

UD COMPONENT SYSTEM/COMPACT HI-FI SYSTEM

UD-413

INSTRUCTION MANUAL

KENWOOD CORPORATION

For your records

Record the sens injumber includion the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on the product.

Model _____ Seria: Numbe

Unpacking

unback the Unit carefully and make sure that a laccessories are but aside so they will not be lost Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately if your unit was shipped to you directly, notify the shipping dompany without dealy. Only the consignee the person or company receiving the unit; can file a craim against the carrier for shipping damage.

We recommend that you retain the original parton and packing materials for use should you transport or ship the unit in the future.

Accessories

EV indoor antenna (1)

AM local antenna (1)

Loop antenna stand (1)

Remote control unit (1)

Batter es R6/AA(12)

Audio cord (1)





Speaker sord (2.

Speaker stand [2]

Wall hanger J2.

Screw 4







1777

Before applying power

 \bigwedge Caution : Read this page carefully to ensure safe operation.

UD-413 (En)

Units are designed for operation as follows.

2 U.S.A. and CanadaAC 120 V only

Safety precautions

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







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.



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE

THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE

The marking of products using lasers (Except for some areas)

CLASS 1 Laser product

The laber is attached to the rear pane, and says that the component uses laser beams that have been classified as Class 1. It means that the unit is utilizing laser beams that are of a weaker class. There is no danger of hazardous raciation outside the unit.

UD-413 (En!

3

Special features



Easy operation

Nearly all operations for CD, tuner, and cassette deck can be cone just with the self-lluminated basic operation keys. Color keyed function control:

When the nout selector is operated, the power is automatically switched on and play (reception) starts (except AUX).

3D Speaker System

Free avout is possible. A SD speaker system is used. The sub-woofer can be placed anywhere, for example in a corner of the room, without impairing the stereo feeling, and non-bass sound will be played back.



Dynamic rotary volume control - 3.

When adjusting the volume, fast turning of the volume control produces a larger volume change for the same angle of rotation of the VOLUME CONTROL knob. Sow turning produces a small volume change, thus bermitting fine adjustment.



L.L.C. (Low Level Control)



For estening at a low level at hightleto,, the volume can be rowlered by one-touch, operation. At this time, the low and the high range are dompensated automatically for a more natural sound reproduction. The level at the time of rowlevel can be changed as desired.



3-Disc carousel CD player



The CD player is of the 3-bisc carbuser type winton can accommodate up to 3 discs at a time. The disc can be replaced easily leven during blayback of another disc. This feature is useful when blaying various biscs for long benods.



One-touch edit

- _25

- 26

Only desired tracks from a sos or an entire discipanible recorded on table with a pne-rough operation. This feature allows you to produce custom tables.



Versatile tone and sound field adjustment

- 27

The tone can be selected according to the genre of the music diaved POP, ROCK, UAZZ, CLASSIC

The sound field can also be selected as desired: - ARENA UAZZ CLUB (STAC) UM (HIT MASTER

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Convenient timer functions

- 30

in addition to the boss birty of storing up to 2 timer programs in memory, the following functions are available.

. All timer . When the power is turned ON by the timer, the sound leve increases gradually.

Sleep timer luseful when you want to go asleep while istening to music

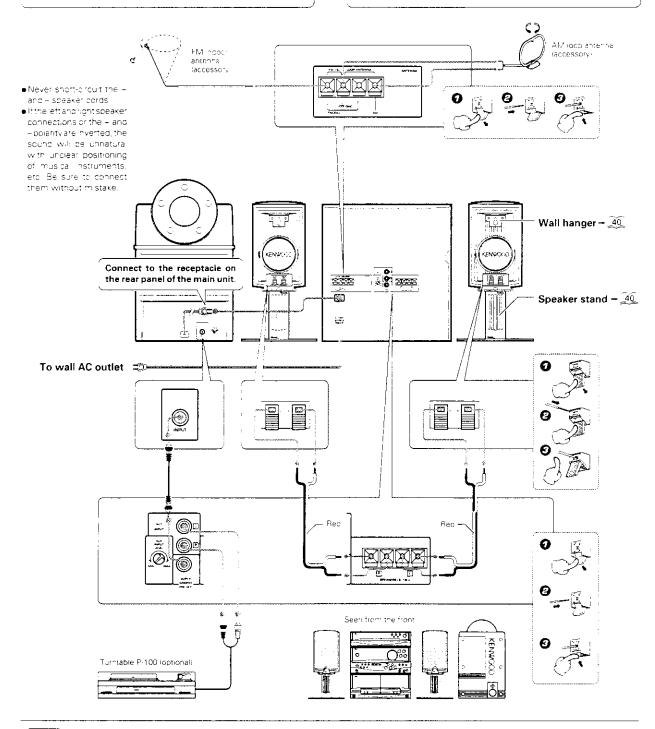
Do not plug the power cord into the power outlet until all of the required connections have been made.

- In case an associated system component is connected, also read the instruction manual of the component.
- Align the front panels of the unit flush

Marfunction of microcomputer

If operation is not possible or erroneous display appears even though all connections have been made properly, reset the microcomputer referring to in case of difficulty'.

— 35





- 1. Be sure to insert all connection cords securew in their connections are imperfect, the sound may not produced or noise may interfere.
- 2. Before plugging or unplugging a connection cord, be sure to unplug the power cord from the wall AC outlet. If connection cords are plugged or unplugged with the power cord left blugged in limit function or damage may result.
- 3. Do not connect up a power source which is larger than that indicated on the socket at rear of the unit

AUX INPUT LEVEL control

This control adjusts the input level from the component connected to the AUX INPUT jacks. Usually the AUX INPUT LEVEL should be set to MAX. Adjust the control when the input level is too high.

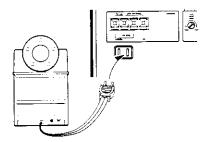
Note

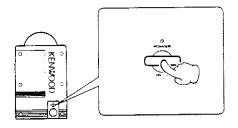
The AUX INPUT LEVEL control has been set to the MIN (minimum) position when the unit left the factory. Be sure to adjust the AUX INPUT LEVEL control if you connect an external component to the AUX jacks.

Power Supply for the Sub Woofer

When the system is connected as shown below, the power supply for the sub woofer will be coupled to the POWER ON/OFF switch of the main unit.

Oconnect the power plug of the sub woofer to the AC receptacle (Switched) on the rear panel of the main unit. @ Always keep the POWER switch of the sub woofer set to ON.





Operation of remote control unit

Loading batteries

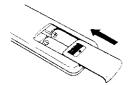
@ Remove the cover.



Insert batteries.



O Close the cover.

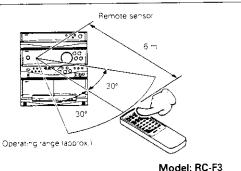


Insert two R6 ("AA"-size) batteries following the polarity indications.

Operation

After plugging the power cord of this unit, press the POWER key of the remote control unit to turn the power of the system ON. When the power is turned ON, press the key of the function to be operated.

When pressing more than one remote control keys successively, pressione keys securely by leaving an interval of 1 second or more between keys.

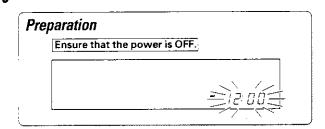


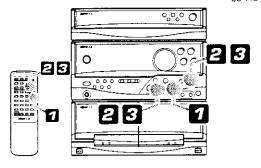
Infrared ray system



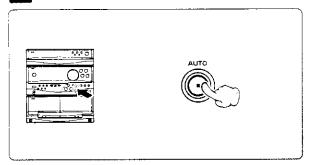
- 1. The provided patteries are intended for use in operation checking, and their service : fe may be short
- 2. When the remote controllable distance becomes short, replace both of the batteries with new ones.
- 3 f direct sunlight or the light of a night-frequency fluorescent lamp (inverter type, etc.) is incident to the remote sensor, marfunction may occur in such a case, change the installation position to avoid malfunction.

This unit incorporates a clock function. Be sure to adjust the correct time before using the timer function.

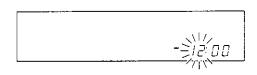




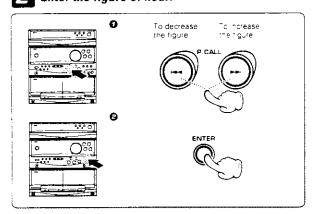
7 Activate the clock adjustment mode.



Example: Adjustment to 8:45



Enter the figure of hour.

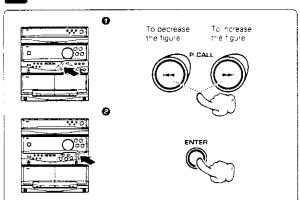


■The time display starts to blink



- The time of the day is represented in 12-hour AM/PM method.
- Press the ENTER key. The nour is entered and the minute display starts to blink.

3 Enter the figure of minute.



- B. 455

- If you make a mistake, restart from the beginning
- To adjust correct time, press the ENTER key at the same moment as a time announcement
- The time display blinks after a power failure or when the power cord has been unplugged from the AC outlet and plugged again. In such a case adjust the clock again.

Power ON / OFF



Press the POWER key.





Sub woofer unit

 The power also is switched on when an input selector key (CD, TAPE, UNER letcilis pressed

Volume adjustment







Receiver unit

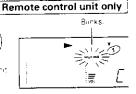
Remote control unit

- Quick turning produces a larger change amount.
- The volume of the sub woofer also is coupled

Muting the sound temporarily





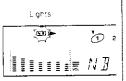


- Press again to resume the original volume
- This is cancelled when the volume or the L.L.C. is operated

Bass compensation (N.B.: Natural Bass circuit)





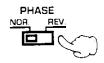


This is cancelled when it is pressed again

Sub Woofer Phase Switching



The acoustics of the bass sound change according to various conditions. Listen to the music and select the phase according to your liking.



Listening through headphones



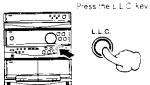
Oinsert the headphone plug into the PHONES jack.



- The sounds from all speakers are out off
- Adjust the volume.

Listening at low volume (L.L.C.: Low Level Control)

The volume for quiet listening (L.L.C. volume) can be called by one-touch operation.







When the key is pressed again after the L.L.C. indicator has finished flashing, this function is cancelled

- The volume is reduced and the low range and the high range are compensated.
- When L.L.C. is ON, the change amount will be constant. agependent of the speed with which the VOLUME CON-
- •When the memorized L.L.C. volume is larger than the present volume, the volume will not change.
- The volume will not return to the original volume when L.L.C. s cancelled. Please adjust as required

To change the setting

- O Switch the L.L.C. to ON.
- Adjust the volume with the VOLUME CONTROL knob or the remote control unit while the L.L.C. indicator is flashing.
- O Press the L.L.C. key once more while the L.L.C. indicator is flashing.
- •When the L.L.C. volume exceeds 29, no compensation is executed for high and low range

Sub Woofer Volume Adjustment

Set the volume ratio in regard to the front speakers. VOLUME



The bass sound The pass sound will be increased v - pe reduced Standard setting example

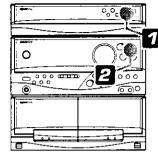
STANDBY mode of POWER switch

As long as the plug of the power cable of this unit is connected to a receptacle, independent of power CN/OFF, the time display is lit. The reason for this is that a small current is kept flowing for memory protection. This is called standby condition. As long as the time display is i.t, power ON/OFF also can be done by remote control

UD-413 (En)

When a disc is placed into the CD player in advance, this unit will be switched on automatically and the CD will be played when the CD (>/II) key is pressed.

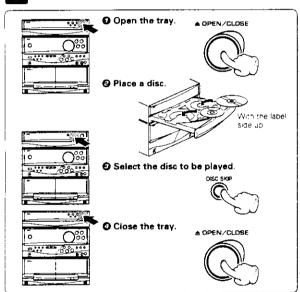




Playing tracks in order from track No. 1

Use the following procedure to play a CD in the original order of tracks from track No. 1.

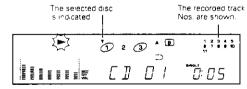
1 Load a disc.



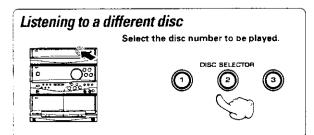
- . Do not touch the played side of disc.
- Rotate the tray with the DISC SKIP key to insert the third disc.
- The tray of the disc to be played should come to the left position when the unit is seen from the front.

2 Start playback.



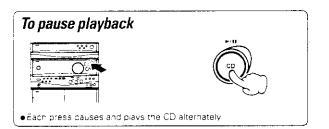


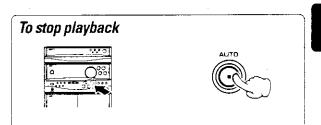
• After a few seconds, play starts from track No.1.



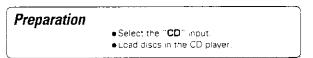
• The disc can also be selected with the DISC SKIP key.



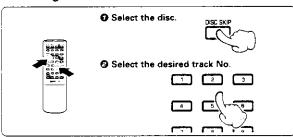




Playback from desired track



Selecting a track



• The disc can also be selected with the **DISC SELECTOR** key.

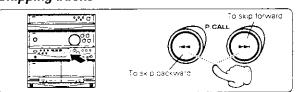
Press the numeric keys as shown below....

To enter track No. 23 +10, +10, 3

To select track No. 40 : +10, +10, +10, 0

 Playback starts from the selected track and continues on the subsequent tracks.

Skipping tracks



- •The track in the direction of the button pressed is skipped, and the selected track will be played from the beginning.

Searching



Playback starts from the position where the key is released.

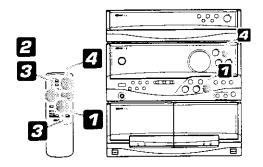


Programming tracks in desired order

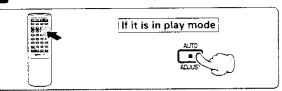
UD-413 (En)

Preparation

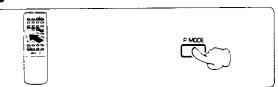
- Select the "CD" input
- Load discs in the CD player



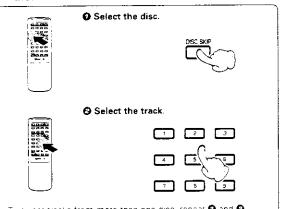
Check that the CD player is in the stop mode.



2 Light the "PGM" indicator.



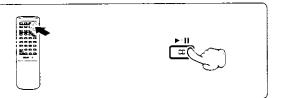
Enter track Nos. in the order you want to play them.



