

Hard Disc Audio Recorder

Operating Instructions

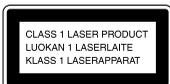


HAR-LH500

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.



This appliance is classified as a CLASS 1 LASER product. This marking is located on the rear exterior.

To prevent fire, do not cover the ventilation of the apparatus with news papers, table-cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.



Don't throw away the battery with general house waste, dispose of it correctly as chemical waste.

IN NO EVENT SHALL SELLER BE LIABLE FOR ANY DIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE, OR LOSSES OR EXPENSES RESULTING FROM ANY DEFECTIVE PRODUCT OR THE USE OF ANY PRODUCT.

CAUTION

The use of optical instruments with this product will increase eye hazard.

About HAR-LH500 manual

HAR-LH500 contains the following manuals. Refer to them as required by the operation.

- HAR-LH500 Operating Instructions (this manual)
This manual explains the connections and operations of the recorder itself. This manual mainly explains operations using the remote, but the same operations can also be performed using the buttons and controls on the recorder having the same or similar names.
- "M-crew for HAR-LH500" Help
This manual can be used after the "M-crew for HAR-LH500" software is installed. It explains the operations of the "M-crew for HAR-LH500" software included on the same CD-ROM.
- "M-crew for HAR-LH500" Install manual
This manual is included on the supplied CD-ROM. It explains how to install the supplied "M-crew for HAR-LH500" software to your computer.

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This recorder, with its internal hard disc, supports the following functions:

Recording

The recorder's HDD can store up to 1,340 hours of data (in ATRAC3) or 125 hours of data (in LINEAR PCM). Up to 999 albums can be recorded on the HDD, with one album containing up to 400 tracks. The maximum number of tracks that can be recorded on the HDD is 40,000. Like an MD deck, this recorder supports Synchro-Recording and the editing of recorded tracks.

Transferring MP3 format audio files from your computer

MP3 format audio files stored in your computer can be transferred to the recorder using the supplied "M-crew for HAR-LH500" software.

Search

Specific tracks on the HDD can be easily found.

- **Keyword Search (page 21)**
A keyword can be entered to find a desired album or track. Keywords may be the name of the album, track or artist.
- **Artist Play (page 22)**
The name of an artist can be used to find all the songs by that artist (tracks labeled with the artist's name).

Automatic insertion of the albums, tracks and artist's names by CDDDB
With the supplied "M-crew for HAR-LH500" software, you can access Gracenote CDDDB® server* from your computer to label albums, tracks and artist's names automatically.

* A database containing information about CDs on the market

Play list

A play list is a receptacle for gathering together only the tracks that you want. Besides the 999 albums that you can create on the HDD, you can create up to 10 albums through play lists on the HDD, with one play list containing up to 400 tracks. Tracks can be repeatedly added to or deleted from play lists. Since track data are originally recorded inside albums on the HDD, the original data are not affected by the deletion of tracks from a play list.

Notes

- The recorded music is limited to private use only. Use of the music beyond this limit requires permission of the copyright holders.
- Sony is not responsible for any loss that may arise from lost data.
- Recording to the hard disc should be considered as a temporary means of storing audio data. Be sure to retain the original sound source as backup.
- There is no service for the recovery of lost data.
- You may hear sounds as the recorder access the hard disc when you turn on the recorder, play an HDD track, record to the HDD, etc. These sounds are natural to the HDD and are not abnormal.
- The recorder may make sounds even when no operation is being performed. These sounds are produced by the recorder's self-maintenance functions and are not abnormal.
- You may also feel vibrations from the recorder, but this is not a malfunction.
- The copying of digital data is restricted by the Serial Copy Management System (page 35). For this reason, digital data recorded from a CD in the recorder's CD player, digital data input from an a CD player connected through the DIGITAL OPTICAL IN connector, and MP3 files transferred from a computer cannot be copied to an externally connected recording device. Note that an MP3 format file that is transferred from your computer to the HDD is erased from the computer, and files transferred to the HDD cannot be transferred back to the computer.

M-crew is the registered trademark of Sony Corporation.

IBM is the registered trademark of International Business Machines Corporation.

Flow-Down License Terms

This product contains technology and data from Gracenote, Inc. of Berkeley, California (“Gracenote”). The technology from Gracenote (the “Gracenote Embedded Software”) enables this product to do disc identification and obtain music-related information, including name, artist, track, and title information (“Gracenote Data”), which is included on the Gracenote Database (the “Gracenote Database”).

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Music recognition technology and related data are provided by Gracenote and the Gracenote CDDB® Music Recognition ServiceSM. Gracenote is the industry standard in music recognition technology and related content delivery. For more information visit www.gracenote.com.

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Playable discs

You can play back the following discs on this recorder. Other discs cannot be played back.

List of playable discs

Format of discs	Disc logo	Contents
Audio CDs		Audio
CD-R/ CD-RW	 	Audio

Discs that this recorder cannot play

- CD-ROMs (PHOTO CDs included)
- CD-Rs/CD-RWs other than those recorded in the music CD format

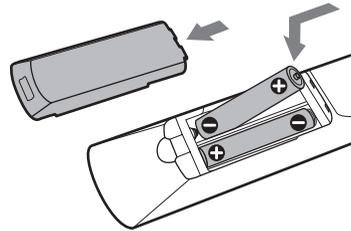
Notes on CD-R and CD-RW

- This recorder can play CD-R/CD-RW discs edited by the user. However, note that playback of some discs may not be possible depending on the recording device used for recording or the disc condition.
- CD-R and CD-RW discs that have not been finalized (processing to allow play by a normal CD player) cannot be played.
- CD-R and CD-RW discs recorded in multi-session mode are not supported.

