

BELT DRIVE CD TRANSPORT

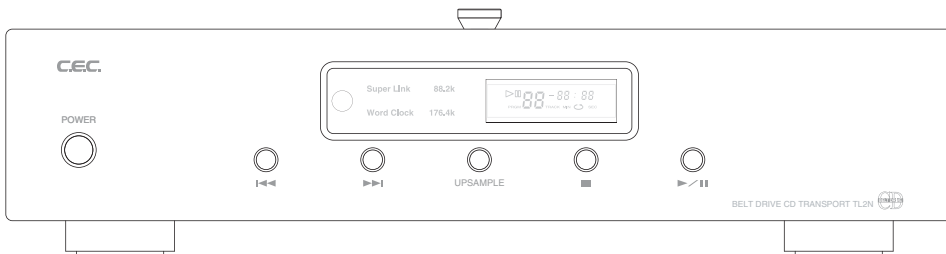
TL2N

Owner's Manual

Thank you for purchasing a TL2N.

Please read through and refer to this Owner's Manual to use your TL2N safely and adequately.

It is recommended to keep the packaging available for future transportation needs.



C.E.C.

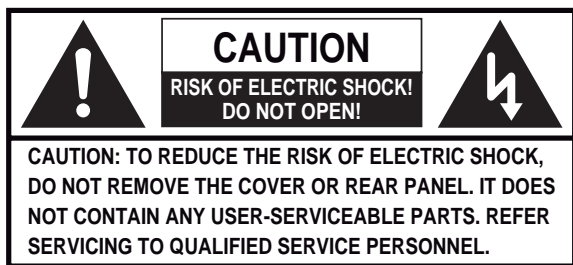
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Features

- ❑ Double belt-drive system: In order to eliminate the vibration and electromagnetic noise from the motors (both spindle motor for CD and feed motor for laser pick-up) a double belt-drive system has been applied, enabling motors to be located away from the spindle and laser pick-up.
- ❑ Large (12 cm in diam., 380 grams) stabilizer to the turntable increases its effective mass and inertial stability (high flywheel effect), and stabilize the disc rotation.
- ❑ The belt to drive the disc (spindle belt) is located after moving stabilizer, and is easy to replace by end-user. Feed belt (belt to drive laser pick-up) can be seen through the window at mechanism cover.
- ❑ In addition to CEC's proprietary SUPER LINK, SPDIF; balanced connection AES/EBU (XLR), COAXIAL (RCA) and TOSLINK (Optical) outputs are for the connection with D/A converter. And an independent BNC terminal is equipped to input 44.1kHz word clock signal at the connection with SPDIF.
- ❑ Standard output signal of CD 44.1kHz can be up-sampled to high resolution music field; two time to 88.2kHz or four times to 176.4kHz.

Important Safety Instructions



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to potential electric shock hazards within the product's enclosure.



The exclamation point within an equilateral triangle is intended to notify the user to the presence of important operating and maintenance (servicing) instructions in the accompanying documentation.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this appliance near water.
- 6) Clean only with a dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install this appliance near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) (For USA, Canada:) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades, with one blade wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet. (For European Countries:) Do not defeat the safety purpose of the grounding-type plug. This plug has two poles and a third grounding hole. The third hole is provided for your safety. If the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect this appliance's power cord from being walked on or pinched, especially around the plugs, convenience receptacles, and where it exits from this appliance's casing.

11) Only use attachments/accessories specified by the manufacturer.

12) Only use this appliance with a cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the appliance. If using a cart, exercise caution when moving the cart/appliance combination to avoid injury from it tipping over.



13) Unplug this appliance during lightning storms or when leaving it unused for extended periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when this appliance itself, its power-supply cord, or plug has been damaged in any way, when liquids have been spilled onto this appliance, when foreign objects have fallen into this appliance, when this appliance has been exposed to rain or moisture, when this appliance does not operate normally, or when this appliance has been dropped.

CAUTION:

- Do not expose this appliance to drips or splashes.
- Do not place any objects filled with liquids, such as vases, on this appliance.
- Do not install this appliance in a confined space, such as within a bookcase or similar piece of furniture.
- Plug the ac power cord into an easily accessible ac wall outlet, so it can be quickly unplugged in case of emergency.
- Do not remove the protective housing with a screwdriver.
- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
- If this appliance seems to be malfunctioning, contact a qualified service station. discontinue use of any malfunctioning unit.

For CANADA

AC power cord connection

Caution:

To prevent electric shock, match the blade width of the plug to the slot width. the plug must be fully inserted to the slot.

Handling Precautions

① Connecting Other Devices

Unplug the AC power cord from the outlet before connecting or disconnecting other devices. Exercise caution when handling the AC power cord. When disconnecting the AC cord from a socket, make sure you pull the plug, and not the cord itself.

② Turning Power On/Off

Your system components should be turned on/off in the following order to avoid generating noise from your speakers and damaging the speakers themselves or other devices:

- Turning power on:** Turn on this appliance before turning on the DA converter or amplifier connected to this appliance.
- Turning power off:** Turn off the amplifier before turning off this appliance.

③ Optical Semiconductor Laser Pickup

The optical pickup is one of the important components that determine the performance of a CD transport. Never touch the optical lens of the pickup with your fingers, etc. Always place the CD Stabilizer on the CD-Turntable in the CD tray to keep the lens clean when not in use as well.

④ CD Stabilizer

Only use the provided CD Stabilizer with this appliance. Commercially available stabilizers may cause this appliance to malfunction.

⑤ Handle With Care

Avoid exerting excessive force on the cabinet, the switch, the knob, the terminal and the CD-Turntable on this appliance.

⑥ Installation

Use of an audio rack is recommended to maximize the sound quality and performance of this appliance. Installation and use of this appliance in the locations described below may cause deterioration in sound quality or malfunction:

- Locations exposed to direct sunlight, such as windowsills, and other exceptionally warm locations, such as near heating appliances (surrounding temperature higher than 35 °C), or exceptionally cold locations (surrounding temperature lower than 10 °C), may prevent this appliance from functioning adequately.
- Damp locations exceeding 90% humidity may

cause this appliance's metal parts to rust, causing this appliance to malfunction.

- Dusty locations may cause this appliance to malfunction. The accumulation of dust inside the CD tray may lower the performance of music signal reading. It may also cause contact failure of the switches, and/or noise.
- Otherwise, avoid installing this appliance close to other transformers and electrical motors, so as to prevent the pickup of induction hum. Also, avoid mounting this appliance on surfaces that may be affected by vibration.

⑦ Avoid lightning strikes

Disconnect the AC power cord from the AC outlet when there is a thunderstorm in your vicinity.

⑧ Condensation

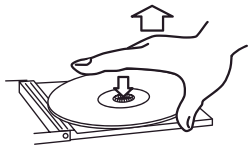
When this appliance is brought into a warm room when the exterior temperature is cold, or when the room temperature rises sharply from using a heater, condensation may form both inside and outside this appliance, hampering its performance. If this happens, leave this appliance unused in the room for 1 to 2 hours (depending on the amount of condensation), so as to bring the temperature of this appliance closer to the room temperature. The condensation should go away gradually.

⑨ Listening etiquette

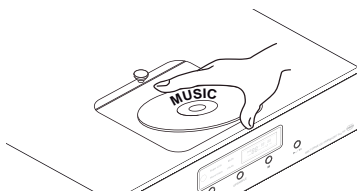
Make sure your playback sound, ex. due to too big sound, does not disturb other people and your neighborhood.

Compact Disc Handling

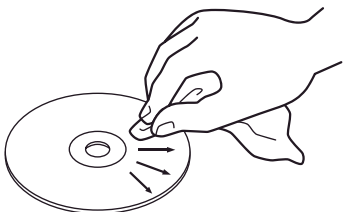
- When taking a compact disc from its case, lift it out by holding the edge of the disc while pressing down on the center button of the case.



- Since a compact disc can be played or recorded only on one side, discs should always be placed on the CD-Turntable with the label side up.



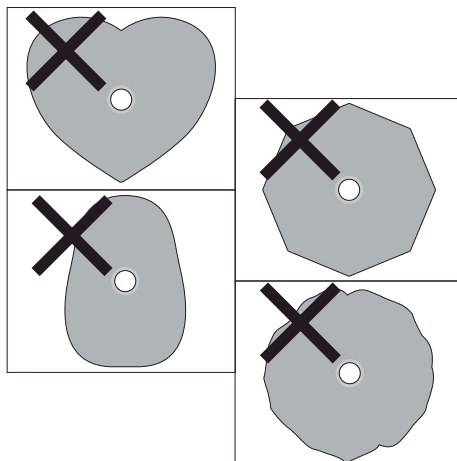
- Handle compact discs with care so as not to scratch their surfaces. Scratches, fingerprints or soiling may cause reading errors during playback.
- If a compact disc's surface becomes soiled, wipe it directly away from the disc's center with a soft, dry cloth. Try to keep the discs clean at all times.



- Never use chemicals such as record sprays, anti-static sprays, benzene or thinner to clean a disc. These may corrode the surface of a disc.
- Do not place discs in any locations subject to high temperatures and high humidity, or that receive direct sunlight. Keep discs away from radiators and electrical heaters. CD-R and CD-RW discs are especially sensitive to ultraviolet rays, so keep them out of direct sunlight.
- To avoid dust and scratching or warping of discs that could cause reading errors, replace discs in their cases after use.
- Do not attach any labels on a disc surfaces. Do not use discs that have Scotch tape, labels, excessive

label glue exposed on the surface. These may cause this appliance to malfunction.

- Do not use cracked discs or irregularly shaped discs (octagonal, heart-shaped, or any other special shapes). These may cause this appliance to malfunction.



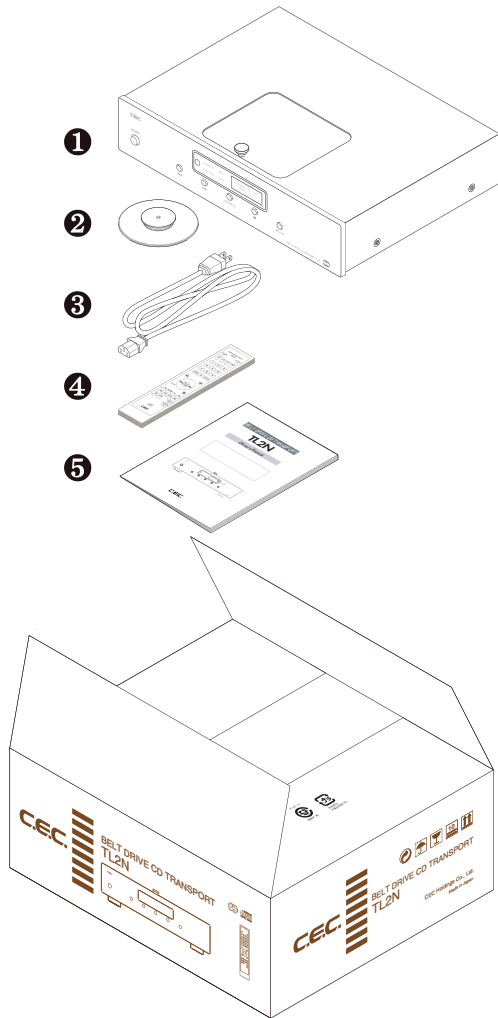
CD-R/RW DISC

- This appliance is able to playback CD-R/RW discs recorded in audio CD format and finalized. Some CD-R/RW discs may be unplayable due to the quality of the CD-R/RW disc and/or the quality of the recording.
- Do not attach stickers or protective seals on discs and do not use any protective coating sprays. If you wish to label a disc, only write on the label side using soft-tipped insoluble pens. Never use ballpoint pens or hard-tipped pens.

Accessories

TL2N should contain the following:

- ❶ TL2N main unit
- ❷ CD-Stabilizer
- ❸ AC power cord
- ❹ Remote control unit RU-218
- ❺ Owner's manual



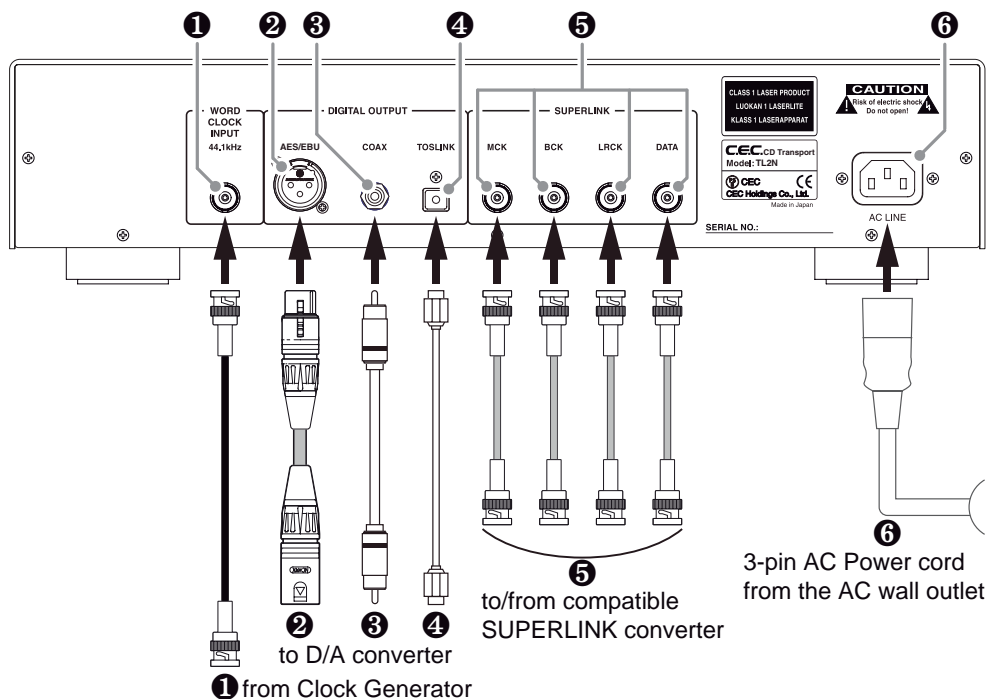
- Keep the packaging available for future transportation needs.
- The power cord is for use with the TL2N exclusively, and should not be used for other devices.

Specifications

Playable disc	music CD and finalized music CD-R/RW
Spindle drive system	belt-drive
Pick-up drive system	belt-drive
CD-Stabilizer	diameter approx. 120mm, weight approx. 380g (brass)
Digital output / sampling frequency	SUPERLINK x 1: 2.5Vp-p/75Ω (BNC x 4) / 44.1kHz
	AES/EBU x 1: 2.5Vp-p/110Ω (pin2=hot) / 44.1k, 88.2k, 176.4kHz
	COAXIAL x 1: 0.5Vp-p/75Ω / 44.1k, 88.2k, 176.4kHz
	TOS x 1: -21 to -15dBm EIAJ / 44.1k, 88.2k, 176.4kHz
Word clock input	BNC x 1: 44.1kHz (not useful with SUPERLINK)
Upsampling	24bit/88.2kHz, 176.4kHz (not useful with SUPERLINK)
Power supply	AC230V/120V, 50/60Hz (specified on the rear panel)
Power consumption	21W
Dimensions	approx. 435(W) x 335(D) x 109(H)mm (incl. buttons, terminals and legs)
Weight	approx. 11kg (incl. CD-Stabilizer)
Accessory	CD-Stabilizer, AC power cord, Remote control unit RU-218, Owner's manual
Color	silver / black

- Design and specifications are subject to change without notice.
- Illustrations in the Owner's Manual may deviate from the actual unit due to design improvements.

Rear Panel Functions and Connections



Make a connection before power on, otherwise TL2N may malfunction due to interference when contacting a cable plug to a terminal. Turn off and on again to recover the function.

Clock input

1 WORD CLOCK INPUT (44.1kHz)

44.1kHz word clock input jack with a BNC type connector. Connect to a clock generator using a BNC (75Ω) cable. Being synchronized with an external clock "Word Clock" in the display panel lights up.

Digital outputs

2 AES/EBU(Balanced)

Balanced digital output with a XLR type connector (1=GND, 2=Hot, 3=Cold). Connect to a digital audio device using a XLR (110Ω) cable.

3 COAXIAL

Standard (SPDIF) digital signal output jack with a RCA type connector. Connect to a digital audio device using a RCA (75Ω) cable.

4 TOS LINK (Optical)

Optical (SPDIF) digital signal output jack with a square TOS LINK connector. Connect to a digital audio device using an optical cable with a square TOS LINK plug.

Super Link

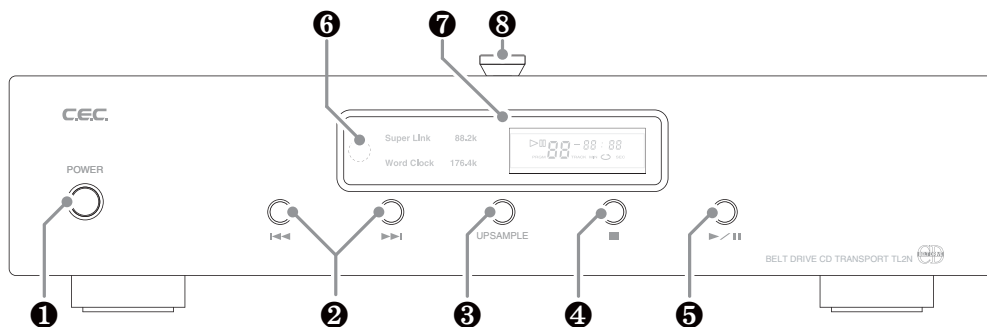
5 SUPERLINK

Proprietary "SUPERLINK" digital input/output for use with a compatible D/A converter. There are four BNC type terminals named MCK, BCK, LRCK and DATA. Four BNC (75 ohm) cables are required.

AC power

6 AC LINE

Connect the supplied 3-pin AC power cord to the AC LINE inlet and the wall outlet.



1 POWER button

Press to turn the power ON or OFF.

Turning the power on the **7** display will blink "0 0:00" and the CD transport will check its tray for a compact disc. Several seconds later the display will change to indicate the total number of tracks and the total playing time. When there is no disc on the CD-Turntable the display will indicate "no DISC".

When the CD door is open the display will indicate "OPEN". Closing the door the CD transport will start to check for a compact disc.

2 Track Skip ◀◀/ ▶▶ buttons

Press the Skip forward ▶▶ or backward ◀◀ button to jump to the next or previous track from the track being played (or displayed).

Pressing the skip backward ◀◀ button during playback, playback will return to the beginning of the track being played. Press the skip backward ◀◀ button twice repeatedly to jump to the previous track.

3 UPSAMPLE button

Press to up-sample the sampling frequency from the CD standard 44.1kHz to 88.2kHz or 176.4kHz. Pressing the button will change the sampling frequency in an order of 44.1kHz (default) >> 88.2kHz >> 176.4kHz, and the **7** display will indicate "88.2k" or "176.4k". Refer to "Upsampling" on page 12 for details.



Changing the sampling frequency during playback would interrupt the sound, or cause a noise or a malfunction. Press the button after stopping the playback and decreasing the amplifier volume.

4 STOP ■ button

Press to stop playback.

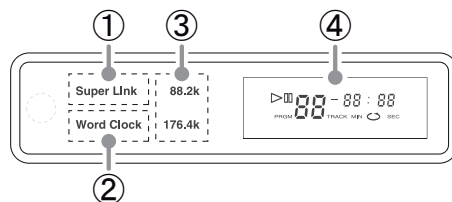
5 PLAY/PAUSE ▶/|| button

Press to start or to temporarily stop playback.

6 Remote sensor

The remote sensor, which receives signals from the remote control unit, is located at the left side of the **7** display window. Aim for this sensor when using the remote control unit. The remote control may malfunction if there are any obstacles between the remote control unit and the remote sensor.

7 Display



1 Super Link indicator

"Super Link" lights up in Superlink mode linking to a compatible D/A converter.

2 Word Clock indicator

"Word Clock" lights up when an external 44.1kHz word clock is synchronized.

NOTE: Once Superlink is activated the word clock will be unsynchronized. Superlink is prior to an external word clock.

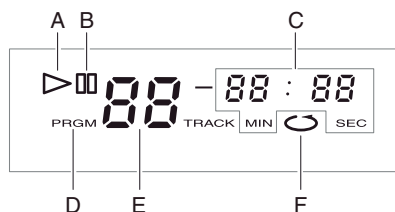
3 Sampling Frequency indicator

"88.2k" or "176.4k" lights up when the upsampling function is activated.

Press the UPSAMPLE button on the front panel or remote control unit to change the sampling frequency.

④ CD indicator

After reading a table of contents (TOC) the display indicates the total number of tracks and total playback time, and during playback the track number being played and elapsed time are displayed.



A: Playback indicator lights up during playback.

B: Pause indicator blinks during pause mode.

C: Time display indicates the elapsed time/remaining time for the track being played, total remaining time or total elapsed time.

D: Programming indicator lights up during program mode.

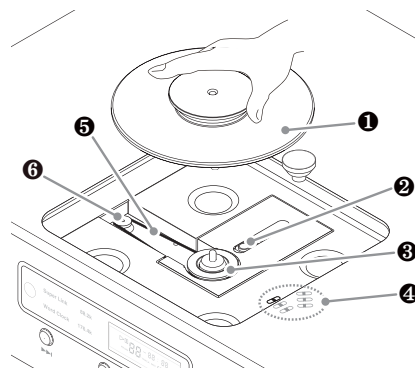
E: Track number display indicates the track being played.

F: Repeat indicator lights up when repeat mode is enabled.

⑧ CD Door knob

Open or close the CD door sliding backward or forward by hand to place a compact disc on or remove it from the CD-Turntable in the tray.

Always close the CD door to keep the inside clean.



① CD-Stabilizer

The CD-Stabilizer for TL2N is heavy with a diameter of 12cm and weighing 380g.

Handle with care. Hold the upper edge steadily when placing on or removing it from the CD-Turntable in the CD tray. Dropping the CD-Stabilizer may damage it and decrease playback accuracy.

② Optical Laser Pickup Lens

The optical laser pickup reads music signals from a compact disc. To keep it clean never touch the lens with your fingers, etc., and always close the CD door.

③ CD-Turntable

Place a compact disc on the CD-Turntable, and place the CD-Stabilizer on top of the disc. Closing the CD door the CD-Turntable will begin to rotate to read out the disc information (TOC).

The CD-Stabilizer can be placed on the CD-Turntable when not in use, even when no disc is in place.

④ Viewing Windows for Feed Belt

Six small ellipse windows opening in the mechanism cover to see part of the square rubber belt which drives the laser pickup.

⑤ Spindle Belt

Square rubber belt to drive a disc on the CD-Turntable. Periodic maintenance is not required. However, the tension of the belt may be lowered by using for years which may affect the disc rotation accuracy. Refer to "Maintenance of Rubber Belt" on page 16 to replace the belt.

⑥ Spindle Motor Pulley

Motor pulley to drive a disc on the CD-Turntable via spindle belt.

Button Functions

① to ⑫ buttons work for TL2N and the others are compatible with the other CEC products like D/A converter DA5 and DA3N, CD player CD5 and so on. Here refers to TL2N functions only.

① PROGRAM button

Press to enable programmed playback. Refer to "Programmed CD playback" on page 14 for details.

② CHECK button

Press to check the order of tracks in your current programmed setting. Refer to "Programmed CD playback" on page 14 for details.

③ CLEAR button

Press to clear the current programmed setting. Refer to "Programmed CD playback" on page 14 for details.

④ UPSAMPLE button

Press to up-sample the digital output signal to 88.2kHz or 176.4kHz. Refer to "Upsampling" on page 12 for details.

⑤ DIMMER button

Press to change the display brightness in different three levels. Refer to "Dimmer" on page 12 for details.

⑥ DISPLAY button

Press to cycle the display through various mode.

● Elapsed track time



● Remaining track time



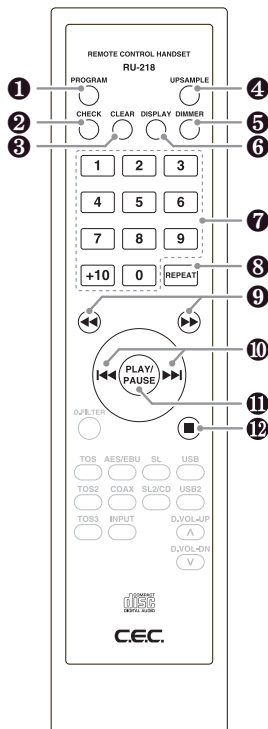
● Total elapsed time



● Total remaining time



Each press of the DISPLAY button cycles the display in



the following order: track number/elapsed track time (default display) → track number/remaining track time → total remaining time → total elapsed time → back to track number/elapsed track time (default display).

□ After track-32 remaining track time is not displayed, but " - " and " - - : - - " blink alternately.

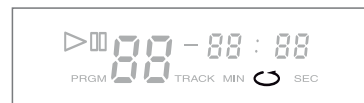
□ Total remaining time and total elapsed time will not be displayed in the programmed playback mode and/or repeat mode.

⑦ Numeric buttons

Press to select a track directly for playback or to enter a programmed playback order. To select ex. 24-track press +10 twice and then 4.

⑧ REPEAT button

Press to repeatedly playback all the tracks on a disc. When repeat mode is on, the display will show the repeat indicator.



Press again to cancel the repeat mode. Or press the stop button to stop playback and cancel the repeat mode at the same time.

⑨ Search ◀◀/▶▶ button

Press and hold the button to quickly search through the track being played. ◀◀ searches through the track backwards, and ▶▶ searches forwards.

⑩ Skip ◀◀/▶▶| button

Jump to the previous or next track.

⑪ PLAY/PAUSE ▶/|| button

Press to start playback or to pause playback temporarily.

⑫ STOP ■ button

Press to stop playback.

Precaution on handling the remote control unit

□ When operating the remote control, point it towards the remote sensor on the front panel.

□ Make sure nothing is blocking the front panel where the remote sensor is located.

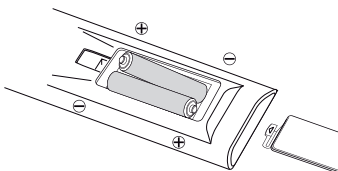
□ Avoid exposing the remote sensor on the front panel to direct sunlight or other light sources, as such exposure

can cause malfunction.

- ❑ The remote control unit may malfunction when its batteries are running low. Change the batteries to new ones of the same type if this seems to be the case.

Battery Installation

Remove the cover of the battery compartment. Insert two AAA batteries into the compartment. Make sure that the batteries are inserted with their positive (+) and negative (-) poles positioned correctly, and put the cover back on.



Battery Replacement Period

If the distance at which the remote control unit can be used to operate the player seems to be decreasing, replace both batteries with new ones.

Precaution on handling batteries

- ❑ Never use different types of batteries together. Both rechargeable and non-rechargeable batteries can be used, but the two should not be used together.
- ❑ If you will not be using the remote control unit for an extended period of time (more than a month), remove the batteries to prevent leakage.
- ❑ If the batteries leak, use a cloth to wipe away the liquid inside the battery compartment and replace the batteries with new ones.
- ❑ Do not heat or disassemble batteries, and never dispose of old batteries by throwing them in a fire. Dispose of batteries following laws in the local area.

SUPERLINK is a proprietary digital signal transmission system that transports music signals and synchronization(clock) signals with separate cables.

The SPDIF(Sony Philips Digital Inter Face) and AES/EBU(Audio Engineering Society/European Broadcasting Union) systems, commonly used in coaxial digital outputs and optical outputs, transmit both the music and clock signals through the same cable, and thus are prone to jitter effects caused by the signals interfering with each other.

SUPERLINK system transmits these signals separately with multiple cables, requiring no encoding/decoding process for data transmission. It minimizes deterioration of the music signal during transmission by using the clock signals from the D/A converter's master clock generator to achieve complete synchronization.

Each transmission path delivers/receives the following signals.

MCK(Master Clock): The CD transport receives the master clock signal from the D/A converter through this line, and functions as a slave to the DA converter, enabling completely synchronized transportation of audio data.

BCK(Bit Clock): Sends bitclock signals, required for digital data bit identification(e.g. sampling frequency) or signal readout, from the CD transport to the D/A converter.

LRCK(L/R Clock): Sends left/right identification clock signals from the CD transport to the D/A converter.

DATA: Sends audio data from the CD transport to the DA converter.

Remark:

Whenever changing the D/A converter input to or from SUPERLINK the master clock source is also switched to external or internal one. This master clock change will cause the CD transport to re-read the disc information (TOC) resulting in cancelling every current functional settings like programmed playback, repeat, dimmer and so on. Set those functions again after re-reading out TOC.

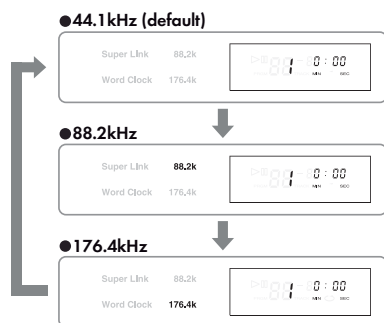
Upsampling

Standard CD sampling frequency of 44.1kHz(16bit) can be up-sampled to 88.2kHz(24bit) of two times or 176.4kHz(24bit) of four times which expects more precise, smooth and deep sound.

Check whether your D/A converter is compatible with those higher sampling frequencies. If it is not any comfortable sound won't come out with such a higher sampling frequency. Change to an acceptable sampling frequency for the converter.

How to use

① During stop, press the UPSAMPLE button on the front panel or the remote control unit to select a compatible sampling frequency. Pressing the button toggles through 44.1kHz(default), 88.2kHz and 176.4kHz, and up-sampled 88.2k or 176.4k will light up on the display. 44.1k does not light up.



② Check that your D/A converter has been synchronized with the up-sampled 88.2kHz or 176.4kHz (refer to the converter's manual how to check synchronized or not).

③ Press the PLAY/PAUSE ► / ||| button. Playback should begin with the new sampling frequency.



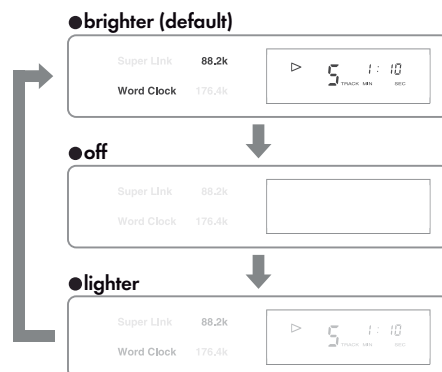
Changing the sampling frequency during playback would interrupt the sound, or cause a noise or a malfunction. Press the button after stopping the playback and decreasing the amplifier volume.

Remarks:

- During SUPERLINK mode any upsampling is not available.
- Changing the D/A converter input to SUPERLINK any sampling frequency up-sampled should return to 44.1kHz. To activate upsampling again change the converter input to any other SPDIF than SUPERLINK, and then press the UPSAMPLE button.

Dimmer

Display brightness can be changed in different three levels. Press the DIMMER button on the remote control unit to dim the display. The display brightness will toggle through "brighter"(default), "off" and "lighter".



During "off" mode:

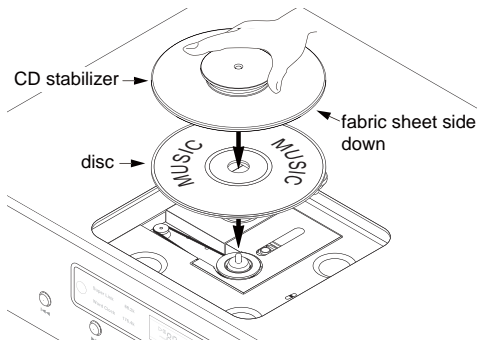
- Opening the CD door "OPEN" and current functional setting will be displayed in "lighter" brightness temporarily. Closing the CD door the display will be "off" again automatically.
- Pressing once the UPSAMPLE button the current functional setting will be displayed in "lighter" brightness temporarily when upsampling and/or external word clock has been activated. Press the UPSAMPLE button successively to change the sampling frequency. 5 seconds later the display brightness will return to "off" automatically.

Remark:

- Pressing the UPSAMPLE button in Superlink mode the display brightness won't change.
- Regardless of any DIMMER setting the brightness will return to the default "brighter" whenever turning the POWER on again or changing the D/A converter input to or from SUPERLINK.

Normal playback

- 1 Press the POWER button to turn the CD transport on.
- 2 Open the CD door sliding backward by hand. When the door is open the display indicates "OPEN".
- 3 Lift up the CD-Stabilizer, if it is on the CD-Turntable, holding the edge of upper layer part securely. Place a disc on the CD-Turntable, and then the CD-Stabilizer gently on top of the disc.



Important:

Make sure that a disc and the CD-Stabilizer have been set correctly and laterally before closing the CD door.

Inclined positioning of CD-Stabilizer and/or improper connection of CD-Stabilizer to a disc might cause an unstable rotation resulting in the ability to read music signals correctly.

Slightly push the CD-Stabilizer center with your finger for correct location and better mounting to disc.

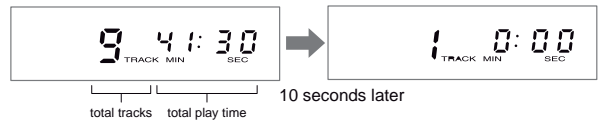
■ Make sure you place the disc on the CD-Turntable with the label side facing up, and place the CD-Stabilizer on the disc before closing the CD door. The CD transport is unable to read the disc unless you place the CD-Stabilizer correctly.

■ Only use the supplied CD-Stabilizer. Any other type of the CD-Stabilizer may cause a malfunction.



- 4 Close the CD door completely sliding forward by hand. The CD transport should automatically start spinning the disc to read its information, and the total number of tracks and the total playing time should appear on the display. Leaving it without pressing any button the display will

change approx. 10 seconds later to show the 1st track playback ready.



- 5 Press the PLAY/PAUSE button to start playback. The playback indicator and track number should be shown on the display, followed by the elapsed time for the track being played.



Skip Track

Press the Skip forward button to jump to the next or previous track from the track being played (or displayed).

NOTE: Pressing the skip backward button during playback, playback will return to the beginning of the track being played. Press the backward button twice repeatedly to jump to the previous track.