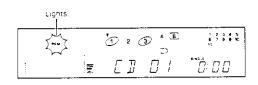
To select tracks from more than one disc, repeat ② and ②

 To program all tracks of a CD, select the disc and then press the P.MODE key without selecting any tracks

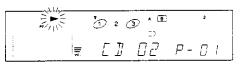








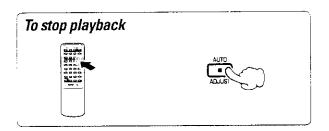
- The disc can also be selected with the DISC SELECTOR key
- Up to 32 tracks can be programmed. When "FULL" is displayed indimore. tracks can be programmed
- If you make a mistake, press the P.MODE key to dult the program mode and restart from step 🖪



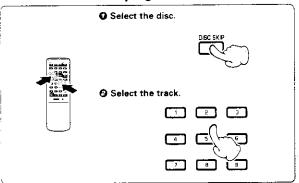


- Tracks will be played in the order they were programmed (in order of P
- When the ◄◄ or the ►► key is pressed during play, the program will jump to the preceding or the following track respectively:
- •When the ⋈⋈ key is pressed once during playback, the play position returns to the beginning of the current, track being played.
- A space of several seconds is produced between tracks



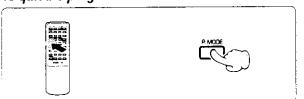


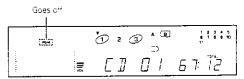
To add a track to the program



• When a track No. is entered, the track will be added to the end of the existing program.

To quit the program mode





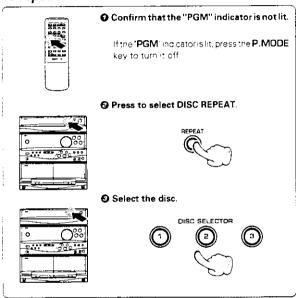
 If the key is pressed during playback, normal playback in order of tracks resumes from the current track

UD-413 (En)

Preparation

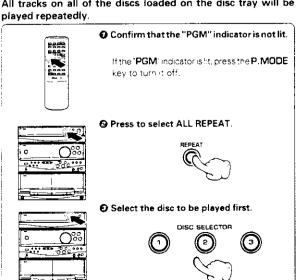
- Select the "CD" input
- Load discs in the CD player

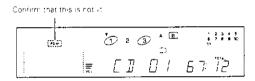
To repeat a disc



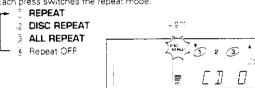
To repeat all discs

All tracks on all of the discs loaded on the disc tray will be





Each press switches the repeat mode



To stop repeated playback

Press the REPEAT key twice.

• The "DISC" and "REPEAT" indicators go off and the playback following the current mode of the CD player starts



Each press switches the repeat mode



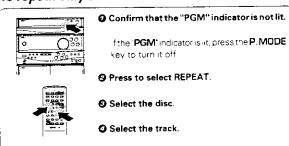
To stop repeated playback

Press the REPEAT key again.

• The "ALL" and "REPEAT" indicators go off and the playback following the current mode of the CD player starts.



To repeat only one track



Each press switches the repeat mode.

Lights up

REPEAT

2 DISC REPEAT

3 ALL REPEAT

4 Repeat OFF

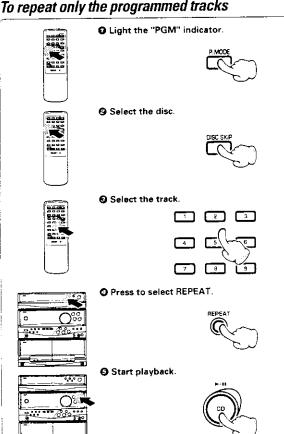


To stop repeated playback

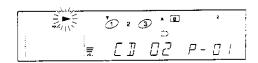
Press the REPEAT key three times.

• The "REPEAT" indicators goes off and the playback following the current mode of the CD player starts.

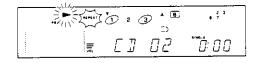
To repeat only the programmed tracks







- All of the programmed tracks will be played repeatedly.
- Up to 32 tracks can be programmed by repeating steps 2 and 3. When "FULL" is displayed, no more tracks can be programmed.



To stop repeated playback

Press the REPEAT key again.

• The "REPEAT" indicator goes off and the playback, following the current mode iPGMI of the CD player starts



Playback in a random order (Random playback)

UD-413 (En)

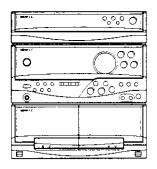
As Tracks are selected at random, you can enjoy listening to for a long time.

Preparation

- Select the "CD" input
- Load discs in the CD player







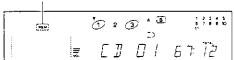
Confirm that the "PGM" indicator is not lit.

If the "PGM" indicator is lit, press the P.MODE key to turn it off.









Select the RANDOM mode.

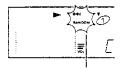
For "DISC RANDOM" playback, select the disc in advance.





Each press switches the modes as follows:

- ① DISC RANDOM (Random play of one disc)
- 2 ALL RANDOM (Random play of all discs.
- 3 Random play cancelled





• The random playback can also be repeated by pressing the REPEAT key

To select another track in the middle of playing one







To cancel random playback

Press so that the "RANDOM" indicator goes



◆Pressing the ◄◄ key once returns to the beginning of the track being played

• The "RANDOM" indicator goes off and the playback in order of the tracks starts from the track being played

Playback of tape

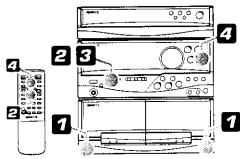


JD-413 [En

When a tape is placed into the cassette deck in advance, this unit will be switched on automatically and the tape in deck B will be played when the TAPE (◄ ►) key is pressed.

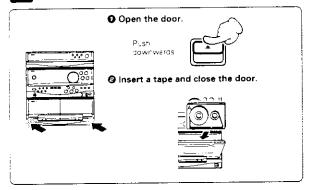


For play of a tape recorded with presence effect, switch off the presence $\rightarrow 28$:

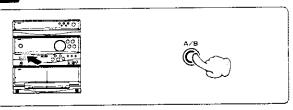


Tape playback

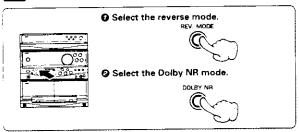
Load a cassette tape.



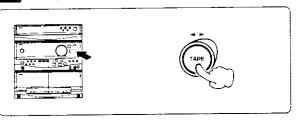
2 Select the deck to be used for playback.



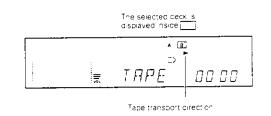
3 Determine the playback modes.



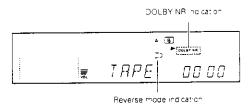
Start playback.



- The type of tape, that is, Normai, Chrome or Metal, is set automatically
- Remove tape slack before loading



Close the door secure:y



Each press switches the modes as follows

1) "==" Playback stops after having played the two sides.
2) "==" Endless playback occurs.

— ③ "—" …Playback stops after having played a side

DOLBY NR OFF

 Select the Dolby NR mode according to the recording condition of the tape.

• If the tape transport direction is not the desired direction, press the TAPE
 → ► key again

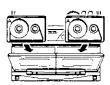
15



1C

Relay play

When tapes are set in the decks A and B and the reverse mode is set to "—" (play of both sides), play of the second deck will be started automatically after play of the first deck has been completed. Tape play will be repeated alternately.



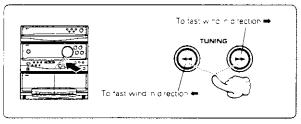
To stop playback





• Do not press the eject key until the tape has stopped completely.

To wind tape at high speed



●Press the ■ key to stop fast winding.

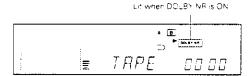
A tip for use of the tape counter

The tape counter is set to \$\textit{DDDD}\$ when a cassette tape is loaded. By writing down the counter reading in case you want to interrupt recording (playback) in the middle of the tape, the memo will be helpful as a reference for locating the same position when continuing the recording (playback) the next time. The tape counter figure decrements during recording or playback of the back side (while the \$\rightarrow\$ tape transport indicator is at \$\textit{To}\$ reset the tape counter to \$\textit{DDDD}\$, unload the tape then load it again.}



Dolby Noise Reduction (NR)

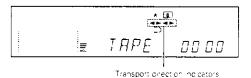
The Dolby NR system minimizes the hiss noise heard when playing tape. When playing a tape prerecorded with Dolby NR ON, be sure to set the DOLBY NR ON for playback.



Transport direction indicators

The ◀ and ► indicators indicate the current direction in which the tape advances when playback or recording is started automatically by the easy operation function, etc. This direction is the direction stored in memory when the tape was last stopped.

(To change the direction, press the TAPE (◄ ►) key then press the ■ key.)



Searching for the desired music program (DPSS)

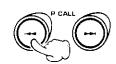


UD-413 [En]

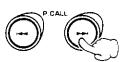
The DPSS (Direct Program Search System) is capable of detecting non-recorded spaces of more than 4 seconds as "blanks between programs" and, based on this information, can return to the beginning of the music program being played or the beginning of a desired program by skipping up to 16 other programs.

To return to the beginning of the current music

During play in direction ►



During play in direction ◄

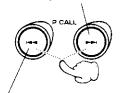


To skip to the beginning of a desired music

During play in direction >

To play the next program To play the 4th program after the current program

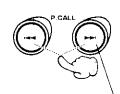
Press once. Press 4 times.



To return to the deginning Press once To play the 4th program before the current program? Press 5 times.

During play in direction ◄

To play the next program To play the 4th program Press 4 times after the current program



To return to the beginning of the current program Press once To play the 4th program before the current program: Press 5 times

Notes

he DPSS may not function normally with the following kinds of tape.

- Tapes containing several no-sound intervals of more than 4 seconds, such as conversation and talk tabes.
- Tapes containing planissimo sections, such as classical music tape.
- *apes in which large noise is recorded in blanks between programs.
- faces containing bianks between programs that are shorter than 4 seconds
- Tables recorded at low level
- Tabes recorded by prossiface recording thi which the beginning of next program is overlapped on the end of previous program

17

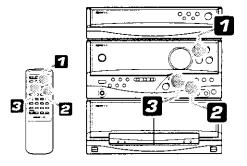


Broadcast reception

UD-413 (En)

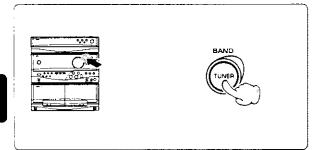
It is also possible to receive them by one-touch operations by storing up to 20 stations in the preset memory.

When the TUNER key is pressed, this unit will be switched on automatically.



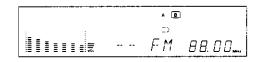
Receiving broadcast station

Select the broadcast band.

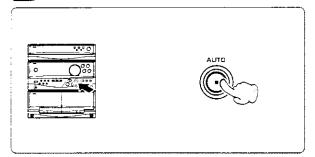


Each press alternates the band



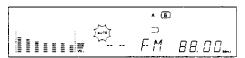


2 Select the tuning mode.

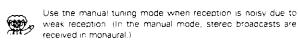


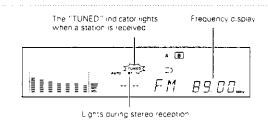
Each press alternates the mode

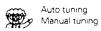
1 AUTO lit (Auto tuning)
2 AUTO not lit (Manual tuning)



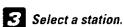
• Normally, use the AUTO (Auto tuning) mode.

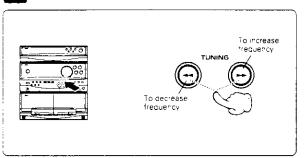






Each press receives the next station Press the key repeatedly or hold it depressed until a station is received.





Storing radio stations in memory (Station preset)



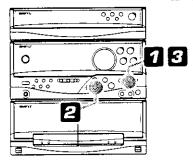
UD-413 (En)

Preparation



•Receive a station to be stored in preset memory





"MEMO" lights (for approx. 5 sec.)

A (B)

Press the ENTER key during reception.







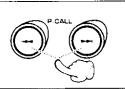


Go to step 🖪 within 5 sec

f more than 5 seconds have elapsed, press the ENTER key

Select one of the preset numbers from 1 to 20.







Go to step 2 within 5 sec.

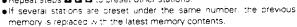
If more than 5 seconds have elabsed, restart the procedure

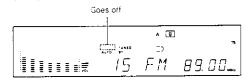
Press the ENTER key again.





• Repeat steps 2 2 5 to preset other stations.





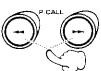
Receiving a preset station



Set to TUNER mode.



Select the radio station.



 Every time the key is pressed, the preset stations are switched over as follows

for the order of $\rightarrow 2 \rightarrow 3$.. $18 \rightarrow 19 \rightarrow 20 \rightarrow 1$ Press >> Press \rightarrow for the order of $20 \rightarrow 19 \rightarrow 18 \dots 3 \rightarrow 2 \rightarrow 1 \rightarrow 20$

 When a key is neig depressed, preset stations will be skipped at an interval of about 0.5 second

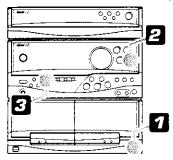
19

UD-413 [En]

20

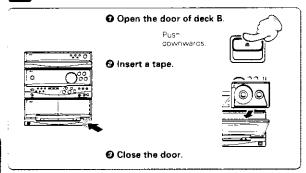
Note that this cassette deck cannot record onto Metal tapes.



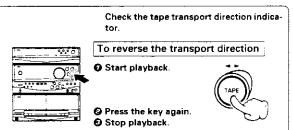


Preparation for recording

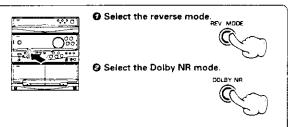
1 Load a tape in deck B.



2 Select the tape transport direction.



3 Set the recording condition.



- •The type of tape, that is, normal or chrome is set automatically
- Remove tape slack before loading
- When the microphone is not used, set the MIC MIXING control fully counterclockwise to the minimum position



- When recording is started, the tape is transported in the direction selected in this step
- •Wind the tape to the position where recording is to be started

Each press switches the modes as follows

① "二" Recording will end after having recorded on two sides ② "四" . Recording will end after having recorded on two sides ③ "二" . Recording will end after having recorded on one side

DOLBY NR OFF

Dolby HX Pro

The Dolby HX Pro headroom extension system records high frequencies such as the cymbal sound clearly by controlling the bias current during recording according to the frequency composition of the sound being recorded. This system is activated automatically during recording with this



Preparation

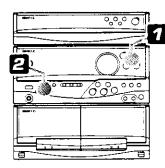
Load a cassette tape in the deck

- Select the tape transport direction (◄ or ►)
- Select "=" itwo-side recording) or "=" ione - side recording).
- Select the Dolby NR mode.
- (Insert a disc in the CD player.)



The presence effects applied to the music are recorded together with the music sound. +28

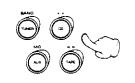




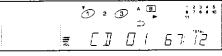
1

Select the source to be recorded.





Select an input source other than "TAPE"



The input source component to be recorded should be displayed.

 When the CD input is selected and if a disc has been set in the CD player, its playback starts immediately.

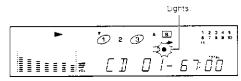
2

Start recording.



- Play (or tune) the input source to be recorded.
- Start recording.





 Recording stops automatically when the tape side(s) to be recorded have been fully recorded.

To end recording





Beat cancel function

There may be cases in which beat noise interferes with recording of AM .MW/_Wi broadcasting

In such a case, press the **DEMO** key during recording to reduce or suppress the peat noise. The **DEMO** key acts as the demonstration key except during tuner recording.



- When the key is pressed, recording stops after leaving a non-recorded blank of 4 seconds
- If the key is pressed again in less than 4 seconds after it has been pressed, recording resumes from that instant.

Display during recording

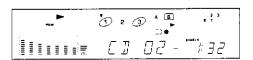
During recording, the time display on the display panel shows the remaining playing time of the track (or disc). The displayed contents vary depending on the play mode.

When the 'PGM' indicator is not lit.

Remaining time on the disc being recorded.

When the 19GM1 indicator is lit

Remaining time on the track being recorded





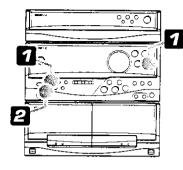
Copying tape (Tape dubbing)

UD-413 (En)

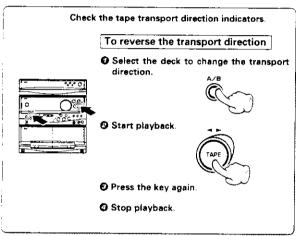
The contents of the tape in deck A can be copied onto the tape in deck B.







1 Use the same tape transport directions.





When recording is started, the tape will be transported in the direction selected in this step.

2 Start dubbing.





Dubbing ends automatically when the side(s) to be dubbed has been completed

To stop dubbing





- The deck B will stop after creating a non-recorded portion of about 4 sec and then the deck A will stop
- The dubbing can also be stopped by pressing the STDP key. Non-recorded blank is not created in this case.



The **DOLBY NR** key is not active in dubbing mode. The tape recorded on deck B assumes the same Dolby NR condition as the tape played on deck A.

UD-413 (En)

- 24

+ 26

The system is capable of three types of edit recording which may be selected as follows:

Select the type of edit recording

If you want to avoid any tune being interrupted at the end of tape

East recording of CD is possible by the simple operation of entering the recording length of the tape.

If you want to select the tracks to be recorded while playing a CD

Recording desired tracks while playing a CD - 25.

Play a CD and, if a track you want to record starts, press the ONE
TOUCH EDIT (O.T.E.) key. The track will be recorded from the

beginning.

Timed edit recording

Recording an entire disc

Press the **ONE TOUCH EDIT (0.T.E.)** key when in the stop mode. The disc will start to be recorded.

If you want to record a CD in order of track numbers

23





Timed edit recording

By simply specifying the recording time of the tape, the CD tracks will be recorded with their order automatically changed so that no tune is interrupted at the end of tape sides A and B.

Preparation

- Load a cassette tape in the deck B
- Select the tape transport direction (◄ or ►)
- Select "⇒" (two-side recording).
- Select the Dolby NR mode
- Select the "CD" input
- Insert a disc in the CD prayer



The presence effects applied to the music are recorded together with the music sound. +28

7 Select the "EDIT" mode.



O Confirm that the "PGM" indicator is not lit.

If the "**PGM**" indicator is lit, press the **P. MODE** key to turn it off

2 Press the EDIT key.

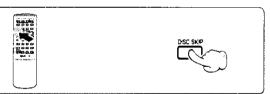




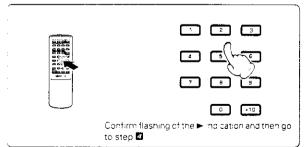
Go to step 2 within 8 sec.

If more than 8 seconds have elapsed, select the mode again.

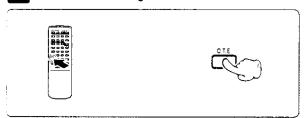
2 Select the disc.

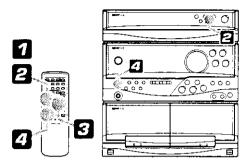


Enter the recording length of the tape.



4 Start edit recording.

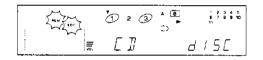




Confirm that this is not it



 To cancel the EDIT mode, press the P.MODE key of the remote controunit.

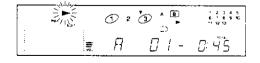


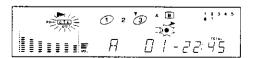
• Even if the disc has already been selected, select the disc again

Press the numeric keys as shown below.

30-minute tape : \(\frac{+10}{10}, \) \(\frac{+10}{10}, \) \(\frac{-10}{10}, \) \(\frac{-10}{10}, \) \(\frac{+10}{10}, \) \(\frac{+10}{10}, \) \(\frac{-10}{10}, \) \(\f

- If you make a mistake in entering the recording time, check that the ► indicator is blinking and restart from step
- Up to 32 tracks can be edited.
- The ► indicator blinks after completion of automatic editing
- Every time the ►► key is pressed, the edited track numbers will be displayed in the changed order. Press the key to return to the track number of the first track.





- The tape and CD stop automatically when recording has completed
- The time display during recording is the remaining time on the current side of tape

Recording desired tracks while playing a CD



UD-413 (En)

The following procedure allows you to record CD tracks by selecting them while playing a CD.

Preparation

- Load a cassette tape in the deck B.
- Select the tape transport direction (◄ or ►)
- Select "

 " (two-side recording) or "

 tone-side recording)
- Select the Dolby NR mode
- Select the "CD" input
- insert a disc in the CD player



The presence effects applied to the music are recorded together with the music sound + 28



Select a mode other than random play.





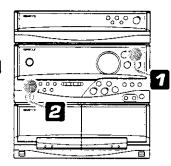
When you want to record a track being played, press the ONE TOUCH EDIT (0.T.E.) key.



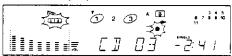


When recording has been completed, a non-recorded portion of 4 seconds will be produced and the cassette deck part will stop. The CD player will enter temporary stop condition.

To record a different track, repeat the steps 2 and 2.



In case the key is pressed with track No.3



- Playback restarts from the beginning of the track being played and recording starts at the same time.
- The time display shows the remaining time of each track

To end recording in the middle





Both the cassette deck and CD player stop.



Recording an entire disc

UD-413 (En)

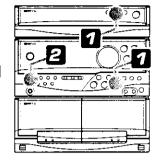
When the ONE TOUCH EDIT (O.T. E.) key is pressed while the CD player is in the stop mode, recording of a CD can be started at the same time as playback.

Preparation

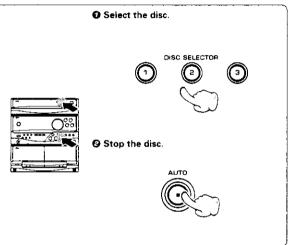
- . Load a cassette tape in the deck B.
- Select the tape transport direction (◄ or ►).
- Select "⇒" (two-side recording)
- Select the Doiby NR mode
- Select the "CD" input
- •insert a disc in the CD player.



The presence effects applied to the music are recorded together with the music sound — 28



7 Select the disc.

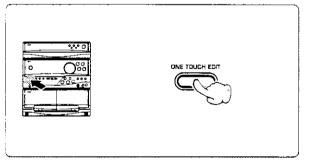


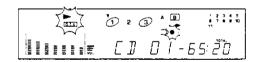
Select a mode other than random play.



Step \blacksquare also can be executed after the order of the tracks has been programmed.







- Recording of CD starts at the same time as playback
- At the end of tape, the music is not recorded on the leader tape portion
 if you do not want any music to be interrupted in the middle, refer to
 "Recording" and start recording of side B with the interrupted track

- 20

To end recording in the middle





●Both the cassette deck and CD player stop

Tone adjustment



UD-413 (En)

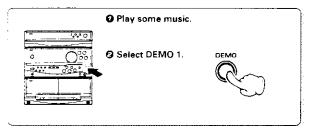
The system allows you to select 4 kinds of graphic equalizer patterns or 4 kinds of presence (sound field) modes. Select graphic equalizer patterns according to the genre of music and select the presence modes according to the acoustic ambience required.

Demonstration

This feature applies various tone adjustment effects of the graphic equalizer and presence sound fields in sequence with the sound. The display also changes as the applied effects change. Check out the tone adjustment effects both visually and aurally.

DEMO 1

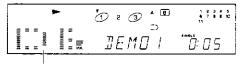
The effects of graphic equalizer and presence can be heard.



Each press of the key switches the demonstration modes as follows

: DIEMO -S DEMO 2

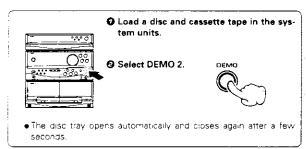
3 OFF (Demonstration cancelled)



The letters flow on the display

DEMO 2

The contents of the above DEMO 1 will be executed for the respective input sources in the order of CD player, cassette deck, tuner, and AUX (connected external unit).



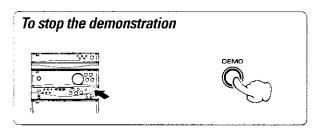
Each press of the key switches the demonstration modes as follows:

TO DEMO I

3 **OFF** (Demonstration cancelled)

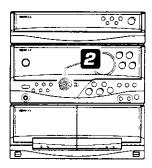


The letters flow on the display







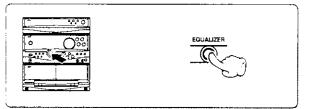


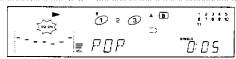
Playing music with the desired tone

The graphic equalizer patterns can be selected according to the genre of music played.

Play the desired music.

2 Select the music category.





Display characters scroll from the right to the left.

Press repeatedly to select

ELRSSIE (Classic)

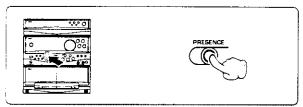
= § EG BFF (**EQ.ON** not lit .. Equalizer cancelled)

Enjoying music with the presence effect (presence modes)

The presence (sound field) mode can be selected according to the music played and to your liking. The presence effect applied to the sound can be recorded together with the sound.

7 Play a desired music.

2 Select a presence sound field.





Display characters scroll from the right to the left.

Press repeatedly to select

⊕: RRENR

Reproduction of a live feeling as if the listener is in the first row of the arena seat

@ JRZZ ELUB

Reproduction of a lazz live house where cymbals resound $\ensuremath{\mathfrak{FTRBTUM}}$

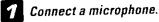
Reproduction of an open atmosphere with little reverberations which are usually reflected from the ceiling.

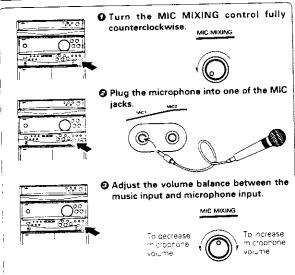
⊕ HII MRSTER (Vocai canceller)

For use in Karaoke singing

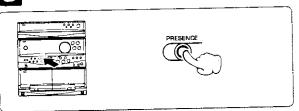
- 3 PRESENCE DEF

(PRESENCE, EQ.ON not lit ... Presence cancelled)



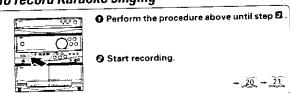


- 2 Play the music.
- Select HIT MASTER.



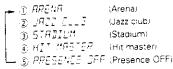
4 Sing along with the accompaniment.

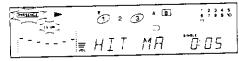
To record Karaoke singing



- Use a microphone equipped with a mini-plug.
- Set the MIC MIXING control to the fully counterclockwise position when the microphone sinct used.

Select by pressing repeatedly.



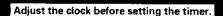


- The volume of the local parts of the song decreases. However, this effect may not be clear with some songs and discs.
- Adjust the overall clume with the **VOLUME CONTROL** knob

During Karaoke singing using the song recorded on a tape, the Karaoke sound cannot be recorded.



A Karacke tabe can be created by recording the performance while the **MIC MIXING** control is in the fully counterclockwise cosition.





Timer operation

UD-413 (En)

Two 24-hour timer systems (PROG.1, PROG.2) (which can be used every day) and a sleep timer system (which works only once) are available.

In each of PROG.1 and PROG.2, the timer data including the operating period and played contents can be set and selected to be activated or not as required.



Timer reservation is possible for the two types PROG.1 and PROG. 2 at the same time.

 Please make reservations with an interval of at least one minute, so that the operation times of PROGIT and PROGIZ do not overlap.

Timer playback, timer recording (PROG.1, PROG.2)

With each of the two timer programs, a selected source can be played (or radio broadcast can be recorded) in the previously set time period

Al timer playback (PROG 1, PROG.2)

When timer playback starts, the volume increases gradually

Sleep timer

Timer programming

Make preparations for the play (recording).

To listen to radio

The station should be preset prior to the above.

– 19

● To listen to CD

Insert a disc. (Program playback is not possible.)



Select the disc to be played (1, 2 or 3)

• To listen to tape

Set a tape into deck B.



Playing the auxiliary input source

Make timer setting of the component connected to the AUX jacks.

• For recording

Make preparations for recording.

- 20

2 Adjust the listening volume.



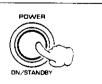


()

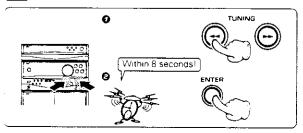
 When recording radio, the listening volume is automatically set to the minimum volume at the moment the power is turned ON by the timer.

Set the POWER switch to OFF (STANDBY) position.





Select a program No.

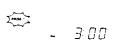


The selected program No lights.

If a program No. under which a timer program has already been reserved.
 It is replaced by the new timer program.

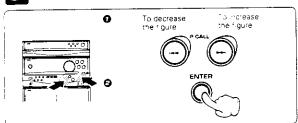
Each press of the key switches the program numbers as follows.

- Frogram 1)
 - ② PROG.2 (Program 2)
- ③ Normal operation



UD-413 (En)

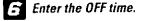
Enter the ON time.

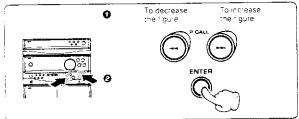


 After entering the figure of "hour" with the procedure in 3 and 3, enter the figure of "minute" using the same procedure.



if you commit a mistake, restart from step



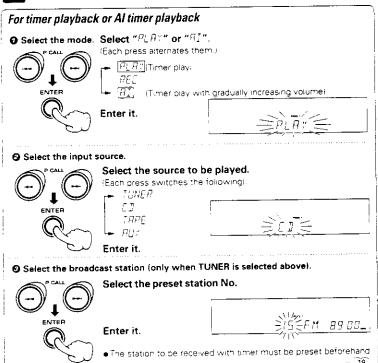


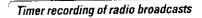
 After entering the figure of "hour" with the procedure in ② and ②, enter the figure of "minute" using the same procedure



• if you commit a mistake, restart from step

Make the desired reservation.





O Select the mode.

(Each press alternates them.)

Select "REE"

ENTER

Enter it.

Select the broadcast station.



Select the preset station No.

ENTER

Enter it.

Select the timer program No. to be used.



Each press of the key switches the program numbers as follows.

Execution of program 1 only. Execution of program 2 only. 3PROG.1, 2 Execution of programs 1 and 2 4.Timer OFF

• The selected program No gnts

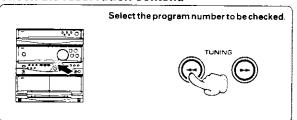
The timer will not function unless a program No. is selected.

The reservation contents cannot be cleared. The contents are

32

Ensure that the power is OFF.

Check the reservation content.



cleared only when they are changed

Each press of the key switches the program numbers as follows

PROG.1 (Display of program 1)

PROG.2 (Display of program 2)

- Normal mode

 The reserved contents will be displayed for 3 seconds per item. After this, the previous display content appears again.

To change the reserved contents

Restart the procedure of "Timer programming" from the beginning

When timer operation is not required

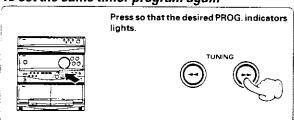


Each press of the key switches the program numbers as follows

PROG.1 (Program 1 operates.)
 PROG.2 (Program 2 operates.)
 PROG.1, 2 (Programs 1 and 2 operate.)
 Not lit (No program operates.)

• The reservation contents are held in memory

To set the same timer program again



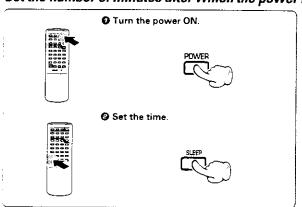
Each press of the key switches the program numbers as follows

PROG.1 (Program 1 operates.)
PROG.2 (Program 2 operates.)
PROG.1, 2 (Programs 1 and 2 operate.)
Not lit (No program operates.)

Also prepare the disc or tape and adjust the listening volume

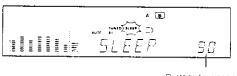
Sleep timer

Set the number of minutes after which the power is to be turned OFF.



- The power is turned OFF automatically after the set time has elapsed
- Each press decreases the time by 10 minutes. The maximum time that can be set is 90 minutes.

90→80→70...30→20→10→Cancel→90→80...



Duration for sleep time:

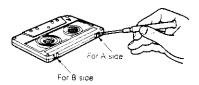
To cancel

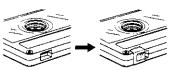
Turn the power OFF or press the **SLEEP** key until the sleep time is cancelled

Notes on cassette tape

Safety tab (accidental erasure prevention tab)

After an important recording has been finished, break the safety tab, to prevent the recorded contents from being erased or recorded on accidentally.





To re-record

Apply tape only to the position where the tab has been removed.

To store cassette tapes

do not store the tapes in a place which is subject to direct sunlight, or near equipment that generates heat. Keep the cassette tapes away from any magnetic field.



When there is slack in the tape

In such a case, insert a pencil into the reel hole and wind the reel hub to remove the stack.



Notes

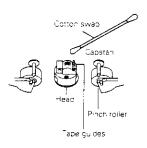
1. 110/120-minute cassette tape

Since a 110/120-minute cassette tape is very thin, the tape could adhere to the pinch roller or be easily broken. It is recommended that these tapes not be used with this unit to prevent possible damage.

2. Endless tapes

Do not use an endiess tape, as this could damage the mechanism of the unit.

Cleaning the head section



Cleaning the heads and peripheral components

For maintaining the best condition of the deck and for longer service life, always keep the heads (recording / playback / erase), capstan and pinch roller clean. To clean them, perform the following:

- . Open the cassette holder.
- Using a cotton swab dipped in alcohol, clean the head (recording / playback / erase), capstan and pinch roller carefully.

Demagnetizing the head

When the recording / playback head is magnetized, the sound quality will deteriorate. In such a case, demagnetize the head using a commercially available demagnetizer (head eraser).



There are precisely aligned parts around the heads, including the tape guides. When cleaning, pay special attention so as not to apply shock to them.

Beware of condensation

When water vapor comes into contact with the surface of a cold material, condensation is produced

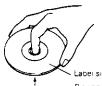
If condensation occurs, correct operation may not be possible, or the unit may not function correctly.

This is not a malfunction, however, and the unit should be cried-out. (To do this, turn the POWER switch ON and leave the unit as it is for several hours.)

Be especially careful in the following conditions.

- •When the unit is prought from a cold place to a warm place, and there is a large temperature difference
- When a heater starts operating
- When the unit's strought from an air-conditioned place to a place of high temperature with high humidity.
- When there is a large difference between the internal temperature of the unit and the ambient temperature, or in conditions where condensation occurs easily.

Disc handling precautions



Handling

Hold compact discs so that you do not touch the playing surface

Playing side



Do not attach paper or tape to either the playing side or the label side of compact



Cleaning

If fingerprints or foreign matter become attached to the disc, lightly wipe the disc with a soft cotton sloth (or similar) from the center of the disc outwards in a radial manner.

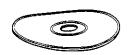


Storage

When a disc is not to be played for a long period of time, remove it from the CD player and store it in its

Caution on disc used





Never play cracked or warped disc.

During playback, the disc rotates at high speed in the player. Therefore, to avoid malfunction, never use a cracked or deformed disc or a disc repaired with tape or adhesive agent.

Discs which can be played with this unit

CD (12 cm, 8 cm), CDV (only the audio part)

. With CD-G (CD Graphics) discs, this unit can play only the audio.

Dolby noise reduction and HX Pro headroom extension manufactured under licence from Dolby Laboratories Licensing Corporation. HX Prooriginated by Bang & Olufsen "DOLBY", the double-D symbol and "HX PRO" are trademarks of Dolby

Laboratories Licensing Corporation

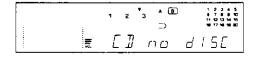
When your unit needs to be repaired, bring the entire set (Speakers excluded) to your dealer

Memory backup function Clock display Stored contents which are cleared immediately when power plug is unplugged from power outlet Stored contents which are Amplifier cleared in at least a day after POWER status (ON or OFF) power plug is unplugged from Input selection power outlet Volume control value Tuner unit Receiving band Frequency Preset stations Program settings Cassette deck unit Transport direction DOLBY NR Reverse mode

Note related to transportation and movement (CD player)

Before transporting or moving this unit, carry out the following operations.

- Turn the power ON but do not load a disc.
- Press the CD (►/III) key to check that no disc is present on the tray.
- 2. Wait a few seconds and verify that the display shown appears.



3. Turn the power OFF.

Operation to reset

The microcomputer may fall into malfunction (impossibility to operate, erroneous display, etc.) when the power cord is unplugged while power is ON or due to an external factor, in this case, execute the following procedure to reset the microcomputer and return it to normal condition.

Unplug the power cord from the power socket, and while holding the **ENTER** key depressed, plug the power cord into the socket again.

 Please note that resetting the microcomputer clears the contents stored in it returns it to condition when it left the factory

Reciver unit, speakers

Symptom	Cause	Remedy
Sound is not produced.	The speaker cords are disconnected.	 Connect properly referring to "Connections".
	• The volume control is set to the minimum position	Adjust to an required volume
	The MUTE switch of remote control unit is switched ON.	Switch MUTE OFF
	The headphone blug is inserted into the lack.	Unplug the headphone plug
The character display blinks and sound is not produced.	The speaker cords are short-circuited.	Turn the power OFF, remove the short-circuit and turn the power CN again.
Sound is not produced from the left or right speakers.	The speaker cords are disconnected.	Connect properly referring to: System connections"
The clock display blinks without changing the figures.	There was a power failure. The power cord was unolugged from the outlet.	Adjust the present time again. Adjust the present time again.
Timer operation is not possible.	The present time has not been adjusted or there was a power failure. The timer ON time and OFF time have not been set. The timer execution was not set up.	Adjust the present time referring to "Clock adjustment". Set the timer ON time and OFF time. Press the ➤ key to set up the execution + 20
Radio stations cannot be received.	The antennas have not been connected. A proper broadcasting band has not been selected. The frequency of the station to be received is not tuned.	Connect antennas. Select a band. Tune to the frequency of the desired station.
Noise interferes.	Car ignition noise. influence of an electric appliance.	Instal, the outdoor antenna in an apart position from the road. Switch the suspected electric appliance.
	• A TV set is installed near the system	orr • Install the TV or the system at an increased distance between them.
A station has been preset but it cannot be	• The frequency of the preset station is not	Preset stations with tunable frequencies.
received by pressing the P.CALL key.	tunable. The preset memory has been cleared because the power cord has been unblugged for allong period.	• Preset stations again -19
Demonstration starts suddenly.	The power plug was unplugged from the out- let while the power switch was ON, or there was a power failure.	This is not malfunction Press the DEMO key to cancel the demosnstration. - 12

4	L	А	

Symptom	Cause 2.1	Remedy
Sound cannot be produced by pressing the play key or no operation occurs even when an operation key is pressed.	The head is dirty The tape is wound too tight due to irregular winding A nonrecorded tape is played.	Clean the head referring to "Maintenance". Try another tape Play a recorded tape
	A nonrecorded tape is played.	Flay a recorded tape
No operation occurs even when an opera- tion key is pressed.	The cassette nolder is not closed completely. The operation key is pressed immediately after closing the cassette holder. The operation key is pressed in less than 4 seconds after turning the power ON Tape is not inserted in the unit	 Close the holder completely Press operations keys in more than a few seconds after closing the holder. Press operation keys after waiting for more than 4 seconds. Insert a tape
	. • The tape is wound too tight due to irregular	Try another tape
	winding • The tape is fully wound to one of the reels.	Change the tape transport direction or reverse the tape insertion orientation.
The DPSS malfunctions.	The tape used is not suitable for DPSS, for example the spaces between tunes may be too short. The tape used is not suitable for DPSS, for example the spaces between tunes may be too short.	Refer to "Searching for the desired music program (DPSS)" - 12.
In dubbing, the tape stops at different moments in decks A and B.	This is due to the difference in the tape length or characteristics of the mechanisms of two cassette decks	Small time difference does not mean a malfunction.
The cassette holder cannot be opened by pressing the eject key.	The key is pressed during recording or play- back. The microcomputer is malfunctioning due to external noise.	Press in stop mode Unplug the power cord and plug it again.
Sound is harsh or high frequencies are not reproduced.	The nead is dirty The tape is stretched or shrunk	Clean the head referring to "Maintenance" Try another tape
Sound is distorted.	The tape being played was recorded with distorted sound.	• Try another tape
Noise is noticeable.	• The tape head is magnetized	Demagnetize the head referring to "Main- tenance" -33
	External noise is induced A tape recorded with Dolby NR ON is played	 Install the system at a distance from other electric appliances and TV Set the Dolby NR to on
	with Dolby NR OFF	
Sound vibrates.	The capstans or pinch rollers are dirty. !	• Clean the nead referring to "Mainte- nance" — 31
	• The tape is wound irregularly	 Wind the tape again by fast forwarding, rewinding or playing from an end to the other.
Recording cannot be started by pressing the record key.	The recording protect table fithe cassette has been broken. The cassette holder is not closed completely. The TAPE input is selected.	Use a cassette with an unbroken recording protect tab or block the hole Close the holder completely Select the source to be recorded with the input selector key Change the tape transport direction of deck
	The tape is fully wound to one of the reels	B or reverse the tape insertion orientation
Volume of the recorded track changed.	MIC MIXING control knob is moved during recording.	Fully turn the MIC MIXING control know to the left

CD player unit

Symptom	Cause	Remedy
A CD is placed in the player but it cannot be played.	 The disc is placed upside down The disc position is displaced. The disc is extremely dirty The disc is scratched Dew is condensed on the optics lens. 	 Place the disc properly, with the label side facing upward. Place the disc properly. Clean the disc referring to "Disc handling precautions". Try another disc. Refer to "Beware of condensation" and remove the condensation by evaporation
Sound is not produced.	 The cisc has not been placed The player is not put to the play mode. The disc is extremely dirty The disc is scratched. 	 Prace a disc in the CD player Press the CD (►/II) key. Clean the disc referring to "Disc handing precautions" Try another disc.
Sound skips.	The disc is dirty The disc is scratched. The player is subject to vibration.	 Clean the disc referring to "Disc handing precautions" Try another disc Install the unit in a place not subject to viprations

Remote control unit

Symptom	Cause	Remedy	
Remote control operation is not possible.	Batteries are exhausted. The remote control is too far away from the system, the controlling angle is deviated or there is an obstacle in between.	 Reclade with new patteries Operate the unit inside the remote control acide range. 	
	There is no tape or CD set in the component to be played An attempt is made to play the cassette deck which is recording something.	Set a tape or CD in the component to be prayed. Wait until the recording ends.	



- 1. With some tapes, a squeaky noise is produced when the tape is stopped automatically. This is due to the tape protection function, and not a malfunction
- 2. Do not use 120-minute tapes, for the tape is too thin and gets easily tangled
- 3. Do not use contact cleaners because it could cause a maifunction. Be specially careful not to use contact cleaners containing oil for they may deform the plastic component.

WARNING NOTICE:

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UO-413 (En)

Samicanductor lacor

Main unit (RXD-F41)

Rated nower output

Amplifier section

53 watts per channel mini	num RMS, both channels	
driven, at 6 Ω from 500 H:		
than 0.5 % total harmonic distortion. (FTC)		
nput sensitivity / Impedance		
nput sensitivity / Impedance AUX	200 mV / 47 kΩ	

AUX 86 dB (IHF'66)

FM Tuner section	
Tuning frequency range 87	.5 MHz ~ 108 MHz
Sensitivity (IHF) 13.2 d	Bf (1.2 μ V at 75 Ω)
AM Tuner section	
Tuning frequency range 53	30 kHz ~ 1,700 kHz
Usable sensitivity 12	

Cassette deck section

	stereo 4-track, 2-channel stereo
	(Frequency: 105 kHz)
Heads	
A deck	Playback head 1
B deck	Playback / recording head 1
	Erasing head 1
Motors	
Fast winding	time Approx. 120 seconds (C-60 tape)

CD player section

	Unmeasurable Limit
General	
Power consumption	150 W
AC outlet SWITCHED	1: (200 W, 1.6 A Max.)
Dimensions	W: 270 mm (10-5/8")
	H: 305 mm (12")
	D: 341 mm (13-7/16")
Weight (net)	8 kg (17.6 lb)

In regard to the speaker part, please refer to the documentation enclosed with the speak-

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice

For the U.S.A.

Note to CATV system installer.

This reminder is provided to call the CATV system installer's attention to Article \$20-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building lasic ose to the point of cable entry as practical

For the U.S.A.

CAUTION:

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

In compliance with Federal Regulations, following are reproductions of lables on, or inside the product relating to laser product safety.

KENWOOD CORPORATION 2967-3, ISHIKAWA-CHO, HACHIOJI-SHI, TOKYO, JAPAN

KENWOOD CORP. CERTIFIES THIS EQUIPMENT CONFORMS TO DHHS REGULATIONS NO. 21 CFR 1040, 10, CHAPTER I, SUBCHAPTER J.

Location: Back Panel

For the U.S.A.

FCC WARNING

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause narmful interference to radio communications, if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation, if this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- - Reprient or relocate the receiving antenna.
- -- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- = Consult the dealer or an experienced radio / TV technician for help