Music discs encoded with copyright protection technologies

This product is designed to playback discs that conform to the Compact Disc (CD) standard. Recently, various music discs encoded with copyright protection technologies are marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

Inserting batteries into the remote



You can control the recorder using the supplied remote.

Insert two R6 (size AA) batteries by matching the + and – on the batteries to the diagram inside the battery compartment.

Insert the negative (–) end first, then push in and down until the positive (+) end clicks into position.

Notes

- Do not leave the remote near an extremely hot or humid place.
- Do not drop any foreign object into the remote casing, particularly when replacing the batteries.
- Do not expose the remote sensor to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you do not use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Tip

When the remote no longer operates the recorder, replace both batteries with new ones.

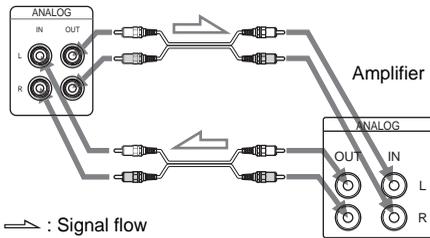
Hooking up the system

This section describes how to hook up the HDD recorder to an external devices. Be sure to turn off each component before making the connections.

Analog hookups

Connect the amplifier via the ANALOG IN or OUT jacks using the audio connecting cord (supplied). Make sure to match the color-coded cords to the appropriate jacks on the components: red (right) to red and white (left) to white.

HDD recorder



Digital hookups

If you have a digital component such as a digital amplifier or D/A converter, connect the component via the DIGITAL OPTICAL IN or OUT connector using the digital optical cord (supplied).

The DIGITAL OPTICAL OUT connector on the recorder is provided for audio signal output to an amplifier or receiver. For this reason, non-audio data such as text and track number information are not output from this connector.

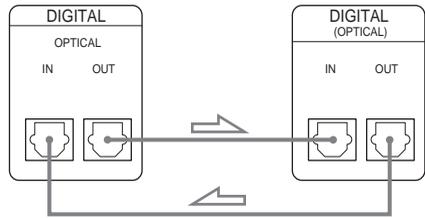
Be sure not to bend or tie the digital optical cord.



Digital optical cord (supplied)*

HDD recorder

Digital component



* One digital optical cord is supplied with this recorder. To make connections to the DIGITAL OPTICAL IN and OUT connectors, another optional digital optical cord is necessary.

Notes

- When you connect via the DIGITAL OPTICAL IN connector, noise may occur when you play CD software other than music, such as a CD-ROM.
- Track numbers may not be recorded correctly during recording to other components through the DIGITAL OPTICAL OUT connector.
- If “Din Unlock” or “Cannot Copy” flashes in the display, recording via the DIGITAL OPTICAL IN connector is not possible. In this case, record the sound source via the ANALOG IN jacks pressing ANALOG button.
- Do not place heavy objects such as an amplifier, deck, etc. on top of the recorder.

Tip

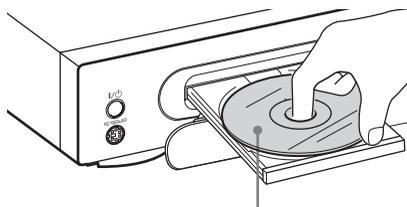
A built-in sampling rate converter automatically converts the sampling frequency of various digital sources to the 44.1 kHz sampling rate of this recorder.

Connecting a computer

Use the supplied USB cable to connect a computer to the recorder. By connecting the recorder to a computer, you will be able to select and play the tracks and do various HDD editing operations from the computer.

Loading a CD

- 1 Turn on the amplifier and set the source selector to the position for this recorder.
- 2 Press I/⏻ to turn on the recorder.
- 3 Press CD (or CD/HDD on the recorder to light up the CD indicator).
“CD” appears in the display.
- 4 Press OPEN/CLOSE ▲.
The disc tray slides out.
- 5 Load a disc on the disc tray with the label side up.



When you play a CD single (8 cm CD), load it on the inner circle of the tray.

- 6 Press OPEN/CLOSE ▲ again to close the disc tray.

Playing a CD

—Normal Play/Shuffle Play/Repeat Play

This recorder lets you play CDs in different play modes.

Before the operation, press CD or press CD/HDD on the recorder to light up the CD indicator.

- 1 While the recorder is stopped, press **PLAY MODE** repeatedly to select the play mode.

To play	Select
The disc in original order	No display
The tracks on the CD in random order	SHUFFLE
The tracks on the CD in any order that you want (see “Programming the CD tracks” on page 10)	PROGRAM

- 2 Press ▷ (or the **PLAY/NEXT/PREV** dial (▷) on the recorder).

Repeat Play Operations

You can play the CD tracks repeatedly in any play modes.

Press **REPEAT** repeatedly until “**REPEAT**” or “**REPEAT 1**” appears in the display.

To	Select
Repeat all tracks	REPEAT
Repeat only one track	REPEAT 1
Cancel Repeat Play	No display

The recorder repeats the tracks as follows:

When the CD is played in	The recorder repeats
Normal Play	All the tracks
Shuffle Play	All the tracks in random order
Program Play (page 10)	The same program

Other Operations

To	Do this
Stop playback	Press ■.
Pause	Press ■■. Press ■■ again or ▷ to resume playback (or the PLAY/NEXT/PREV dial (▷) on the recorder).
Select a track	During playback or pause, press ►► repeatedly (to go forward) or ◀◀ repeatedly (to go backward) (or turn the PLAY/NEXT/PREV dial towards ◀◀/▷► on the recorder).
Select a track directly*1	Press the numeric button(s).
Find a point in a track	Press and hold down ◀◀/►► during playback, and release it at the desired point.*2
Remove the CD	Press OPEN/CLOSE ▲.

*1 When you directly locate a track numbered over 10, press >10 before entering a two-digit track number. When you press the >10 button, two bars appear if the CD contains 10 to 99 tracks. Press 0/10 for "0".

Example:

To enter track number 30 for a CD containing 99 tracks

1 Press >10.

"-.-" appears in the display.

2 Press 3 and 0/10.

*2 If you press and hold down while the recorder is paused, you can find a point viewing the time information.

Notes

- If there is no CD in the recorder, "No Disc" appears in the display.
- If "- Over -" appears in the display, the CD has reached the end while you are pressing and holding down the ►► button. Press and hold down the ◀◀ button to go back.
- CD playback on the recorder is disabled when the function is set to external input (i.e., when "Optical In" or "Analog In" is selected by pressing the OPTICAL or ANALOG button).

Tips

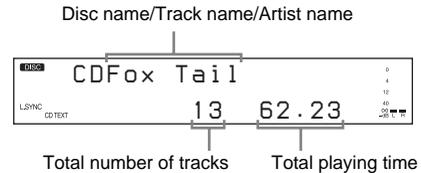
- You can select the last track quickly by pressing ◀◀ (or turning the PLAY/NEXT/PREV dial towards ◀◀ on the recorder) while the total number of tracks and total playing time are displayed.
- You can pause at the beginning of a track by pressing ◀◀/►► (or turning the PLAY/NEXT/PREV dial towards ◀◀/▷► on the recorder) while the recorder is paused.

Using the CD display

You can check information about the CD using the display.

Before the operation, press CD or press CD/HDD on the recorder to light up the CD indicator.

While in stop mode



To display name information

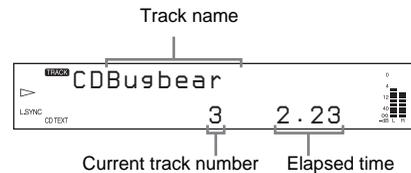
Press DISPLAY (or DISPLAY/CHAR on the recorder) repeatedly.

Each time you press the button, the display changes as follows:

- When no track is selected
Disc name → Name of the disc's artist
- When a track is selected
Track name → Name of track's artist → Disc name

When program play is selected, the last programmed track number and the total playing time of the program are displayed.

While playing



To display name information

Press DISPLAY (or DISPLAY/CHAR on the recorder) repeatedly.

Each time you press the button, the display changes as follows.

- Track name → Name of track's artist → Disc name

Using the CD display (continued)

Tips

- When you load a CD containing CD TEXT data, “CD TEXT” lights up in the display.
- If the CD has no text information, “No Name” appears instead of the disc name or track name.
- You can scroll a title of 14 or more characters by pressing the SCROLL button. Press the button again to pause scrolling, and again to resume scrolling.

To display time information

Press TIME repeatedly.

Each time you press the button, the display changes as follows:

- Elapsed time of the current track →
- Remaining time of the current track →
- Remaining time of the disc

Note

The remaining time of the disc does not appear in the display when the “REPEAT 1,” “SHUFFLE,” or “PROGRAM” play mode is selected.

Programming the CD tracks

You can specify the playback order of the tracks on a CD and create your own programs containing up to 25 tracks.

Before the operation, press CD or press CD/HDD on the recorder to light up the CD indicator.

Note

You cannot mix CD and HDD tracks together in the same program.

- 1 While the recorder is stopped, press PLAY MODE repeatedly until “PROGRAM” appears in the display.**

- 2 Press ◀◀/▶▶ (or turn the PLAY/NEXT/PREV dial towards ◀◀/▶▶) on the recorder) repeatedly until the desired track appears, then press ENTER to program the track.**

The last programmed track number appears, followed by the total playing time of the program.

Tip

You can select the track using the numeric buttons. To select a track numbered over 10, use >10 (see page 9).

- 3 To program additional tracks, repeat step 2.**

- 4 Press ▷ (or the PLAY/NEXT/PREV dial (▷) on the recorder) to start Program Play.**

To cancel Program Play

While the recorder is stopped, press PLAY MODE repeatedly until “PROGRAM” disappears.

Notes

- The total playing time of the program does not appear when it exceeds 1,000 minutes.
- “Step Full!” appears when you program over 25 tracks. Erase the unnecessary tracks to enter other tracks.
- The program is erased when you take out the CD, turn off the power, or disconnect the power cord.

Tip

The program remains even after the Program Play ends. When you press ▷ (or the PLAY/NEXT/PREV dial (▷) on the recorder), you can play the same program again.

Changing the track order

You can change your program while the recorder is stopped.

To	You need to
Erase the last track in the program	Press CLEAR. Each time you press the button, the last programmed track is cleared.
Add tracks to the end of the program	Follow step 2 of the programming procedure.

Notes on recording

Before recording

- You cannot select a play list as the recording destination.
- You cannot record over an existing track. If you select an album with existing tracks as the recording destination, the recorder automatically starts recording from the end of the existing tracks.

After recording

The HDD play mode automatically switches to Normal Play.

Automatic conversion of digital sampling rates

A built-in sampling rate converter automatically converts the sampling frequency of various digital sources to the 44.1 kHz sampling rate of the recorder.

Maximum number of recordable tracks

Total number of the tracks recorded on the HDD cannot exceed 40,000, not counting the tracks in play lists.

If "Track Full!" appears in the display when you select the recording destination

The album already contains 400 tracks, the maximum number of tracks that can be recorded to a single album. Select another album.

If "Drive Full!" appears in the display while recording to the HDD

Further recording is impossible because there is not enough recordable space on the HDD or the maximum number of recordable tracks has been attained on the HDD. To continue recording to the HDD, compress the data by converting tracks to the ATRAC3 format (page 32) or erase unnecessary tracks or albums.

Note on text information

Text data on CDs with CD TEXT content are not recorded by the recorder when the CDs are recorded through the DIGITAL OPTICAL IN connector.

Recording a CD to the HDD

—CD-HDD Synchro-Recording/ High-Speed CD-HDD Synchro-Recording

Tips

- You can use the ALBUM dial on the recorder instead of the ◀, ▶, or ENTER button on the remote to select and enter items in Edit Menu or Setup Menu.
To select an item: Turn the ALBUM dial towards +/-.
To enter a selection: Press the ALBUM dial.
- You can also use the ALBUM +/- buttons instead of the ◀/▶ buttons to select items in Edit Menu or Setup Menu.

- 1 Turn on the amplifier and set the source selector to the position for this recorder.
- 2 Press **I/⏻** to turn on the recorder.
- 3 Press **CD** (or **CD/HDD** on the recorder to light up the CD indicator).
- 4 Load a CD on the disc tray.
- 5 Press **MENU/NO**.
"Setup Menu" appears in the display.
- 6 Press **◀/▶** repeatedly until "Sync Normal" (or "Sync High") appears in the display, then press **ENTER** or **YES**.
- 7 Press **◀/▶** repeatedly to select the recording speed, then press **ENTER** or **YES**.

To	Select
Perform the normal-speed Synchro-Recording	Sync Normal
Perform the high-speed Synchro-Recording	Sync High (factory setting)

continued

Recording a CD to the HDD (continued)

8 Press **MENU/NO**.

9 Press **CD SYNC**.

The HDD stands by for recording and the CD stands by for playback.

To change the album position, press **ALBUM +/-** repeatedly (or turn the **ALBUM** dial on the recorder). To enter the position directly, press **ALBUM** and the numeric button(s) (see page 19).

10 Press **▷** (or the **PLAY/NEXT/PREV** dial (**▷**) on the recorder) or **II**.

Recording starts.

The recorded sound is not audible during High-Speed CD-HDD Synchro-Recording.

To stop recording

Press **■**.

To extend the recordable time (Recording Mode)

By recording tracks in the **ATRAC3** format, the total recordable time on the **HDD** becomes longer than that possible in normal recording mode.

1 Press **REC MODE** so that "**ATRAC3**" appears in the display.

2 Do steps 5 through 10 of "Recording a CD to the HDD" on page 11.

Notes

- You cannot change the recording mode while recording.
- You cannot change the recording mode to **MP3** format.

To restore the factory setting

Press **REC MODE** again so that "**ATRAC3**" disappears in the display.

To change the recording mode using Setup Menu

You can also change the recording mode using the Setup Menu.

1 While the recorder is stopped or recording pause, press **MENU/NO**.

"Setup Menu" appears in the display.

2 Press **←/→** repeatedly until "**Rec Mode**" appears in the display, then press **ENTER** or **YES**.

3 Press **←/→** repeatedly until "**ATRAC3**" appears in the display, then press **ENTER** or **YES**.

4 Do steps 5 through 10 of "Recording a CD to the HDD" on page 11.

To restore the factory setting

Select "**LinearPCM**" in step 3.

Notes

- If the **HDD** becomes full during recording, recording ends automatically.
- You cannot pause recording during Synchro-Recording.
- If the **CD** play mode is set to Repeat Play or Shuffle Play, it automatically switches to Normal Play.
- The **HDD** play mode automatically switches to Normal Play.
- **CD TEXT** may not be saved for short tracks.

Tips

- You can record 12 times faster than normal **CD-HDD Synchro-Recording** by doing High-Speed **CD-HDD Synchro-Recording** with the recording mode set to "**LinearPCM**" (factory setting) (this page). If the recording mode is set to "**ATRAC3**," High-Speed **CD-HDD Synchro-Recording** will still be 3 times faster than normal **CD-HDD Synchro-Recording**.
- You can select the recording mode before you start recording (this page).
- You can use Program Play to specify only the **CD** tracks you want to record. After loading a **CD**, do the procedure of "Programming the **CD** tracks" on page 10. Then do the Synchro-Recording procedure afterwards.
- If an inserted **CD** supports **CD TEXT**, **CD TEXT** can be saved to the **HDD** automatically.
- Synchro-Recording enables the assignment of album and track names from the Gracenote **CDDb**® server. For details on the Gracenote **CDDb**® server, refer to the Help for "M-crew for **HAR-LH500**."

Using the HDD display

You can check information about the HDD using the display while recording.

To display time information while recording

Press TIME repeatedly.

Each time you press the button, the display changes as follows:

Track number and elapsed time of the current track → Percentage of the HDD area used as the total recorded time

Notes

- The total recorded time is first displayed as a percentage. When the remaining recordable time reaches “999, 59” (999 minutes and 59 seconds), the display changes to a time display.
- The percentage of the HDD area used will never be 0% even when no tracks have been recorded to the HDD.

Tip

“Analog In” appears in the display when you record through the ANALOG IN jack, and “Optical In” appears when you record through the DIGITAL OPTICAL IN connector.

Recording to the HDD

- 1 Turn on the amplifier and set the source selector to the position for this recorder.
- 2 Press **I/C** to turn on the recorder.
- 3 Press the respective button on the remote to select the sound source.

Sound source	Press
The CD in the recorder	CD
The component connected to the DIGITAL OPTICAL IN connector	OPTICAL
The component connected to the ANALOG IN jacks	ANALOG

- 4 Press **●**.

“REC” appears in the display.

The HDD stands by for recording.

To change the album position, press ALBUM +/- (or turn the ALBUM dial on the recorder) repeatedly. To enter the position directly, press ALBUM and the numeric button(s) (see page 19).

When recording through the ANALOG IN jack, adjust the recording level (see “Adjusting the recording level” on page 17) if necessary.

- 5 Press **▷** (or the PLAY/NEXT/PREV dial (▷) on the recorder) or **||**.

Recording starts.

- 6 Start playing the sound source.

Other operations during recording

To	Press
Stop recording	■
Pause recording	
Resume recording after recording pause*	or ▷ (or the PLAY/NEXT/PREV dial (▷) on the recorder)
Add a track number	●

* Track number increases by one.

continued

Recording to the HDD (continued)

Notes

- If you select “Optical In” or “Analog In” as the sound source (by pressing the OPTICAL or ANALOG button) in step 3, track numbers may not be copied automatically from the source. If this occurs, use the divide function (“Dividing recorded tracks” (page 25)) to add tracks at the required locations.
- While recording, you cannot use the CD, OPTICAL, or ANALOG button on the remote to switch to another sound source.
- Tracks longer than 120 minutes cannot be recorded. If the recording time has reached 120 minutes, the track number increases by one automatically. If the track number cannot be incremented, recording ends.
- If the selected album is one that contains 400 tracks at the time you press the ● button, the sound source is recorded to the album that is closest in number with recording space.
- The CD inserted in the recorder cannot be operated when the recorder is set to “Optical In” or “Analog In” as the sound source (by pressing the OPTICAL or ANALOG button) while a recording operation is in progress or is paused.
- Restrictions on the recording of digitally broadcast programs (e.g., digital TV) are imposed by some broadcasting companies. For this reason, you may not be able to make digital recording of particular programs or channels.

Tip

You can select the recording mode before you start recording (page 12).

If “Din Unlock” flashes in the display

- The digital sound source is not connected as you selected “Optical In” with the OPTICAL button. Connect the sound source properly.
- The sound source is not turned on. Turn on the sound source.

Recording the current CD track

—REC-IT Function

You can record the currently playing CD track.

Before the operation, press CD or press CD/HDD on the recorder to light up the CD indicator.

- 1 Press ▷ (or the PLAY/NEXT/PREV dial (▷) on the recorder).
- 2 Press REC IT when the desired track is being played.

Playback returns to the beginning of the track and recording starts. Recording stops at the end of the track, but CD playback continues.

To stop recording

Press ■.

Notes

- You cannot select an album that already contains recorded tracks. The previously displayed album is automatically selected.
- The HDD play mode automatically switches to Normal Play.
- CD TEXT information may not be saved for short tracks.

Recording tips

— *Marking track numbers/Smart Space/Adjusting the recording level*

Tips

- You can use the ALBUM dial on the recorder instead of the **←**, **→**, or ENTER button on the remote to select and enter items in Edit Menu or Setup Menu.
To select an item: Turn the ALBUM dial towards +/-.
To enter a selection: Press the ALBUM dial.
- You can also use the ALBUM +/- buttons instead of the **←/→** buttons to select items in Edit Menu or Setup Menu.

Marking track numbers automatically while recording (Level Synchro Recording)

You can number tracks automatically while recording a CD inserted in the recorder. By marking track numbers at specific points, you can quickly locate the points later or edit the HDD easily.

However, tracks may not be automatically numbered when you record from an external device through the DIGITAL OPTICAL IN connector, or when there is noise in the sound source being recorded (e.g., tapes or radio programs recorded through the ANALOG IN connector).

When recording from an external device, do the following procedure to add track numbers automatically. A track number is added whenever the input signal level drops below the trigger level for about 1.5 seconds or more and then rises above it again.

Notes for Level Synchro Recording

- When recording from an external device connected to the DIGITAL OPTICAL IN connector, the entire material might be recorded as a single track.
- When recording from an external device connected to the ANALOG IN jacks with “Tr.Mark Off” selected or when recording from a DAT deck or DBS tuner connected to the DIGITAL OPTICAL IN connector, the entire material may be recorded as a single track.

- 1 While the recorder is stopped or recording pause, press MENU/NO.**
“Setup Menu” appears in the display.
- 2 Press ←/→ repeatedly until “Tr.Mark Lsync” appears in the display, then press ENTER or YES.**
- 3 Press MENU/NO.**
“L.SYNC” appears in the display.
The recorder marks a track number whenever the input signal level drop to the trigger level for Level Synchro Recording or below for at least 1.5 seconds.

To turn off the Level Synchro Recording function
Select “Tr.Mark Off” in step 2.

continued

Recording tips (continued)

To change the trigger level for Level Synchro Recording

Do the procedure below to change the signal level that triggers Level Synchro Recording.

- 1 While the recorder is stopped or recording pause, press **MENU/NO**.
“Setup Menu” appears in the display.
- 2 Press **←/→** repeatedly until “L.Sync(T) -XXdB” appears in the display, then press **ENTER** or **YES**.
- 3 Press **←/→** repeatedly to select the level, then press **ENTER** or **YES**.
You can set the level at any value between -72 dB and 0 dB, in 2 dB increments (-50 dB is the factory setting).
- 4 Press **MENU/NO**.

To restore the factory setting

Press **CLEAR** while setting the trigger level in step 3.

Notes

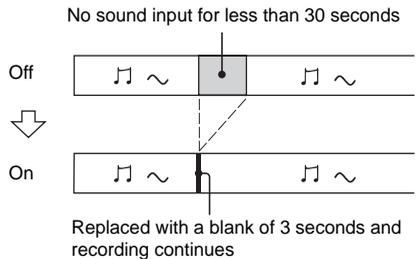
- If this function is activated when the 400th track is reached, recording stop.
- When recording from a CD, a track number might not be marked for tracks less than 4 seconds in length.
- Level Synchro Recording (“Tr.Mark Lsync” or “Tr.Mark Off”) and input level settings remain even after you turn off the power to the recorder or disconnect it from the power outlet.

Tip

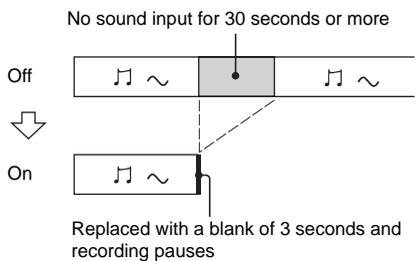
You can mark track numbers even after recording has finished (see “Dividing recorded tracks” on page 25).

Erasing blank portions automatically (Smart Space/Auto Cut)

The Smart Space function lets you make the blank spaces between tracks 3 second long automatically. If the Smart Space function is on and there is no sound input for about 3 seconds or more (but less than 30 seconds) during recording, the recorder replaces this silence with a blank of about 3 seconds and continues recording:



Auto Cut: When the Smart Space function is on, if there is no sound input for 30 seconds or more, the recorder replaces this silence with a blank of about 3 seconds and enters recording pause.



- 1 While the recorder is stopped or recording pause, press **MENU/NO**.
“Setup Menu” appears in the display.
- 2 Press **←/→** repeatedly until “SmartSpace On” (or “SmartSpace Off”) appears in the display, then press **ENTER** or **YES**.

- 3 Press **←/→** repeatedly to select the setting, then press **ENTER** or **YES**.

To	Select
Turn on the Smart Space and Auto Cut functions	SmartSpace On (factory setting)
Turn off the Smart Space and Auto Cut functions	SmartSpace Off

4 Press **MENU/NO**.

Notes

- When you record from a CD, Smart Space does not affect the order of the track numbers being recorded, even if the blank space occurs in the middle of a track.
- Auto Cut is automatically turned on or off in tandem with Smart Space.
- If the recorder continues recording pause for about 10 minutes after Auto Cut activated, recording stops automatically.
- Smart Space and Auto Cut (“SmartSpace On” or “SmartSpace Off”) settings remains even after you turn off the power to the recorder or disconnect it from the power outlet.
- If this function is activated when the 400th track is reached, recording stop.

Adjusting the recording level

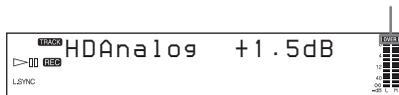
You can adjust the recording level for analog recording.

- 1 Do steps 1 through 3 of “Recording to the HDD” on page 13 and press **ANALOG** in step 3.
- 2 Press **●**.
- 3 Play the portion of the sound source with the strongest output.
- 4 Press **MENU/NO**.
“Setup Menu” appears in the display.

- 5 Press **←/→** repeatedly until “Analog X.XdB” appears in the display, then press **ENTER** or **YES**.

