

DD-7200A
CD WRITER
INSTRUCTION MANUAL

KENWOOD CORPORATION

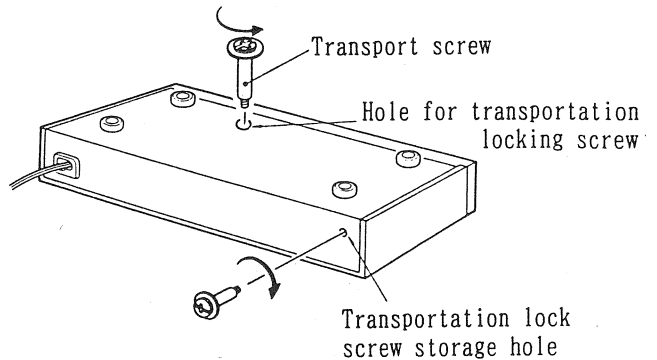
CAUTIONS REGARDING HANDLING

◆Transportation Locking Screw

Using a screwdriver, etc., remove the transportation locking screw (red screw head) from the bottom of the unit before using the CD-writer.

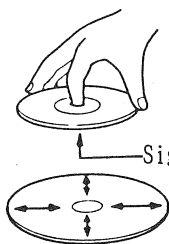
- Place the removed locking screw in the storage hole on the rear panel.
- Following the guidelines below, place the locking screw at its original position before transporting the unit.

1. Set the POWER switch to "ON" with no disc inserted.
2. Wait a few seconds to make sure that "no disc" lights on the display before setting the POWER switch to OFF.
3. Securely fasten the transportation locking screw at its original position.



◆Care of Discs

When holding the discs, do not touch their signal surfaces.



If fingerprints or smudges contaminate the disc, clean the disc by wiping gently with a soft cloth.



Do not affix paper, tape, etc., to neither the signal surface nor the label surface.



If the disc is not to be used for an extended period, remove it from the player and store it in its case.

◆ Condensation

Waterdrops formed when water vapor comes into contact with the surfaces of cold objects are called dew.

When a bottle, etc., is removed from a refrigerator, waterdrops sometimes form on the surfaces of the container when these come into contact with air in a warm room. However, this phenomenon is called dew condensation.

If these phenomena occur, the unit may not operate correctly or operation may be completely impossible. This does not indicate any breakdown. However, the unit must be left to dry until all dew is evaporated. (Set the system's POWER switch to "ON" and allow the unit to stand. At the longest, the dew evaporates after a few hours.)

In particular, attention must be paid to condensation under the following circumstances:

- When the unit is brought into a warm room from cold surroundings, or similar cases where large temperature changes occur.
- When heating devices are started.
- When the unit is brought from a very cool air-conditioned room into a room with high humidity and high temperature.

- When great differences between the temperature of the unit and the outside air temperature occur, as well as other circumstances promoting condensation.

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1. OUTLINE

The CD Writer DD-7200A has been designed for use with the CD Encoder DA-7000A as a CD manufacturing system that conforms to the ORANGE BOOK PART II standards (November 1990).

Both uninterrupted recording mode and partial recording mode are available. The unit also has a playback function allowing playback of regular compact discs as well as partial discs.

2. FEATURES

(1) EFM Signal Input

Signal input only possible via the CD Encoder.

(2) EFM Signal Output

When 1 CD encoder and up to 10 CD writers has been connected in parallel connection for recording, the first CD writer's EFM signal output should be connected to the EFM signal input terminal of the second CD writer. The EFM signal output of the second CD writer should be connected to the EFM input terminal of the third CD writer and so on.

(3) Clock Mode

Select the external mode only when recording signals. Connect the FS signal from the CD encoder to the FS input terminal. Internal mode is also possible during playback.

(4) FS Signal Input

When 1 CD encoder and up to 10 CD writers has been connected in parallel connection for recording, the first CD writer's FS signal output should be connected to the FS signal input terminal of the second CD writer. The FS

signal output of the second CD writer should be connected to the FS input terminal of the third CD writer and so on.

(5) Monitor Sound Output of Recording/Playback

This CD writer has a built-in 18-bit D/A converter, low pass filter and balance output circuit which allow monitoring of audio signals during recording and playback.