Pause Playback

Press the PLAY/PAUSE button to stop playback temporarily. Press this button again to resume playback.

Stop Playback

Press the STOP button to stop playback.

NOTE: Playback will stop automatically if you open the CD door without pressing the STOP button, but it will always take a few seconds for the CD-Turntable to stop spinning. Do not touch the CD-Stabilizer or the disc until those stop completely. Pressing the CD-Stabilizer or the disc down excessively may damage the CD mechanism or the disc, or cause the CD transport to malfunction.



Remove the Disc

Slide the CD Door open with your hand, and remove the CD-Stabilizer first holding its upper edge, and then remove the disc.



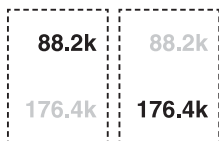
NOTE: Lifting of the CD-Stabilizer too quickly or after playing for a long time may cause a disc drop out of the CD-Turntable. Lift the CD-Stabilizer gently in order to avoid damaging disc or by falling down on the center shaft and/or other components of the CD Transport.

Place the CD-Stabilizer on the CD-Turntable even without disc and slide the CD Door closed with your hand.

NOTE: Do not leave a disc on the CD-Turntable when the CD transport is not in use.

Up-sample 44.1kHz to 88.2kHz or 176.4kHz

During stop press the UP-SAMPLE button on the front panel or remote control unit. Sampling frequencies will toggle through 44.1kHz(default), 88.2kHz and 176.4kHz, and light up except 44.1kHz. Press the PLAY/PAUSE ►/|| button to start playback.



NOTE: Upsampling is not available in SUPERLINK mode.

Use Superlink

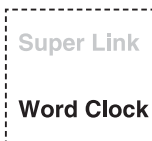
During stop and smaller amplifier volume change the compatible D/A converter input to SUPERLINK. "Super Link" will light up in the display.

Whenever changing the converter input to or from SUPERLINK, the master clock source will be also changed to external or internal one causing the CD transport to re-read the disc information (TOC). Press the PLAY/PAUSE ►/|| button to start playback.



Synchronize with an external word clock

During stop turn on an external clock generator being connected. Detecting a 44.1kHz word clock signal "Word Clock" will light up in the display. Press the PLAY/PAUSE ►/|| button to start playback.



NOTE: Once SUPERLINK is activated the word clock will be unsynchronized since SUPERLINK is prior to an external clock.

NOTE: Any change of Upsample, Superlink or Word Clock during playback would interrupt the sound, or cause a noise or a malfunction. Change those functions after stopping the playback and decreasing the amplifier volume.

Programmed CD Playback

Programming

Up to 32 tracks in a customized playback order can be programmed by using the remote control unit while playback is stopped.

- 1 Press the PROGRAM button on the remote control unit to activate the program mode. "PRGM" is displayed, and "1" as temporary track number blinks and "1" as the first playback order is displayed.



- 2 Select a track number by pressing the numeric keys on the remote control unit. The selected track will be added to the program. For example: Press key-5 to add the 5th track to the 1st playback order, then press key-3 to add the 3rd track to the 2nd playback order. Repeat this process to program additional tracks.



- In case that a number beyond the last track number on a disc is selected the last track may be added alternatively.
- After the 1st playback track is added you can select an addition track by pressing skip buttons as well. The selected track number blinks. Then press the PROGRAM button to add the track to the program. In this way press the PROG. button to add the track every after blinking a track number by pressing skip buttons.

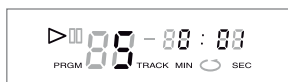


- ③ Press the STOP button to complete the programming phase. The 1st playback track number is displayed. If 32 tracks are programmed "FULL" is displayed as well.



Playback in Program Mode

Press the PLAY/PAUSE button while the "PRGM" indicator is shown on the display to play the programmed tracks.



- To return to the normal playback mode, press the PROGRAM button while playback is stopped. The "PRGM" indicator will disappear from the display. To return to the program mode, press the PROGRAM button again.

Checking, Adding, Changing and Deleting Programmed Tracks

Programmed tracks can be checked, added, changed and deleted under the program mode while playback is stopped.

① Check the Playback Order of Programmed Tracks

Press the CHECK button repeatedly to show the playback order of programmed tracks. The display changes to show "-" when you reach the next to the last track in the program.



Pressing the CHECK button again here will display the first track in the playback order.

- If you press the STOP button, the display will jump back to the first track in the programmed order.

② Add Tracks to the Program

To add one track to the current program, press the STOP button and select the track number with the numeric keys. The new track will be added to the end of the current playback order. Repeat this process to add more tracks to the program. Press the STOP button to complete the track-adding phase.

③ Change Tracks in the Program

To change one track in your programmed playback order, press the CHECK button repeatedly until the track number in question is displayed, then select a new track number. The new track will overwrite the existing track. Repeat this process to change more tracks. Press the STOP button to finish the track-changing phase.

④ Delete Programmed Tracks

- All tracks: to clear the entire program, hold down the CLEAR button for more than 2 seconds.
- One track: to clear one track from the program, press the CHECK button repeatedly until the track number in question is displayed, then press the CLEAR button. Repeat this step (CHECK then CLEAR) to remove more tracks from the program.
- The entire program will be deleted automatically when you open the CD door or turn the power off.

Maintenance of Rubber Belt

Periodical maintenance or check is not required for a rubber belt used for all CEC belt-drive CD transports and players. However, the tension of the belt may be lowered by using for years which may result unstable reading of information on CD, noise during music reproduction and/or jump of the music. The replacement of the belt may solve the problem if it comes from weaker tension of the belt.

If replacement of a belt does not solve the problem, consult with the dealer that you have purchased.

An average of the life of a belt is 5 years. It is not required to replace if music reproduction goes well even after 5 years.

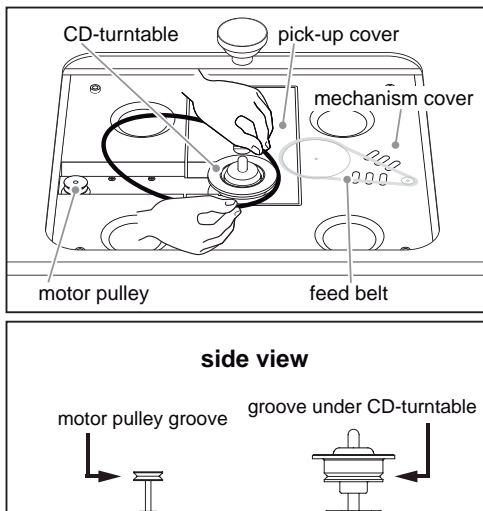
Replacement of a spindle rubber belt

No other rubber band than CEC original rubber belt can be used for replacement. Require the CEC belt at the dealer that you have purchased.

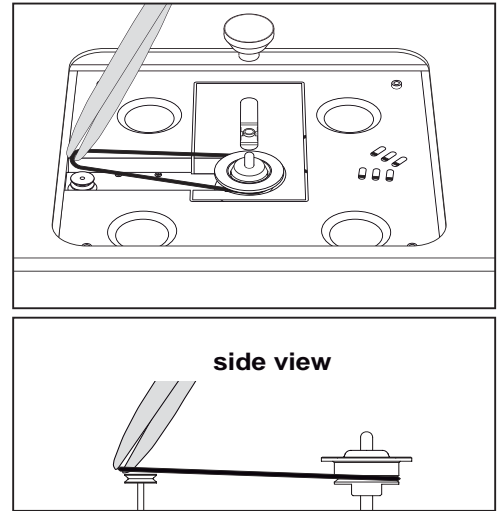
A feed belt should be replaced at the dealer or service center because it is located under both of the pick-up and mechanism covers.

❶ Remove the old belt.

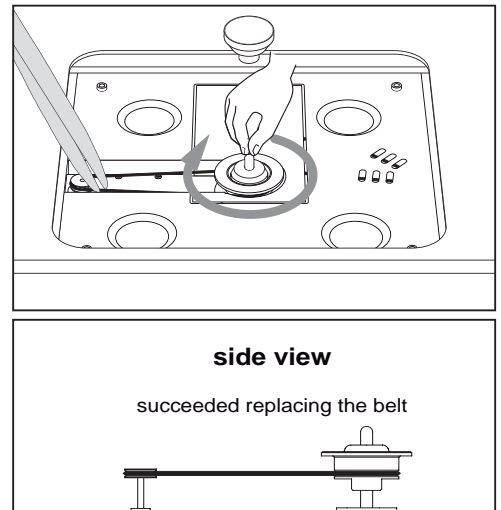
❷ Mount a new belt to the groove under the CD-turnstile through the clearance between pick-up cover and CD-turnstile.



❸ Then mount the belt to the motor pulley groove. Using a pair of tweezers would be easier to mount.



❹ Be sure the belt is installed at the grooves and the belt is not twisted. Twist of the belt can be corrected easily by using a pair of tweezers moving the center shaft by hand.



Summary of Tips and Hints to use Belt Drive CD

❶ Handle the CD-Stabilizer with care

The CD-Stabilizer is quite heavy. Please handle it carefully not to drop to damage other equipment and/or furniture. And the distortion of the CD-Stabilizer may damage the CD reading performance. Please note that it is a quite expensive highly precise component.

❷ When mounting the CD-Stabilizer

Make sure to mount the CD-Stabilizer on CD-Turntable vertically. An inclination of installation of the stabilizer to the spindle shaft may cause unstable reading of the music signal.

❸ Don't touch the CD-Stabilizer before stop

Don't touch the CD-Stabilizer as well as disc when it is rotating after music. Pressing the CD-Stabilizer down strongly may damage the CD mechanism.

❹ Don't touch the pick-up lens

Laser pickup is one of the most important components for the performance of CD player. Don't touch the lens by finger. Make sure to close the CD door when CD player is not used for clean maintenance of the laser pick-up lens.

Maintenance

❶ If the surface of the CD transport case becomes soiled, wipe with a soft cloth or use diluted neutral cleaning liquid. Be sure to remove any fluid completely. Do not use thinner, benzene, alcohol, chemical cloths or bleaching agents as these may damage the surface of the CD transport case. Also avoid using aerosol insecticides near this appliance.

❷ If dust accumulates on the CD-Turntable, remove it with stick tape (e.g. Scotch tape). Make sure not to touch the optical pickup lens with your fingers.

❸ The CD transport requires no periodic maintenance except the belt replacement mentioned on page 16, and contains no other user-serviceable parts. Contact your dealer or an authorized CEC service center for an inspection and repair in case of malfunction.

Troubleshooting

If you suspect a malfunction in this appliance, please check the following chart before calling your dealer.

malfunction	solution
no power	connect completely both ends of AC power cord
no playback	place CD-Stabilizer on CD
	close CD door completely
	place CD label facing up
	clean up CD
sound skipping	mount the belt correctly (refer to page 16)
	change the location or place on a stable rack
no sound	clean up CD
	correct connections as per manual
	select an input with connection
	check connections, input selection and volume setting
sound distortion	turn off and on all the devices
	change to suitable cables
hum noise	correct the cable direction
interference on tuner	connect the RCA plugs completely
unresponsive to remote control	place away from tuner or power off
	turn on the main unit
	install batteries
	replace with new batteries

TL2N contains a microcomputer that can malfunction due to the external noise or interference. If this seems to be the case, turn the unit off and wait for a short while before turning it back on and trying again

In case you need to contact a service center please prepare the following information.

Model name and serial number:

Purchase date:

Dealer name and contact information:

Description of the unit's problem:



CEC Holdings Co., Ltd., Japan