- 6 While monitoring the sound, press **←/→** repeatedly to adjust the recording level so that the **OVER** indicator on the peak level meters does not turn on.

Avoid turning on this indicator



- 7 Press **ENTER** or **YES**.

- 8 Press **MENU/NO**.

- 9 Stop playing the sound source.

- 10 Do steps 5 and 6 of “Recording to the HDD” on page 13.

To restore the factory setting
Press **CLEAR** while adjusting the recording level in step 6.

Note

The recording level can only be increased up to +12 dB (0.0 dB is the factory setting). Therefore, if the output level of the connected components is low, it may not be possible to set the recording level to maximum.

Tip

You can adjust the recording level by pressing the **REC LEVEL +/-** buttons repeatedly during recording or recording pause. The display returns to its former condition after a few seconds.

Playing the HDD

— Normal Play/Shuffle Play/Repeat Play

This recorder lets you play the HDD in different play modes.

- 1 Turn on the amplifier and set the source selector to the position for this recorder.
- 2 Press **I/⏻** to turn on the recorder.
- 3 Press **HDD** (or **CD/HDD** on the recorder to light up the HDD indicator).
- 4 While the recorder is stopped, press **PLAY MODE** repeatedly to select the play mode.

When you select	Result
ALL ALBUM only	All the albums in the recorder are played back consecutively in the order of album number.
1ALBUM only	Only the current album is played back.
ALL ALBUM and SHUFFLE*1	Tracks are selected from all albums*2 in the HDD in random order.
1ALBUM and SHUFFLE	All the tracks in the current album are played back in random order. (Shuffle Play stops when all tracks are played.)

*1 Same tracks may be played two or more times.

*2 Except for the play lists (see page 20)

- 5 Press **▷** (or the **PLAY/NEXT/PREV** dial **▷**) on the recorder).

Repeat Play Operations

You can play the HDD tracks repeatedly in any play modes.

Press **REPEAT** repeatedly until “**REPEAT**” or “**REPEAT 1**” appears in the display.

To	Select
Repeat all tracks	REPEAT
Repeat only one track	REPEAT 1
Cancel Repeat Play	No display

The recorder repeats the tracks as follows:

When the HDD is played in	The recorder repeats
Normal Play (ALL ALBUM)	All the tracks on the HDD.
Normal Play (1ALBUM)	All the tracks in the current album.
Shuffle Play (ALL ALBUM)	All the tracks (except for the play lists (see page 20)) on the HDD in random order.
Shuffle Play (1ALBUM)	All the tracks in the current album in random order.

Other Operations

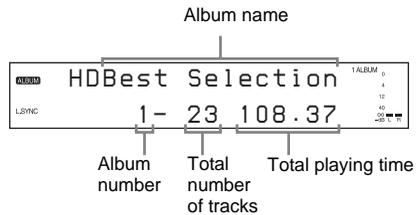
To	Do this
Stop playback	Press ■ .
Pause	Press ⏸ . Press ⏸ again or ▷ (or press the PLAY/NEXT/PREV dial ▷) on the recorder) to resume playback.
Select a track	During playback or pause, press ▶▶ repeatedly (to go forward) or ◀◀ repeatedly (to go backward) (or turn the PLAY/NEXT/PREV dial towards ◀◀/▷▷ on the recorder).
Select a track directly*1	Press the numeric button(s).
Select an album*2 or a play list*3	During playback or pause, press ALBUM + (to go forward) or ALBUM - (to go backward) repeatedly (or turn the ALBUM dial clockwise (to go forward) or counterclockwise (to go backward) on the recorder).
Select an album directly*4	Press ALBUM first, then press the numeric button(s).
Find a point in a track*5	Press and hold down ◀◀/▶▶ during playback, and release it at the desired point.

Using the HDD display

You can check information about the HDD using the display.

Before the operation, press **HDD** or press **CD/HDD** on the recorder to light up the **HDD** indicator.

While in stop mode



To display name information

Press DISPLAY (or DISPLAY/CHAR on the recorder) repeatedly.

Each time you press the button, the display changes as follows:

- While no track is selected
Album name → Name of the album's artist
- While a track is selected
Track name → Name of track's artist → Album name

To display time information (only when no track is selected)

Press TIME repeatedly.

Each time you press the button, the display changes as follows:

Total number of tracks and total playing time of the album → Percentage of the HDD area used as the total recorded time

continued

- *1 When you directly locate a track numbered over 10, press >10 before entering a two-digit or three-digit track number. When you press the >10 button, two bars appear if the album contains 10 to 99 tracks or three bars appear if the album contains 100 or more tracks. Press 0/10 for "0".

Example:

To enter track number 30 in an album containing 100 tracks

1 Press >10.

"- - -" appears in the display.

2 Press 0/10.

The flashing bar shifts to the right.

3 Press 3 and 0/10.

- *2 The playback starts from the first track in the specified album. You cannot select the album containing no track.
- *3 Play lists are displayed as individual albums. Albums are displayed as "001" ~ "999" and play lists are displayed as "P01" ~ "P10."
- *4 Press 0/10 for "0".

Example:

To enter album number 30 when the HDD contains albums numbered 100 or more

1 Press ALBUM.

"- - -" appears in the display.

2 Press 0/10.

The flashing bar shifts to the right.

