symptoms could be: Loss of volume, loss of clarity, poor channel balance, distorted sound, excessively "Microphonic", intermittent noise.

Catastrophic Failure:

This could be due to heater failure, air in the valve, or a short. Although unlikely this could happen at any time.

If the CDX2 sounds OK the valves are probably fine or at least useable.

If the solid state output is working OK or sounds better, the tube probably needs replacing. Icon Audio will test the valve free of charge (non UK customers should include the cost of return postage).

7, Replacement Valves. Use only valves marked ECC82/12AU7. The ECC81/12AT7 may also be used. The ECC83 will work, but not as well. So not recommended

DO NOT USE ECC99 (heater current too high), ECC88, 6922/6DJ8/6N6 (wrong pin connections/heater ratings) or any other valves which may be "close" as the performance will be impaired or damage may result. Ideally a "near perfect" match between the two halves is needed to guarantee perfect channel balance. We suggest that you choose from our recommended tested valves. "Used" premium valves often give disappointing results. We take no responsibility for valves not supplied by Icon Audio damaging the CDX2.

Take care that you orient the valve correctly before inserting and removing. Make sure the pins are straight, beware excessive bending can cause air leaks.

How replace the 12AU7/ECC82 Valve

You will need a medium/large crosshead screwdriver and a set of Allen keys (size 2mm).

1. Disconnect the power/audio connections, remove any CD and the clamp and place the CDX2 face down on a soft surface.
2. Remove the 3 screws that secure the right hand side plate to the base.
3. Turn the CDX2 the correct way up and remove the 4 socket head bolts on the RIGHT HAND (valve window side) that secure the CD deck door top plate.
4. Carefully remove the RIGHT HAND steel top plate/side panel.
5. Change the valve by pulling back the retaining spring and gently but firmly pulling the 12AU7 valve out. A small amount of rocking motion may help.
6. Insert new valve and replace spring, making sure the pins are clean.
7. TO RE-ASSEMBLE first fit the side plate and insert the 3 bolts from the underside. Do not tighten at this stage.
8. Re-fit the deck door top plate and secure with the 8 Allen head bolts.
9. Tighten the all the bolts.
10. Test CD player output working OK.

7 Specification & Features

(Typical conditions @ 230/120v? 50/60Hz)

- 2v Audio Output for full modulation
- 192 kHz 24 bit DAC
- 1x ECC82/12AU7 double triode analogue output
- Burr Brown chipset
- Frequency Response: 20Hz-20kHz ($\pm 0.5\text{dB}$)
- Signal to noise ratio: $\geq 105\text{dB}$ (A Weighted)
- Distortion: $\leq 0.005\%$ (1kHz NORMAL)
- Digital Output: coaxial
- Dynamic Range: $\geq 110\text{dB}$
- 2 separate power supplies for digital circuit
- Hand inserted components
- Ceramic valve base for low noise/leakage
- High quality metal film resistors
- Audiophile polypropylene audio caps
- Optional upgrade to Jensen Copper foil capacitors
- Valves carefully matched for best performance
- Gold plated output terminals
- 220/240volts, 40watts
- W:41cm. D:35cm. H:11cm 9KG (allow for connections)
- Shipping Info W:50cm D:47 H:23 12kg (0.058m²)
- IEC mains lead, (5amp fused)
- CE certified. ROHS & WEEE compliant

Specification subject to change without notice.

Malfunction and anomalies check points

Many malfunctions are caused by some simple operational mistakes. Thus some common malfunctions can be eliminated on your own as per following instructions. If malfunctions still exist after examination, please contact your dealer or Icon Audio.

ATTENTION



1. The machine should be placed in a ventilated and dry environment.
2. When cleaning, unplug the power socket to prevent electric shock.
3. Please use the machine within the specified voltage range.
4. No user replaceable parts inside refer to professional Engineer.

8 Guarantee

Thank you for purchasing one of our products. We hope you will be pleased with it.

This CD Player is guaranteed by your retailer you purchased from for 12 months from the date of purchase for parts and labour, excluding shipping. Valves are consumables and therefore on a 12 months pro-rata basis. Please keep your receipt as proof of purchase, this will be needed.

In the UK "Manufacturers guarantee" does not exist. It is the responsibility of the retailer to care for your purchase.

Where a unit is purchased direct from Icon Audio, Icon Audio will be directly responsible for your guarantee.

All units are individually tested for performance for at least six hours before despatch to you. In the unlikely event that you believe the unit is not functioning correctly, it may be helpful to contact us first as we may be able to assist you. Then we would request that you return the item to us for further action.

You are advised to inform us of any change of address or change of ownership in order that we may keep you up to date of any upgrades or improvements. Check our website.

Warranty Limitations

① **Damage caused by incorrect operation or damage by dropping, liquid, damage to Laser assembly.**

② **Unauthorized modification or upgrades.**

③ **This warranty does not cover commercial use without written approval. Contact Icon Audio.**

Claims for any damage to either amplifiers or valves must be reported within three days of receipt.

9 Packing Instructions

It is essential that the original box and packing be kept in good condition, as this provides vital protection during transit. Please do not write on box, but use removable labels.

- Use packing and tape to secure the CD door.
- Re-use the supplied plastic bag to keep the unit clean and free from damp.
- The mains lead fits in a foam cut-out underneath the amplifier.
- Remove the batteries in the remote control during shipping and storage.
- If the CD player is stored in the box, keep upright.
- Do not store in damp conditions as this will cause damage and corrosion.
- If the CD player is shipped insurance is desirable due to the high unit value.

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Notes: