KENWOOD

STEREO CASSETTE TAPE DECK

KX-5060S

INSTRUCTION MANUAL

KENWOOD CORPORATION

Introduction

Your choice of this product indicates that you are a devotee to excellence in sound reproduction.

We appreciate your patronage and take pride in the long tradition of quality components that our company represents.

So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with operating features and system-connection considerations so that your listening pleasure will be enhanced right from the start.

You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability we have sought to anticipate your needs and desires.

Keep this manual handy for future reference.

For your records

Record the serial number, found on 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 this product.

Model _____ Serial number _____

Unpacking

Unpack the unit carefully and make sure that all accessories are put 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 company without delay. On only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

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

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

Accessories

Audio cord 2   System control cord 1

AC plug adaptor 1
(Except for U.S.A., Canada, Europe, U.K., and Australia)
For the unit with a European AC plug in areas other than Europe.

Contents

Caution : Read the pages marked ⚠ carefully to ensure safe operation.

Special features

This cassette deck incorporates the following features which can enhance the performance of this unit.

Automatic play operation : When this unit is connected with other KENWOOD "ⅨⅢ" or "ⅨⅢ" type units such as an amplifier, the remote control provided with the unit can be used. Also, pressing the Play key of the cassette deck automatically switches the input selector of the connected amplifier to TAPE.

ATCS : ATCS stands for Automatic Tape Calibration System. This function automatically optimizes the bias and recording sensitivity values in order to make full use of the characteristics of the tape to be used for recording.

Preset function : The optimum values for recording, set by the ATCS, can be stored for each type of tape (I, II, and IV). The stored optimum values can be recalled simply by pressing the PRESET key.

CD peak search : When this unit is connected with a KENWOOD "ⅨⅢ" or "ⅨⅢ" type CD player, the cassette deck automatically detects the maximum output level, making it easy to set the recording level.

Before applying power

Units are designed for operation as follows.

U.S.A. and Canada .... 120 V only
U.K. and Australia .... 240 V only
Europe (Except for U.K.) .... 230 V only
*Other countries .... 110-120 / 220-240 V switchable


For the United Kingdom

Factory fitted moulded mains plug

1. The mains plug contains a fuse. For replacement, use only a 13-Amp ASTA-approved (BS1362) fuse.

2. The fuse cover must be refitted when replacing the fuse in the moulded plug.

3. Do not cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adapter, or consult your dealer.
   If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

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*AC voltage selection

The AC voltage selector switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

AC voltage selector switch

AC110-120V~ ◄► AC220-240V~
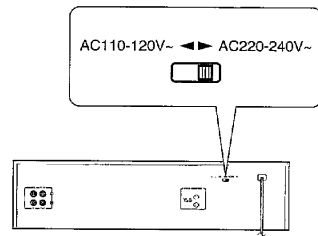
Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

Note:
Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

Safety precautions

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

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

Before operation

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.

For A side

For B side
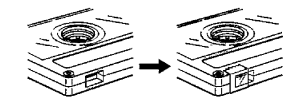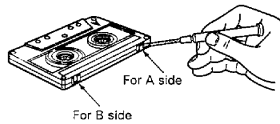
To re-record   Apply tape only to the position where the tab has been removed.
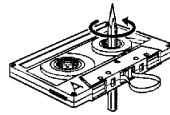
To store cassette tapes
Do not store the tapes in a place which is subject to direct sunlight, or near equipment that generates heat. Keep the cassette tapes away from any magnetic field.
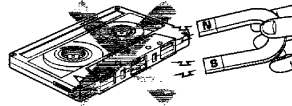
When there is slack in the tape
In such a case, insert a pencil into the reel hole and wind the reel hub to remove the slack.

Notes:

1. 120-minute cassette tape
   Since a 120-minute cassette tape is very thin, the tape could adhere to the pinch roller or be easily cut. It is recommended that these tapes not be used with this unit to prevent possible damage.

2. Endless tapes
   Do not use an endless tape, as this could damage the mechanism of the unit.

Cleaning the head section

Cotton Swab

Erasing head

Capstan

Pinch roller

Recording / playback Head
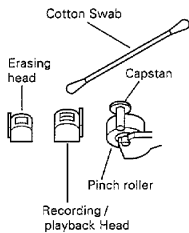
Cleaning the heads and peripheral components
For maintaining the best condition of the deck and for longer service life, always keep the heads (recording / playback / erase), capstan and pinch roller clean. To clean them, perform the following:
1. Press the OPEN / CLOSE key to open the cassette holder.
2. 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 be deteriorated. In such a case, demagnetize the head using a commercially available demagnetizer (head eraser).

Note:
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

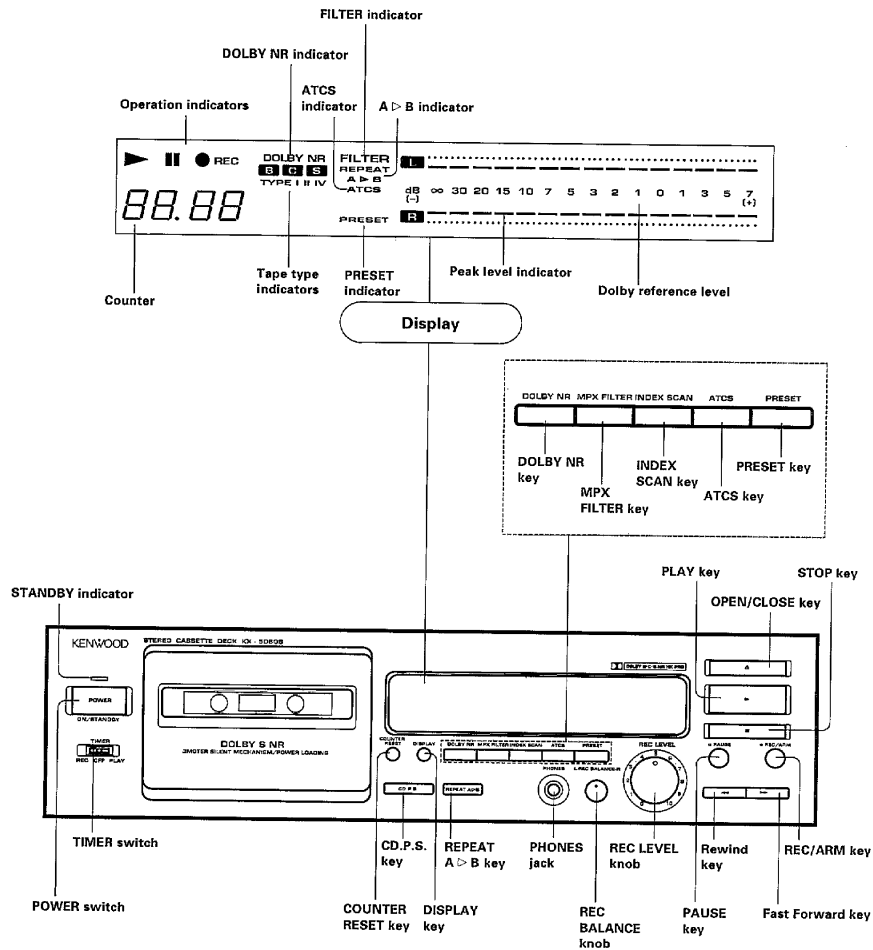When water vapor comes into contact with the surface of cold material, water drops are produced.
If condensation occurs, correct operation may not be possible, or the unit may not function correctly.
This is not a malfunction, however, the unit should be dried. (To do this, turn the POWER switch ON and leave the unit as it is for several hours.)

Be especially careful in the following conditions:
● When the unit is brought from a cold place to a warm place, and there is a large temperature difference.
● When a heater starts operating.
● When the unit is brought 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.

Controls and indicators

FILTER indicator

DOLBY NR indicator

ATCS indicator

A ▷ B indicator

Operation indicators

▶ **II** ● REC   DOLBY NR FILTER
         B C S REPEAT
         TYPE I II IV A ▷ B
                      ATCS   dB ∞ 30 20 15 10 7 5 3 2 1 0 1 3 5 7
                             (-)   (+)
                      PRESET **R**

88.88

Counter

Tape type indicators   PRESET indicator   Peak level indicator   Dolby reference level

Display

DOLBY NR MPX FILTER INDEX SCAN   ATCS   PRESET

DOLBY NR key   INDEX SCAN key   PRESET key
         MPX   ATCS key
         FILTER key

PLAY key   STOP key

STANDBY indicator   OPEN/CLOSE key

KENWOOD   STEREO CASSETTE DECK KX-5060S

DOLBY S NR

TIMER switch   CD.P.S. REPEAT   PHONES   REC LEVEL   Rewind   REC/ARM key
                            key   A ▷ B key jack   knob   key

POWER switch   COUNTER DISPLAY   REC   PAUSE   Fast Forward key
                            RESET key key   BALANCE   key
                                                    knob

STANDBY mode of POWER switch

When the power cord of this system is plugged into an AC outlet, the STANDBY indicator lights up regardless of the ON/OFF setting of the POWER switch. This indicates that a small amount of current is being supplied to the unit to back up the memory contents. This mode is referred to as the STANDBY mode.
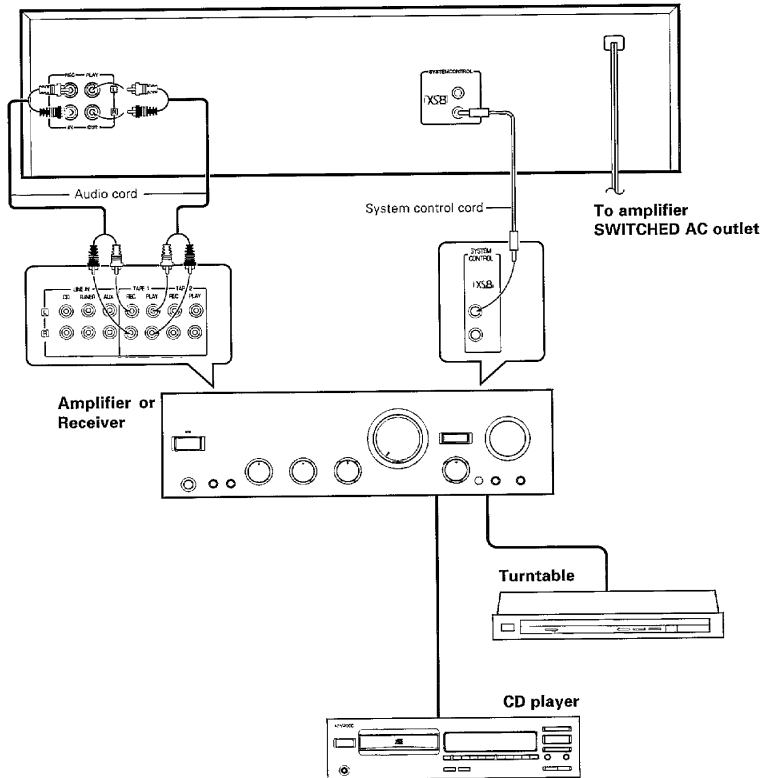
DISPLAY key

Every time the [DISPLAY] key is pressed, the display changes as follows:

DISPLAY

Normal lighting ◀▸ Counter lighting

System connections

Make connections as shown below.
When connecting the related system components, refer also to the instruction manuals of the related components.
Do not plug in the power lead until all connections are completed.

Audio cord

System control cord

To amplifier
SWITCHED AC outlet

Amplifier or
Receiver

Turntable

CD player

Notes:
1. Connect all cords firmly. If connections are loose, there could be loss of sound or noise produced.
2. When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging / unplugging
   connection cords without removal of the power cord can cause malfunctions or damage to the unit.
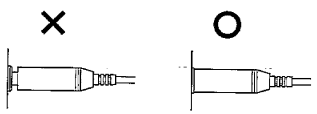
- Be sure to insert the system control cord plugs fully into the SYSTEM CONTROL terminals.
- If the system control cord and audio cords are not connected properly, the automatic system governing remote control and system functions will not operate.
- If your amplifier or receiver is not equipped with the SYSTEM CONTROL terminals, do not connect anything to any SYSTEM CONTROL terminal.
  Do not connect the unit in any system configuration other than specified.

■ System operations

Connection with an amplifier

The system control jacks of KENWOOD amplifiers are marked "[X⊡]", "[X⊡]" or "[X⊟]".
The following operations are available respectively by connecting this unit to an amplifier via a system control cord.

[X⊡] type jack: Systematic remote control using the remote control unit provided with the amplifier is available.
[X⊡] type jack: Both systematic remote control and
[X⊟]   "Easy Operation" are available.

For details, please read the instruction manual supplied with the amplifier (receiver).

Connection with a CD player

When the unit is connected to a KENWOOD CD player carrying the "[X⊡]" or "[X⊟]" mark, the CD peak search recording will be possible.

For details, please refer to page 16.

Listening to cassette tapes

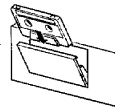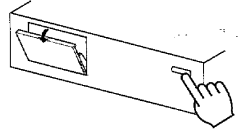**Before starting playback.**

① Set the TIMER switch to OFF.

TIMER
REC OFF PLAY

② Set the POWER switch to ON.

DOLBY NR key   OPEN/CLOSE key

PHONES jack   PLAY key
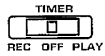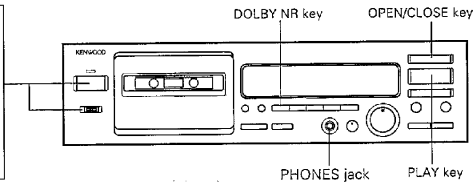
■ To playback a tape
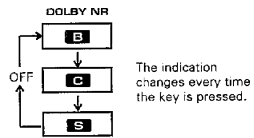
1 Insert a cassette tape.

Press the OPEN
/ CLOSE Key.

Press the OPEN
/ CLOSE Key.
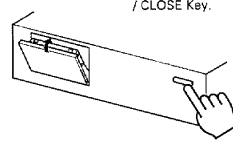
- The type of tape, I (Normal), II (Chrome) or IV (Metal), is detected and set automatically.
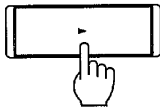- Be sure to remove tape slack before insertion.

2 Determine the playback conditions.

DOLBY NR

Select the Dolby NR mode.

DOLBY NR

OFF

The indication
changes every time
the key is pressed.

- Set the DOLBY NR switch to the same type as the Dolby NR type used in recording.
- If there is no specification on the Dolby NR, set the DOLBY NR switch to OFF.

3 Start playback.

- Playback stops automatically at the end of tape.

To stop playback, press the STOP key.

Listening through headphones

PHONES

Plug commercially available stereo headphones with standard
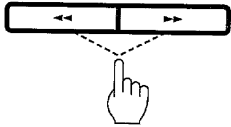phone plug into the PHONES jack.
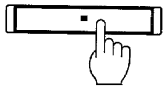
■ Fast Forward and Rewind

1 Stop playback.
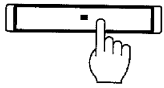
2 Press the ◄◄ key or ►► key.

◄◄: Rewound in the direction of ◄   ►►: Fast forwarded in the direction of ►
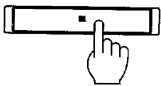
To stop the Fast Forward or Rewind operation

■ Index scan operation

Index scan plays the first about 10 seconds of every tune on tape.
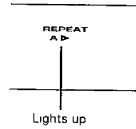
Press the INDEX SCAN key.

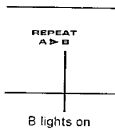INDEX SCAN

To cancel Index scan

• Playback stops.

■ A / B repeat

A / B repeat plays the section between two designated points repeatedly.

1 Start playback.

2 Register start point A.

REPEAT A►B

REPEAT A►

Lights up

• Leave an interval of more than 10 seconds.

3 Register end point B.

REPEAT A►B

REPEAT A►B

B lights on

• A / B repeat starts automatically.
• After repeating playback 16 times, normal playback resumes.
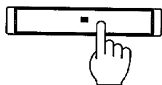• The counter shows the total number of repetitions.

To cancel A/B repeat mode.

To resume normal playback mode

REPEAT A►B

• Pressing the PLAY key starts repeated playback of the single tune being played.

**To stop playback**

DPSS operation

The DPSS (Direct Program Search System) enables the following convenient operations according to the instructions of the operation keys. The DPSS functions are based on the detection of non-recorded spaces of 4 seconds or more between tunes.

1. **Skip play:** By specifying a tune located several tunes beyond (or behind) the tune being played, this function skips tunes between the current tune and the selected tune and starts playback from the beginning of the selected tune. Up to 16 tunes can be skipped in Skip play.

2. **Single-tune repeated playback:** One single tune is played back repeatedly up to 16 times.

3. **Rewind & Play:** Rewinds to the beginning of the tape and starts playback from there.
4. **Dash & Play:** If a non-recorded space of more than 10 seconds is detected during playback, that space will be skipped by fast forward tape winding.
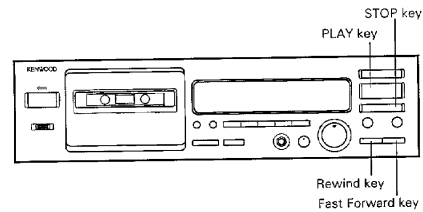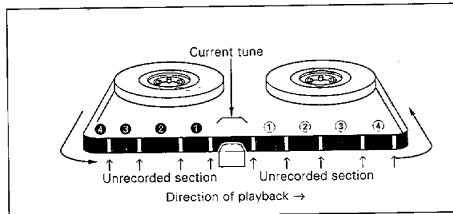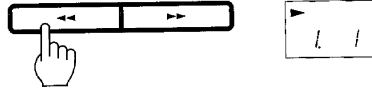

■ Skip play operation

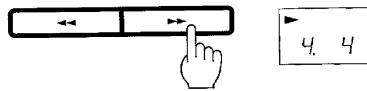**To play a tune located immediately after the tune being played**
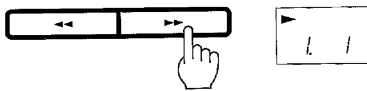
Press once during the playback.
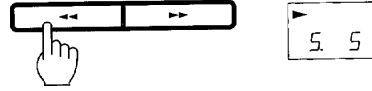
To play the tune being played from the beginning

Press once during the playback.
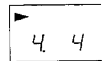
To play a tune located 4 tunes beyond

Press 4 times during the playback.

To play the tune located 4 tunes behind
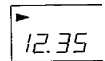
Press 5 times during the playback.

Example of display during skip play

When a tune located 4 tunes beyond is selected.

The right figure decrements.

When the tune is searched, the normal counter display resumes.

The DPSS and Index Scan will not function properly with the following types of tapes.

- Tapes containing spaces of 4 seconds or more, such as conversations and speeches.
- Tapes containing extremely low levels or non-recorded spaces in the middle of tunes, such as classical music.
- Tapes containing recording of large noise between tunes.
- Tapes containing spaces of less than 4 seconds between tunes.
- Tapes recorded with low recording level.
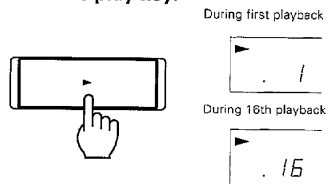- Tapes recorded using Cross-fade recording.

■ Rewind & Play operation

While pressing the Rewind key, press the play key.
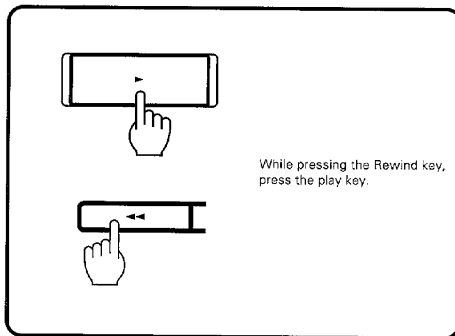
■ Single-tune repeated playback operation

1 Play the tune to be repeated.

2 Press the play key.

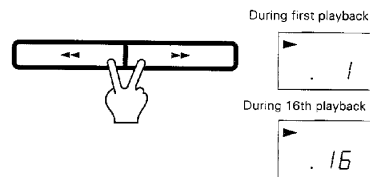During first playback

► . *I*

During 16th playback

► . *I6*

• Normal playback resumes after repeating the same tune for 16 times.

■ Dash & Play operation

The Dash & Play skips long non-recorded spaces automatically as the tape is played.

Press the ◄◄ and ►► keys simultaneously.

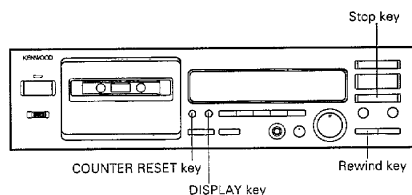During first playback

► . *I*

During 16th playback

► . *I6*

• After repeating Dahs & Play 16 times, the tape is rewound and unit enters the stop mode.

To cancel the playback above in the middle.

• Playback is stopped.

Stop key

COUNTER RESET key
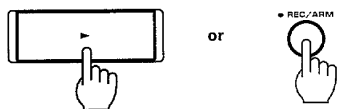
DISPLAY key

Rewind key
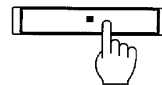
■ Zero-stop operation

By resetting the counter at the beginning of the section to be played or recorded, the zero-stop function allows you to rewind the tape easily to the position where the counter was reset.
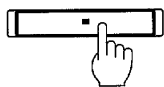
1 Reset the counter.

COUNTER
RESET

`0.00`

2 Start playback or recording.
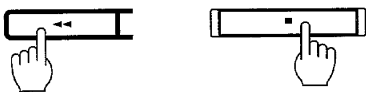
or

● REC/ARM

3 Stop playback or recording.

4 Activate the zero-stop operation as follows.

While pressing the Stop key, press the Rewind key.

- The zero-stop operation can also be initiated with the Fast Forward key.
- The tape is rewound to the counter reading near "0.00" then stopped automatically.

Usage of counter

Before starting recording (playback), press the COUNTER RESET key to reset the counter to "0.00", and write down the counter reading when the recording (playback) should be stopped in the middle of the tape, etc.; this will make it easy to locate the same position when you want to continue recording (playback) next time.

It is also possible to use the Zero-stop function to return to the position where recording (playback) was started.
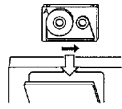
COUNTER
RESET
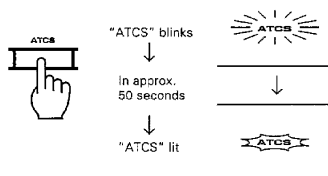
`0.00`

How to record

■ Optimum value preset operation

Preparation: Be sure to set the deck in the stop mode before entering the ATCS mode.

1 Insert a tape.

2 Press the ATCS key.

"ATCS" blinks
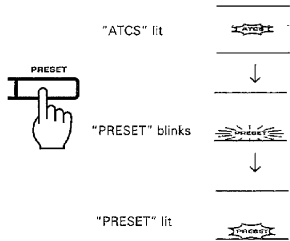↓
In approx.
50 seconds
↓
"ATCS" lit

- The tape stops at a position a few seconds beyond the position where the key is pressed.
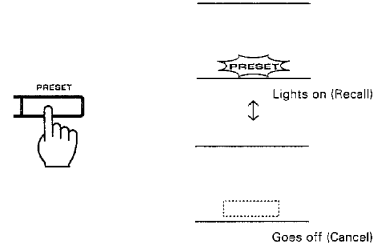
The set bias value can be changed as desired.

- When you have changed the bias value, set the deck in the stop mode again.

3 Store the values in preset memory.

"ATCS" lit
↓
"PRESET" blinks
↓
"PRESET" lit

- If bias and recording sensitivity values have already been preset, they are replaced by the new values.

■ To cancel or recall the preset values

Lights on (Recall)
↕
Goes off (Cancel)

- Each press the key turns the indicator ON and OFF alternately.
- When the indicator is OFF, the bias value and recording sensitivity value returns to the initial values.

Recording with Dolby HX Pro

When recording is started with this unit, the Dolby HX Pro headroom extension function automatically operates to provide a recording with superior high-frequency characteristics.

What is Dolby HX Pro?

In ordinary recording using high-frequency biasing, the high-frequency bias current, which should be constant, is increased with some recording sources due to the high-frequency component contained in the music, etc. This increase affects the recording characteristics with distorted high frequencies and degraded dynamic range and frequency response.
The Dolby HX Pro circuit detects the high-frequency component contained in the music source being recorded, and reduces excessive bias current to make it constant. As a result, the recording characteristics of high frequencies are drastically improved, and the improved high-frequency reproduction can also be enjoyed even when the tape is played on tape decks which are not equipped with circuit.

How to cancel ATCS operation

During adjustment
(ATCS indicator blinking)
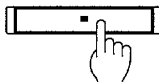
After adjustment
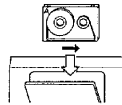(ATCS indicator in steady lighting)

- The ATCS setting is also cancelled when a cassette with a different tape type or a cassette with a broken erasure prevention tab is loaded.
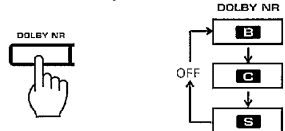- The ATCS is not cancelled even when the OPEN / CLOSE key is pressed.

■ Ordinary recording

1 Set up the cassette deck.

① Insert a tape.

② Select the Dolby NR mode.

DOLBY NR

DOLBY NR

OFF → B → C → S

③ When recording broadcasting programs.

MPX FILTER

FILTER

- To cancel, press the MPX FILTER key again.
- It is recommended to set the MPX FILTER key to ON when recording FM broadcasting.

2 Select the source to be recorded.

3 Set the optimum values for recording (ATCS mode).

Recording is possible even when this step is omitted.

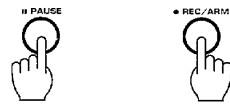| New setting	Recalling
ATCS	PRESET

- The optimum values are set in about 50 seconds.
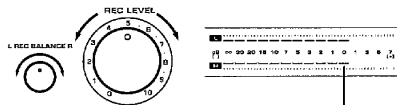
4 Set the recording level.

① Play a music source.

② Enter the record-pause mode.

❚❚ PAUSE   ● REC/ARM

Press both keys at the same time.

③ Adjust the recording level and recording balance.

REC LEVEL

L REC BALANCE R

- Adjust so that segments around the 0 dB segment of the peak level indicator light up at times.

④ Stop playing the source.

5 Start recording.

① Play the music source from the beginning.

② Press the REC/ARM key.

● REC/ARM

Press once.

- The deck enters the stop mode automatically when the tape has been recorded till the end.

Dolby noise reduction system

The Dolby noise reduction system was developed to reduce the tape hiss noise generated during playback.
The optimum effect of the Dolby NR system is obtained when the same type NR system is used for both recording and playback. If a different type NR system is used, playback is not performed correctly. Make sure that the same type noise reduction system is used for both recording and playback.
It is recommended that tapes recorded with Dolby NR be marked "B", "C" or "S" so that the Dolby NR system used in recording can easily be distinguished.
Dolby B NR
The most popular noise reduction system used in home audio components. Usually, Dolby NR system corresponds to B NR.
Dolby C NR
Dolby C NR offers improved noise reduction performance over that of the Dolby B NR.
Dolby S NR
This is the latest Dolby NR system featuring improvement in the quality of noise reduction in the high and low frequencies. As, in human audition, it is compatible with Dolby B NR or NR OFF, tapes recorded with Dolby S NR can be played on ordinary car stereo and headphone stereo with Dolby B NR or NR OFF. It is recommended to use the Dolby S NR if the tape is recorded and played with this unit alone.
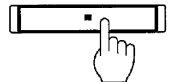
■ To pause recording temporarily

- The operation indicators ("►", "▐▐" and "●") light up.

To resume recording

■ To stop recording

1

- Do not press the OPEN / CLOSE key until the tape has stopped completely.

2 Stop playing the source component.

## ■ How to provide non-recorded spaces between programs
It makes a non-recorded space of about 4 seconds.

In stop mode	During recording
Press successively twice.	Press once.
● REC/ARM	● REC/ARM

- After leaving a non-recorded space of about 4 seconds, the deck enters the record-pause mode.

■ To re-start recording after mistake
The following procedure is useful when you want to cancel recording in progress and restart it. A non-recorded space of about 4 seconds or more should be reserved before the position where recording was started.

1 Stop recording and rewind tape.
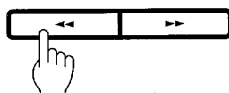
- The recording is stopped, the tape is rewound to the beginning of the tune being recorded, and the deck enters the record-pause mode after leaving a non-recorded space of about 2 seconds from the end of the previous tune.

2 Re-start recording.

① Press the REC/ARM key twice.

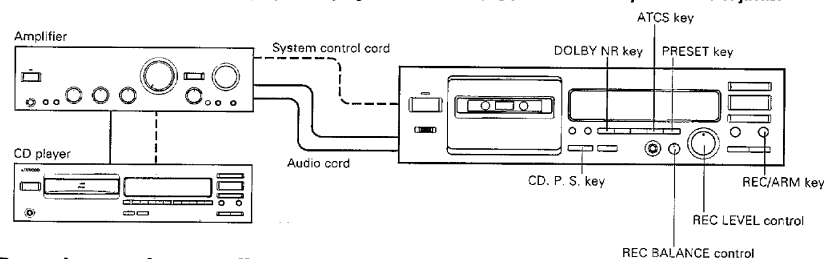- A non-recorded space of about 4 seconds is reserved on tape, then the tape transport stops.

② Press the REC/ARM key once.

- Recording starts.

How to record

Connect the unit with a KENWOOD CD player carrying the "ⅨⓈ" or "ⅨⓈⒷ" mark on its system control jacks.

Amplifier — System control cord — DOLBY NR key — PRESET key — ATCS key
CD player — Audio cord — CD. P. S. key — REC/ARM key — REC LEVEL control — REC BALANCE control

■ CD peak-search recording

With this function, the CD player detects the peak level recorded onto the disc and plays the section containing the peak point so that you can set the recording level accordingly.
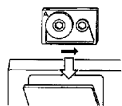
1 Set the INPUT or the REC OUT selector of the amplifier to CD.
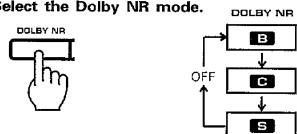
2 Place a CD in the CD player.

- If the CD player can hold multiple discs, specify the disc number.
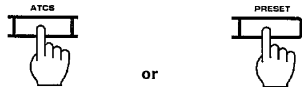
3 Prepare for recording.

① Insert a tape.

② Select the Dolby NR mode.

DOLBY NR → B → C → S → OFF

③ Activate the ATCS mode.

ATCS   or   PRESET

- Recording is possible even when ATCS setting is omitted.

4 Search the peak value on the CD.

CD.P.S

- When performing CD PEAK SEARCH recording with a CD player which can be loaded multiple compact discs, set the CD player to TRACK mode, press the disc select key and press the CD.P.S. key.
- The cassette deck enters the record-pause mode.
- The CD player generates the fast-played sound first, then generates the sampled sound repeatedly. Now go to step 5.

5 Adjust the recording level and recording balance.
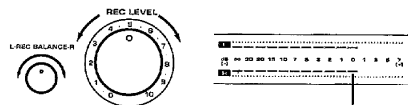
REC LEVEL
L-REC BALANCE-R

Adjust so that segments around the 0 dB segment of the peak level indicator light up at times.

6 Start recording.

● REC/ARM

- The CD peak search ends at the same time as the REC key is pressed.
- The CD player starts playback, and the cassette deck starts recording.

To stop in the middle

To pause .... Press the ▶/Ⅱ key of the CD player.
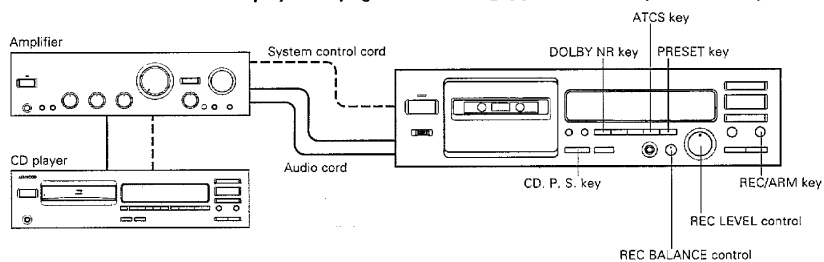To restart
  recording ...... Press the ▶/Ⅱ key of the CD player.
To stop .... Press the ■ key of the CD player.

- If the stop key of the cassette deck is pressed, the cassette deck enters the stop mode but the CD player does not.

Connect the unit with a KENWOOD CD player carrying the "☐✕☐" or "☐✕☐☐" mark on its system control jacks.
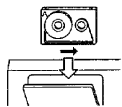

■ Edited recording of CD

By using the editing function of the CD player, tracks on the CD can be recorded on tape so that none of them is interrupted in the middle at the end of tape.

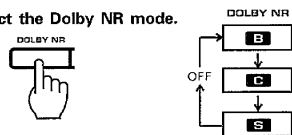**1** Set the INPUT or the REC OUT selector of the amplifier to CD.

2 Place a CD in the CD player.

3 Prepare for recording.

① Insert a tape.

② Select the Dolby NR mode.

③ Activate the ATCS mode.

or
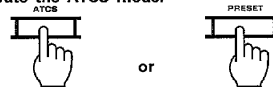
● Recording is possible even when ATCS setting is omitted.

4 Start editing.

● For the editing method, read the instruction manual of the CD player.

5 Search the peak value on the CD.

● The cassette deck enters the record-pause mode.
● The CD player generates the fast-played sound first, then generates the sampled sound repeatedly. Now go to step 6.

6 Adjust the recording level and recording balance
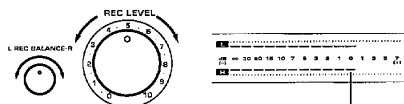
Adjust so that segments around the 0 dB segment of the peak level indicator light up at times.

7 Record onto cassette tape side A.

● After side A has been recorded, the cassette deck enters the stop mode and the CD player enters the pause mode.

8 Record onto side B of the tape.

① Reverse the cassette tape.

② Press the REC/ARM key of the cassette deck.

③ Press the ▶/Ⅱ key of the CD player.

How to record

Amplifier — System control cord — DOLBY NR key — ATCS key — PRESET key

CD player — Audio cord — REC/ARM key — PAUSE key — REC LEVEL control — REC BALANCE control

■ Synchro recording of CD

By connecting this unit with a KENWOOD "□⊠□" or "□⊠□" type amplifier (receiver) with a SYSTEM CONTROL jack and a KENWOOD CD player with a SYSTEM CONTROL jack using system control cords, recording on this unit and playback on the CD player can be started simultaneously.

1 Set the INPUT or the REC OUT selector of the amplifier to CD.

2 Place a CD in the CD player.
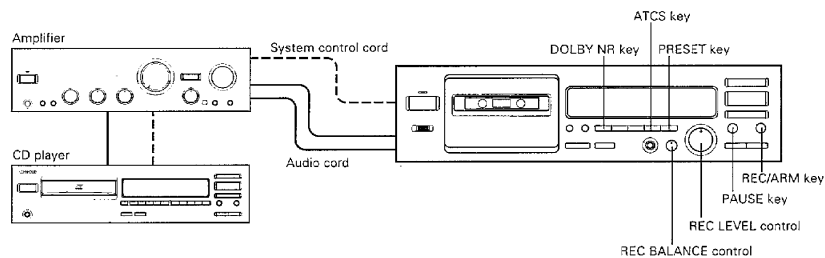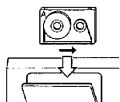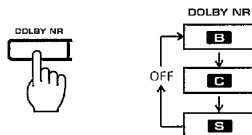- If your CD player can hold multiple discs, specify the disc number.

3 Prepare for recording.

① Insert a tape.

② Select the Dolby NR mode.

DOLBY NR → B → OFF → C → S

③ Activate the ATCS setting.
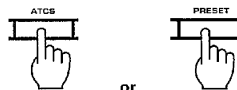
ATCS   or   PRESET

- For the bias preset operation, refer to Page 13.
- Recording is possible even when ATCS setting is omitted.

4 Adjust the recording level.

① Play a CD.

② Set the record-pause mode.
‖ PAUSE   ● REC/ARM
Press both keys at the same time.

③ Optimize the recording balance and recording level.
REC LEVEL
L REC BALANCE R
Adjust so that segments around the 0 dB segment of the peak level indicator light up at times.

④ Stop playing the CD.
- The cassette deck returns to the stop mode.

5 Set the record-pause mode. ‖ PAUSE   ● REC/ARM
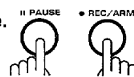
6 Start playing the CD.
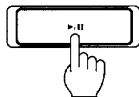
- Recording starts at this moment.
- When the CD player has completed the playback, the cassette deck stops recording and enters the stop mode.

To stop recording in the middle
Press the ▶/‖ key of the CD player.

- If the stop key of the cassette deck is pressed, the cassette deck enters the stop mode but the CD player does not.

Amplifier System control cord

ATCS key

DOLBY NR key   PRESET key

Turntable   Audio cord

REC/ARM key
PAUSE key
REC LEVEL control

PLAY/ CUT key

REC BALANCE control

■ Synchro recording of analog disc

By connecting this unit with a KENWOOD "ΣΣ" or "ΣΣ" type amplifier (receiver) with a SYSTEM CONTROL jack and a KENWOOD turntable with a SYSTEM CONTROL jack using system control cords, recording on this unit and playback on the turntable can be started simultaneously.

1 Set the INPUT or the REC OUT selector of the amplifier to PHONO.

2 Place an analog disc on the turntable.

3 Prepare for recording.

① Insert a tape.

② Select the Dolby NR mode.

DOLBY NR

DOLBY NR → B
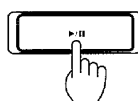OFF ↓
      C
      ↓
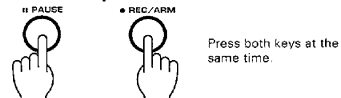   S
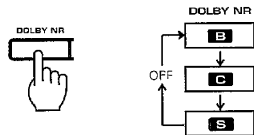
③ Activate ATCS setting.
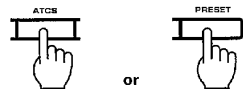
ATCS   PRESET

or

● For the bias preset operation, refer to Page 13.
● Recording is possible even when ATCS setting is omitted.
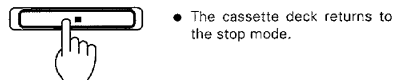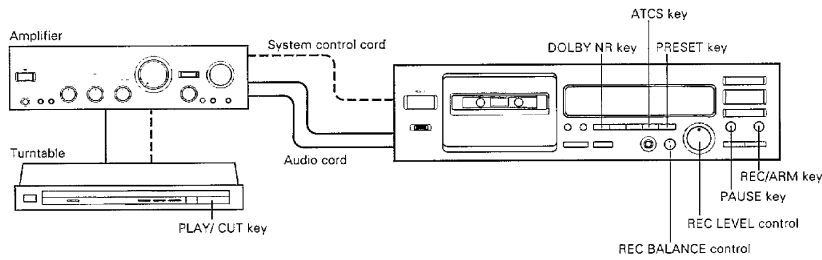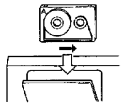
4 Adjust the recording level.

① Start playing an analog disc.
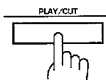
PLAY/CUT

② Set the record-pause mode.

II PAUSE   ● REC/ARM

Press both keys at the same time.

③ Optimize the recording balance and recording level.

REC LEVEL

L REC BALANCE-R

Adjust so that segments around the 0 dB segment of the peak level indicator light up at times.

④ Stop playing the analog disc.

PLAY/CUT

● The cassette deck returns to the stop mode.
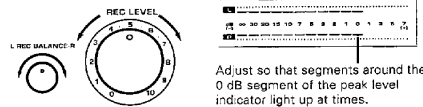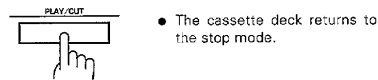
5 Set the record-pause mode. II PAUSE ● REC/ARM
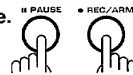
6 Start playing the analog disc.

PLAY/CUT
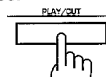
● Recording starts at this moment.
● When the turntable has completed the play, the cassette deck stops recording and enters the stop mode.

To stop recording in the middle

Press the PLAY/CUT key of the turntable.

● If the stop key of the cassette deck is pressed, the cassette deck enters the stop mode but the turntable does not.

Timer operation

This unit incorporates a built-in timer standby function. By using an audio timer optionally available in the market, wake-up playback and unattended recording of tape can be started at any time of the day.

Preparations for timer playback and recording

Connect the power cords of the components to the timer so that their powers can be turned on via the timer.
Read carefully the instruction manual of your audio timer.
When operating the unit other than CD player using an audio timer, be sure to remove the disc from the CD player.

Memory backup

This unit incorporates the memory backup function, with which a memory stores the ATCS preset values and the statuses when the power was last turned OFF (such as Dolby NR setup). The backup memory is held for about three days even when the power cord is left unplugged.

Tuner
Amplifier
Cassette deck
Audio timer
To AC outlet
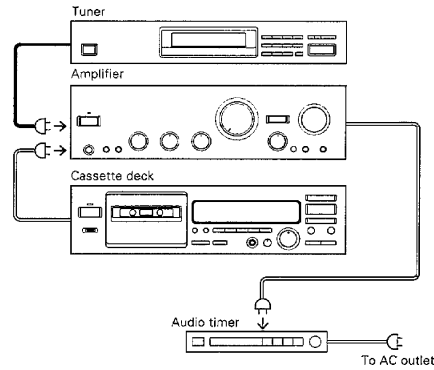
■ Timer playback

1 Set the power switch of each component to ON.

2 Prepare the cassette deck.

① Insert a cassette tape.
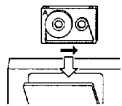
- The type of tape, I (Normal), II (Chrome) or IV (Metal), is detected and set automatically.
- Remove the tape slack before insertion.

② Select the Dolby NR mode.

DOLBY NR

DOLBY NR
B
OFF → C
S
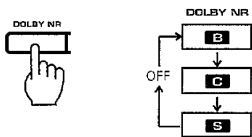
- Set according to the tape to be played.

3 Set the amplifier volume.

① Start playback.

② Adjust the volume of the amplifier.

③ Rewind the tape to the start position.

4 Set the timer so that the tape starts at the desired time of the day.

- Read carefully the instruction manual of your audio timer.

5 Set the TIMER switch to PLAY.
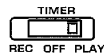
TIMER
REC OFF PLAY

- When the set time comes, tape playback starts automatically.
- Playback stops when the end of tape is reached.

■ Timer recording of tuner broadcast

1 Set the power switches of the components to ON.

2 Receive the desired radio station with the tuner.

3 Prepare the cassette deck.
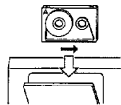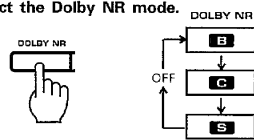
① Insert a tape.

② Select the Dolby NR mode. DOLBY NR

DOLBY NR

OFF → B
     ↑   ↓
         C
         ↓
         S

③ Set the MPX FILTER to ON.

MPX FILTER

To cancel, press the MPX FILTER key again.
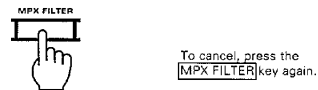
● It is recommended to set the MPX FILTER key to ON when recording FM broadcasting.

4 Activate the ATCS mode.

ATCS   PRESET

or
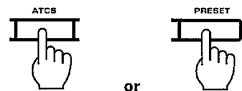
● For the preset operation, refer to page 13.

5 Adjust the recording level.

① Set the record-pause mode.

II PAUSE   ● REC/ARM
                        Press both keys at the
                        same time.
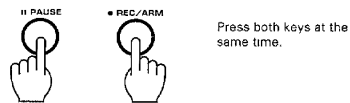
② Adjust the recording level and recording balance.

REC LEVEL
L REC BALANCE R
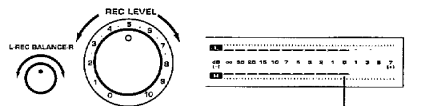
Adjust so that the 0 dB segments of the peak level indicator lights at times.

6 Set the amplifier volume to the minimum position.

7 Set the desired time when the recording is to be started.

● Read the instruction manual of your timer.

8 Set the TIMER switch to REC.

TIMER

REC OFF PLAY
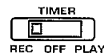
● When the set time comes, the power of the related components are turned ON and recording starts.
● Recording stops when the end of side to be recorded is reached.

Note:
To ensure that the cassette deck's automatic shut off switch operates before the power is shut off, set the timer so that it operates for a little longer than the playing time of the tape.

In case of difficulty

What appears to be a malfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

Symptom	Cause	Remedy
Sounds is not produced when the Play key is pressed.	• The connection cords are connected improperly. • The head is dirty. • Tape is irregularly would and hard to take up. • A non-recorded tape is being played.	• Connect the cords properly referring to "System connections". • Clean the head referring to "Cleaning the head section". • Replace the tape. • Play a recorded tape.
The deck does not work when an operation key is pressed.	• The cassette holder is not closed completely. • The operation key was pressed immediately after closing the cassette holder. • The operation key was pressed within less than 3 seconds after the power was turned on. • Tape is not inserted. • Tape is irregularly wound and hard to take up. • Tape is fully wound to a reel.	• Close the cassette holder completely. • Press the desired operation key in a few seconds after closing the cassette holder. • Press the desired operation key in more than 3 seconds after turning the power on. • Insert a tape. • Replace the tape. • Reverse the tape cassette.
DPSS malfunctions.	• The tape is not suitable for DPSS operation, for example the spaces between tunes are too short.	• Read "DPSS operation".
CD PEAK SEARCH does not work.	• A recordable tape is not inserted in Deck. • A disc is not placed in the CD player. • The disc is dirty.	• Insert a recordable tape in Deck and press the CD P.S. key. • Place a disc in the CD player and press the CD P.S. key. • Clean the disc, place it in the CD player, and press the CD P.S. key.
Sound is hoarse, or high frequencies are not audible.	• The head is dirty. • The tape is stretched or wrinkled.	• Clean the head referring to "Cleaning the head section". • Replace the tape.
Sound is distorted.	• The recording level was too high. • A tape recorded with distorted sound is being played.	• Adjust the recording level referring to "How to record". • Replace the tape.
Recording is not initiated when the REC / ARM key is pressed.	• The cassette holder is not closed completely. • The recording level is set to the minimum position. • The INPUT selector or the REC OUT selector of the amplifier is not set to the source to be recorded. • Tape is wound to one side.	• Close the cassette holder completely. • Adjust the recording level referring to "How to record". • Set the INPUT selector or the REC OUT selector of the source to be recorded. • Insert the tape inversely.
The cassette holder opens when the REC / ARM key is pressed.	• The protect tab on the cassette is broken. • Tape is not inserted in the holder.	• Use a cassette with unbroken tab, or close the hole made by breaking the tab. • Insert a tape.
The cassette holder will not open when the OPEN / CLOSE key is pressed.	• The power of the unit is in the STANDBY mode. • The unit is in the middle of recording or ATCS setting operation.	• Switch the power ON. • Press the STOP key to stop the current operation.
Noise level is high.	• The head is magnetized. • External noise is induced. • The recording level was too low. • A tape recorded with Dolby NR ON is being played with Dolby NR OFF.	• Demagnetize the head referring to "Cleaning the head section". • Install the system apart from other electrical appliances and TV set. • Change the positions and orientations of other system components connected with this unit. • Adjust the recording level referring to "How to record". • Press the DOLBY NR switch to ON.

Sound is vibrating.	• The capstans or pinch rollers are dirty. • Tape is irregularly wound.	• Clean the head referring to "Cleaning the head section". • Wind the tape regularly by fast forwarding, rewinding or playing it fully from one reel to another.
Playback or recording starts at the moment the power is turned ON.	• The TIMER switch is set to PLAY or REC.	• Set the TIMER switch to OFF unless in case timer playback or timer recording is required.

Notes:
1. This unit is microprocessor-controlled, so malfunction may occur due to external noise or interference noise. In such a case, unplug the power cord, plug it and turn power on again.
2. Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.
3. 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.
4. Do not use 120-minute tapes, for the tape is too thin and gets easily tangled.

Specifications

Track System .... 4-track, 2-channel stereo
Recording System .... AC bias (Frequency: 105 kHz)
Heads .... Playback / recording head
.... 1
Erasing head 1
Motors .... DC motor × 3
Fast Winding Time ...... Approx. 90 seconds (C-60 tape)
Frequency Response:
 Normal Tape .... 20 Hz to 18,000 Hz, ± 3 dB
 CrO₂ Tape .... 20 Hz to 18,000 Hz, ± 3 dB
 Metal Tape .... 20 Hz to 19,000 Hz, ± 3 dB
Signal-to Noise Ratio:
 Dolby S NR ON .... 80 dB (metal tape)
 Dolby C NR ON .... 74 dB (Metal tape)
 Dolby B NR ON .... 67 dB (Metal tape)
 Dolby NR OFF .... 58 dB (Metal tape)

Harmonic Distortion .... Less than 1.7 %
(at 1 kHz, 3rd H.D.Metal Tape)
Wow and Flutter .... 0.06 % (W.R.M.S.)
                                                              ± 0.16 % (DIN)
Input sensitivity / Impedance:
 LINE IN .... 100 mV / 47 kΩ
Output Level / Impedance:
 LINE OUT .... 775 mV / 1 kΩ
 Headphones .... 0.9 mW / 32 Ω

[GENERAL]
Power Consumption .... 25 W
Dimensions .... W: 440 mm (17-5 / 16")
                                              H: 127 mm (5")
                                              D: 276 mm (10-7 / 8")
Weight (Net) .... 4.4 kg (9.7 lb)

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

Strömbrytarens POWER beredskapsläge
Indikatorn STANDBY tänds efter nätkabelns anslutning till ett vägguttag, oavsett strömbrytarens POWER till/frånslag. Detta anger att en liten mängd ström leds till komponenten som stöd för minnesinnehållet.
Detta läge kallas för beredskapsläget. Strömbrytaren på fjärrkontrollen kan användas för att slå på och av strömmen så länge indikatorn STANDBY lyser.

Virtanäppäimen (POWER) valmiustila (STAND-BY)
Kun laitteen verkkojohto on liitetty pistorasiaan, valmiustilan merkkivalo syttyy riippumatta virtanäppäimen (POWER) asennosta (ON / OFF).
Merkkivalo osoittaa, että laitteessa on hieman virtaa muistin sisältöjen ylläpitoa varten. Tätä tilaa kutsutaan valmiustilaksi. Kun valmiustilan merkkivalo (STANDBY) palaa, laitteen virta voidaan kytkeä ja katkaista kaukosäätimellä.

Afbrydertastens (POWER) STANDBY funktion
Når apparatets strømledning er tilsluttet en stikkontakt, lyser STANDBY indikatoren, uanset om der er tændt ved afbryderen på apparatet eller ej. Det angiver, at apparatet bliver forsynet med en ganske lille mængde strøm til opret-holdelse af hukommelsens indhold.
Denne funktion kaldes STANDBY. Når STANDBY indikatoren er tændt, kan strømmen til apparatet slås til og fra med fjernstyringsenheden.

PÅ/AV-knappens Stand-by funksjon
Når strømledningen til dette anlegget er satt i en vekselstrømskontakt, vil STANDBY indikatorlampen lyse enten PÅ/ AV-knappen er på-eller avslått. Dette betyr at en viss mengde strøm tilføres anlegget slik at innholdet i minnet ikke går tapt.
Denne funksjonen kalles Standby. Når indikatorlampen for STANDBY er tent, kan strømmen slås PÅ / AV fra fjernkontrollen.