(6) DIGITAL DATA Output

This unit is provided with a digital data output terminal based on the AES /EBU digital audio interface standard.

(7) ENCODER • START/STOP Signal Output

Control signal output to start or stop the generation of the subcode of the CD encoder during recording.

(8) GB-IB Interface

All the 4 modes; uninterrupted recording, partial recording, CD playback, partial disc playback, pass through the GB-IB bus. Using the dedicated system software S-700, interface is possible using a PC (PC-98 Series).

(9) Q Code Display

During recording and playback TNO. and elapsed time of the TNO. are displayed by the Q code.

(10) State Display

REC, PLAY and PAUSE are displayed. By combination 4 states are displayed: REC, PLAY, REC PAUSE, and PLAY PAUSE.

(11) Disc Type Display

When the tray is opened, a disc placed on the tray and the tray closed the type of disc is automatically indicated according to the ORANGE BOOK PART II standards.

3. SPECIFICATIONS

- (1) Encode Method
Conforms to the CD RED/YELLOW/ORANGE BOOK PART II (November 1990).
- (2) Recording Method
Optical modulation by laser.
- (3) Recording Wavelength
780 ~ 790 nm
- (4) Recording Power
Auto setting by ATIP code from approximately 4 mW to 8mW.
- (5) Playback Power
Approximately 0.5 mW.
- (6) Possible Recording Area
Diameter 44 ~ 118 mm
- (7) Rotation Method
Recording: CLV by WOBBLE signal.
Playback : CLV by EFM signal.
- (8) CLV Range
1.2 m/s ~ 1.4 m/s
- (9) Recording Position Control
Time control by the ATIP in the WOBBLE signal.
- (10) C1 Error Rate of Disc After Recording
Less than 3×10^{-2} (In case of Kenwood Cor. specified discs).

- (1) 3T Jitter of EFM Signal of Disc After Recording
Less than 30 nsec. (In case of Kenwood Cor. specified discs).
- (12) Synchronization Error
Between ATIP and subcode: ± 10 EFM
Additional writing continuous: $26 \text{ EFM} \pm 1 \text{ EFM}$
- (13) Input / Output Signals
EFM signal : 50-ohm input/ output at the TTL level, BNC connector
Synchronizing signal: 50-ohm input/ output at the 44.1 kHz TTL level, BNC connector
EFM START : Output at C-MOS level, BNC connector
Control signal : GP-IB, IEEE 24-pin multiconnector
Digital output : AES/EBU standard, XLR3-32 connector
Audio output (L,R) : 600-ohm balanced, XLR3-32 connector
- (14) Control
Control of all functions through GP-IB.
Governing standard: IEEE-488-1978
- (15) Disc Loading
Front loading by OPEN/CLOSE KEY
- (16) Power Supply
Voltage : 100V, 120V, 220V, 240V (switchable by rear panel switch)
Fuses : 1 A (100 V, 120 V), 0.5 A (220 V, 240 V)
Power consumption: Approximately 30 W
- (17) Dimensions: EIA133 426 (W) \times 133 (H) \times 480 (D) mm
(not including protruding parts)
- (18) Rack Mount: Possible
- (19) Weight: 14 kg

(20) Operating Environment: Horizontal position. Temperature: 15-35 °C/ Relative humidity: 25-80%

(21) Supplied Accessories:

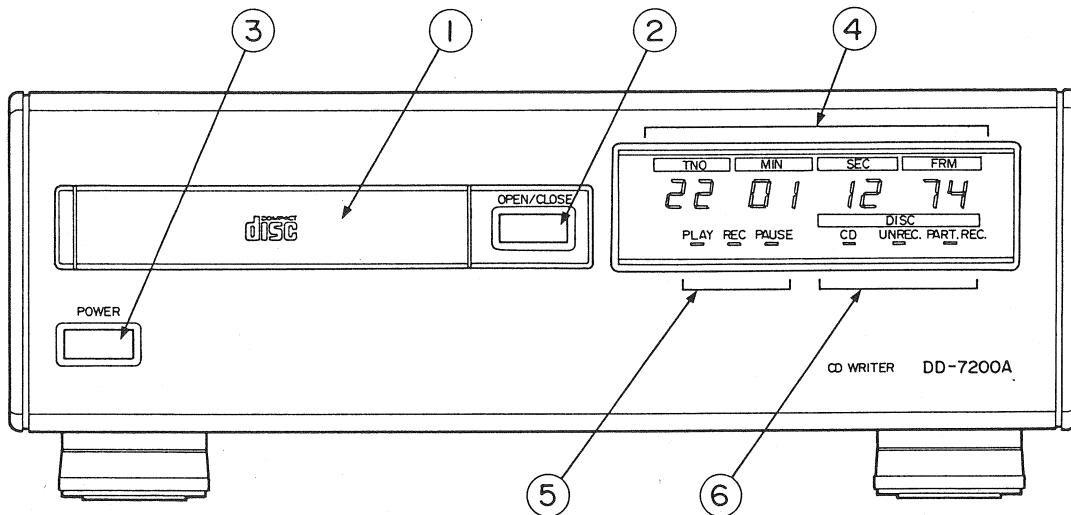
AC cord : 1

Instruction manual: 1

Fuses : 2

4. EXPLANATION OF PANELS

(1) Front Panel



① Tray

The tray accommodates both 8-cm discs and 12-cm discs. The tray can only be opened by using the OPEN/CLOSE KEY② when power is ON and the CD writer set to the stop mode.

② OPEN/CLOSE KEY

This key functions during playback and when the power is set to ON and the CD writer is in the stop mode. The key does not function during GP-IB control. The tray ① can be opened and closed using this key.

③ Power Switch

Press the push switch to turn ON or OFF the power to the CD writer. When the power is ON, LEDs on the display unit (④~⑥) light.

④ Time Code Display

During recording and playback, TNO. and elapsed time of the TNO. are displayed in minutes, seconds and frame units.

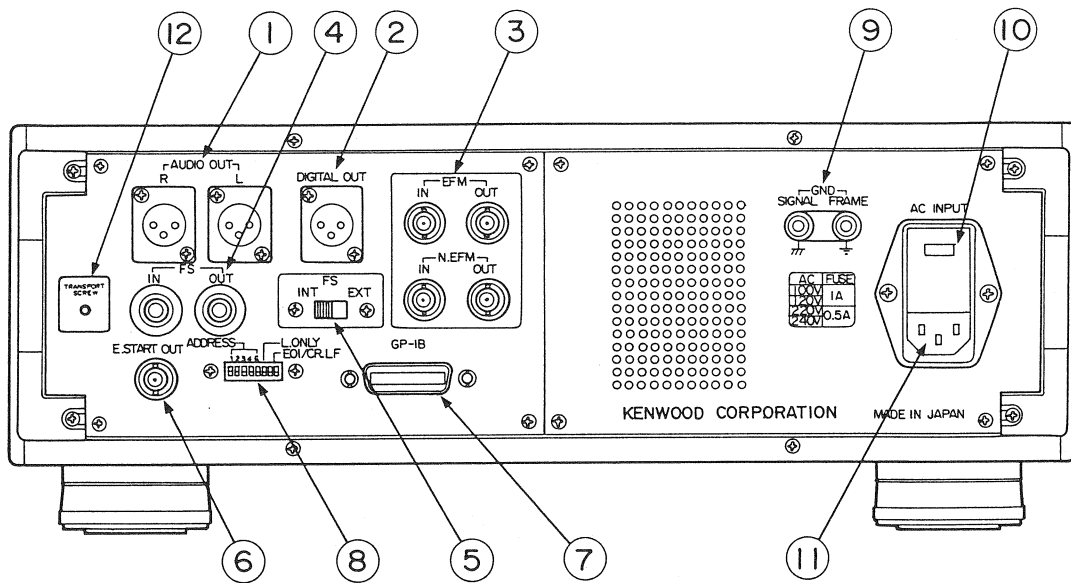
⑤ Mode Indications

PLAY is displayed during play mode. REC is displayed during recording mode. PAUSE is displayed during pause mode.

⑥ Disc Type Indication

When a disc is placed on the tray and the tray closed, the CD writer automatically distinguishes between the following 3 types: compact disc, blank disc, partial disc. When the CD indicator lights, recording is not possible.

(2) Rear Panel



① AUDIO OUT Terminal

A 600-ohm balanced stereo output terminal for monitoring recording and music signal playback. Output is 20 dBm (at 600 ohms load).

② DIGITAL OUT Connector

Digital audio interface output. 3-pin output for professional use.

③ EFM and N.EFM signal IN/OUT Terminals

The EFM IN and the N.EFM IN terminals are provided to receive EFM and N.EFM signals from the CD encoder. Their input impedance is 50 ohms. The EFM OUT and the N.EFM OUT terminals are provided to output to an external circuit the EFM and the N.EFM signals that are input to their IN terminals from the CD encoder. Their output impedance is 50 ohms.

④ FS Signal IN / OUT Terminals

The FS IN is a terminal with an impedance of 50 ohms for receiving the 44.1 kHz synchronizing signal from the CD encoder. When the clock mode switch⑤ is set to EXT, the FS OUT terminal sends out the signal input through the FS IN terminal at 50 ohms impedance. When the clock mode switch is set to INT, the internal 44.1 kHz signal is sent out at 50 ohms impedance.

⑤ Clock Mode Selector Switch

When set to EXT, the unit operates based on the 44.1 kHz synchronizing signal input through the FS IN terminal.

⑥ E. START OUT Terminal

Terminal for initiating and terminating generation of the CD encoder's subcode. During recording the level becomes "H"; during playback the level becomes "L".

⑦ GP-IB Connector

This unit only operates with the GP-IB control. Accordingly, always connect the piggyback cable to this connector.

⑧ GP-IB Address Setting Switch

A set of 8 DIP switches but only address bits 1 ~ 5 can be set. The address bit becomes 1 if the corresponding switch on the 5-column address switch is pushed upwards.

(Note) Always set this GP-IB address setting switch before connecting the unit to the AC mains. If the switch is set after connecting to the AC mains, the setting will not be valid and the previous setting will remain valid.

⑨ GND Terminal

This is the unit's earth terminal. FRAME GND is connected to the cabinet and the center pin of the power supply connector. For safety reasons, always earth this terminal.

The SIGNAL GND is the GND terminal of the unit's control signal system. When shipped from factory, the SIGNAL GND and FRAME GND are connected via a short bar.

⑩ Line Voltage Selector Switch and Fuses

The unit is shipped from factory with the line voltage selector switch set to the power requirements of the destination. Do not turn it.

A.C. input protection fuse is found behind the cover. 1 A glass tube type fuses are used in areas with 100-120 V power supply; 0.5 A glass tube type

fuses in areas with 220-240 V power supply.

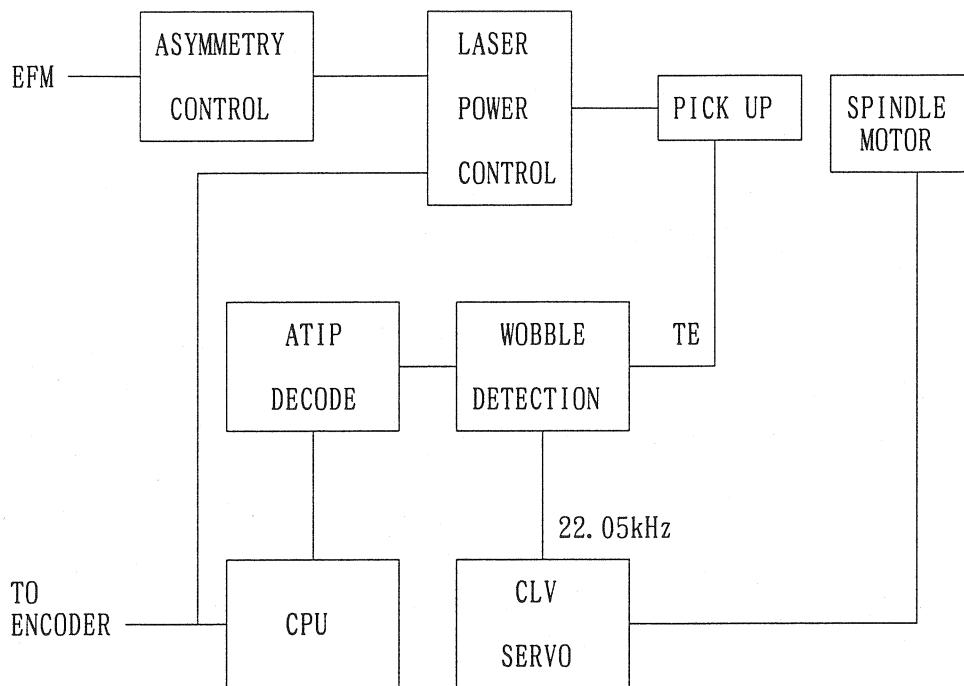
⑪ AC INPUT Connector

Connector to connect the unit with the AC mains and feed the current through the built-in line filter. Use the supplied power cord to connect the CD writer to the AC mains.

⑫ Transportation Lock Screw Storage Hole

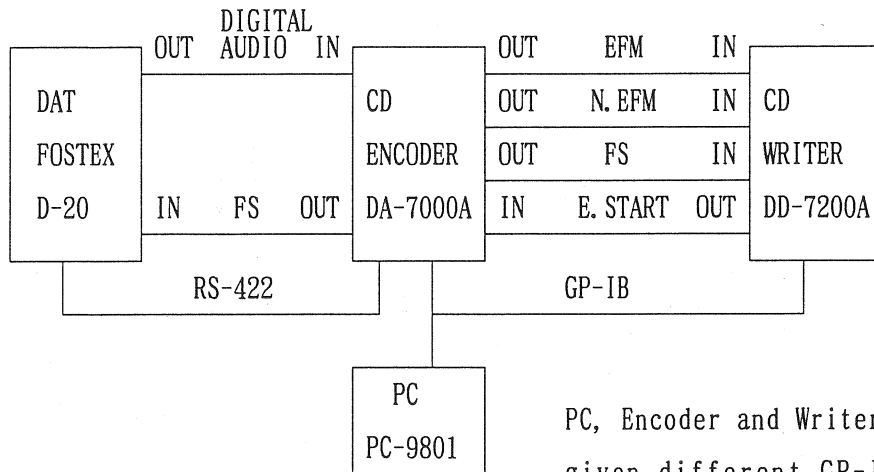
After removing the transportation lock screw from the bottom the unit, place the screw in this storage hole.

5. BLOCK DIAGRAM



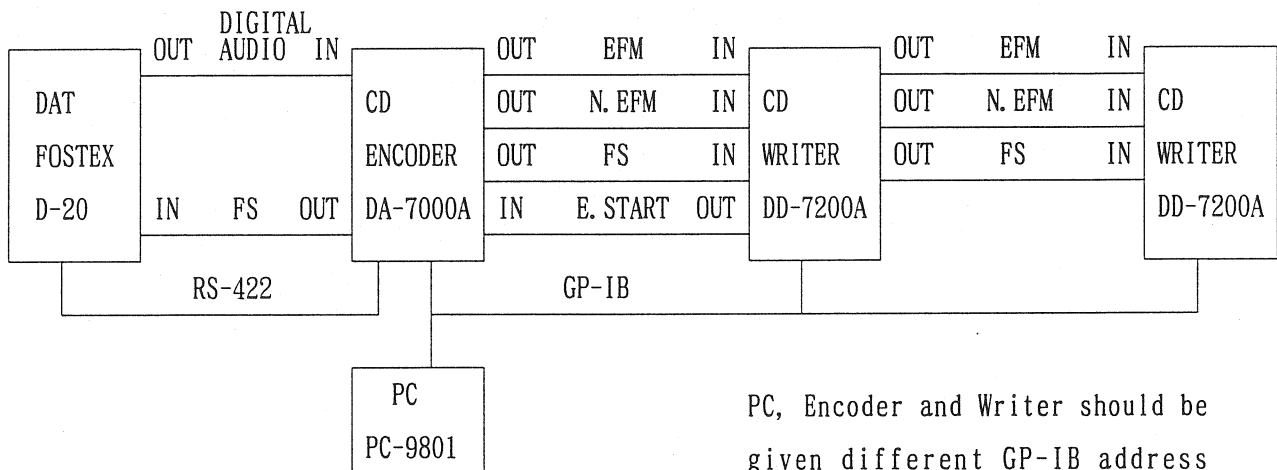
6. SYSTEM CONNECTION DIAGRAM

- (1) Single unit operation: Uninterrupted recording and incremental recording possible.



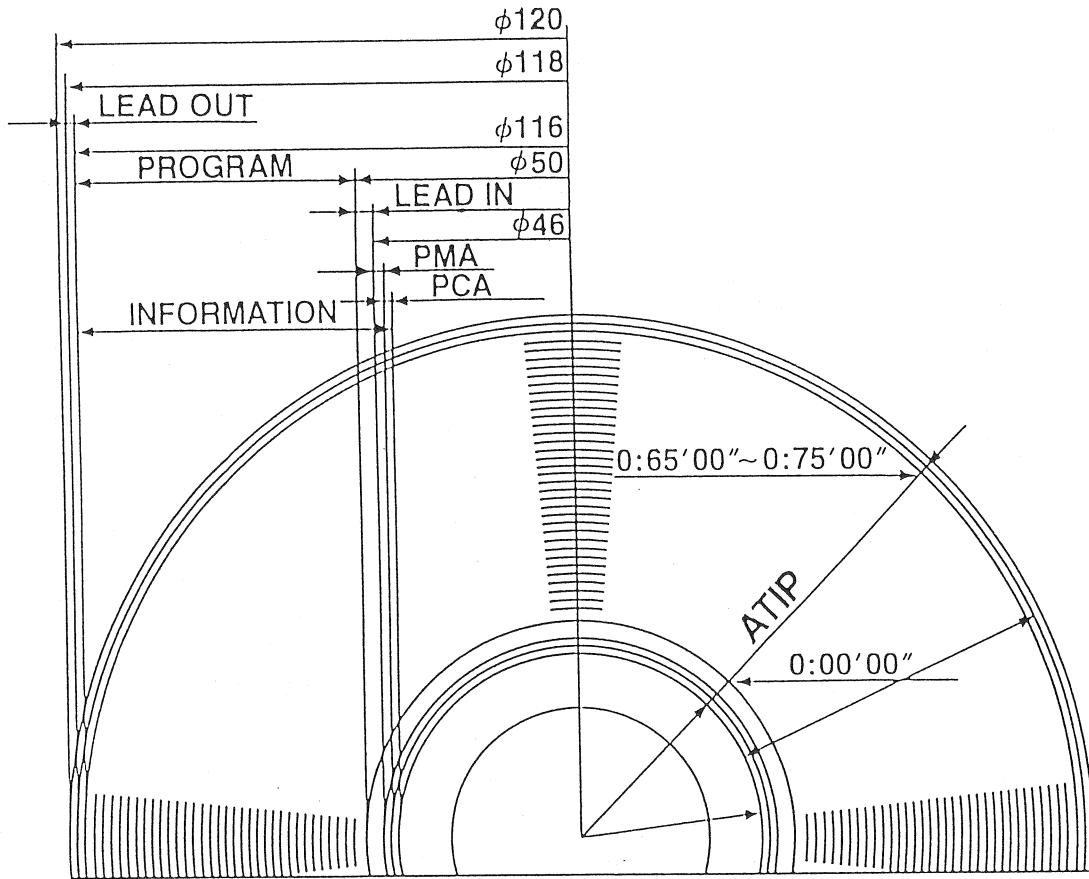
PC, Encoder and Writer should be given different GP-IB address values.

- (2) Parallel operation: Only uninterrupted recording possible.



PC, Encoder and Writer should be given different GP-IB address values.

7. DISC LAYOUT



8. CAUTIONS FOR USE

- (1) Do not use discs other than Kenwood discs or KENWOOD specified CD-R disc TYPE R.
- (2) This CD Writer is a precision measuring instrument. Always handle with utmost care. Always connect the unit to AC mains that provide correctly the prescribed power supply.

A product of
KENWOOD CORPORATION
17-5, 2-chome, Shibuya, Shibuya-ku, Tokyo 150, Japan