3 Press 3 and 0/10.

- *5 You can locate a point only within the current album.

Note

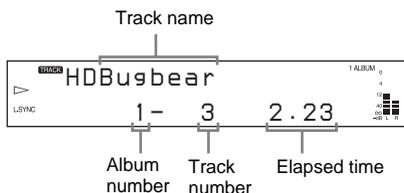
HDD playback is disabled when the function is set to external input (i.e., when "Optical In" or "Analog In" is selected by pressing the **OPTICAL** or **ANALOG** button).

Tips

- You can select the last track in an album quickly by pressing **◀◀** (or turning the **PLAY/NEXT/PREV** dial towards **◀◀** on the recorder) while the total number of tracks and total playing time or the total number of tracks and remaining time of the album are displayed.
- You can pause at the beginning of the track by pressing **◀◀/▶▶** (or turning the **PLAY/NEXT/PREV** dial towards **◀◀/▶▶** on the recorder) while the recorder is paused.
- You can pause at the beginning of the album by pressing **ALBUM +/-** (or turning the **ALBUM** dial on the recorder) while the recorder is paused.
- You can display the play lists (P01 to P10) by pressing the **ALBUM -** button while album 001 is selected (only when play lists are registered).

Using the HDD display (continued)

While playing



To display name information

Press DISPLAY (or DISPLAY/CHAR on the recorder) repeatedly.

Each time you press the button, the display changes as follows:

Track name → Name of track's artist →
Album name

Tip

You can scroll a title of 14 or more characters by pressing the SCROLL button. Press the button again to pause scrolling, and again to resume scrolling.

To display time information

Press TIME repeatedly.

Each time you press the button, the display changes as follows:

Track number and elapsed time of the current track → Track number and remaining time of the current track →
Remaining time of the album

Notes

- When the "REPEAT 1" or "SHUFFLE" play mode is selected, the remaining time of the album does not appear in the display.
- The percentage of the HDD area used will never be 0% even when no tracks have been recorded to the HDD. This is because the HDD contains information other than music data; for example, track names and information about the music, etc.
- "- - - -" appears when the remaining time of the album exceeds 1,000 minutes.
- The total recorded time is first displayed as a percentage. When the remaining recordable time reaches "999. 59" (999 minutes and 59 seconds), the display changes to a time display.

Playing a track in a play list

— Play List Registration/Play List Play

By registering tracks on the HDD to a play list, you can play back only the tracks you want to listen to. Up to 10 play lists can be created and each play list can contain up to 400 tracks. On this recorder, album numbers P01 to P10 correspond to the play lists.

Before the operation, press HDD or press CD/HDD on the recorder to light up the HDD indicator.

What is a play list?

A play list is a container that allows you to separate tracks on the HDD into different groups. For example, you can use a play list to register your favorite tracks. Since the tracks in the play list are originally from albums on the HDD, the track data remains even if you delete tracks in the play list. Tracks can be repeatedly registered to or deleted from a play list.

Tip

You can use the ALBUM dial on the recorder instead of the ALBUM +/- or ENTER button on the remote to select the desired play list and press to enter the selection.

To select the item: Turn the ALBUM dial towards +/-.
To enter the selection: Press the ALBUM dial.

Registering tracks to a play list and playing

- 1 **During the playback or play pause of the desired track, press PLAYLIST.**
- 2 **Press ALBUM +/- repeatedly until the desired play list (P01~P10) appears, then press ENTER or YES.**
"Complete!" appears for a few seconds.
At this time, the recorder plays the track in the original album.
- 3 **Do the procedure of "Playing the HDD" on page 18 to play the play list.**

To cancel selecting a play list
Press MENU/NO while selecting a play list in step 2.

Notes

- If you edit a track in an album that is registered to one or more play lists, the track is erased from all the play lists automatically. (except for the Name function)
- During the playback of a track in a play list, you cannot press the PLAYLIST button to register the track to a play list.

Tip

If you press the PLAYLIST button while the recorder is stopped, the selected track or album is registered to a play list.

Locating a desired album or track

— Keyword Search/Artist Play

Before the operation, press HDD or press CD/HDD on the recorder to light up the HDD indicator.

Tips

- You can use the ALBUM dial on the recorder instead of the **←**, **→**, or ENTER button on the remote to select and enter items in Edit Menu or Setup Menu.
To select an item: Turn the ALBUM dial towards +/-.
To enter a selection: Press the ALBUM dial.
- You can also use the ALBUM +/- buttons instead of the **←/→** buttons to select items in Edit Menu or Setup Menu.

Searching by keywords (Keyword Search)

You can easily find desired albums or tracks on the HDD if they have been named.

- 1 While the recorder is stopped, press SEARCH.**
- 2 Press **←/→** repeatedly to select the target level, then press ENTER or YES.**

To	Select
Search for an album	For Album?
Search for a track	For Track?

- 3 Press **←/→** repeatedly to select the keyword type, then press ENTER or YES.**

To	Select
Search by an album or track name	by Title?
Search by an artist name	by Artist?

“Keyword In” appears in the display.

- 4 Enter the keyword (see “Assigning a title or artist name to a track, album or play list” on page 28).**

Up to 10 characters can be entered.

- 5 Press YES.**

When the corresponding item is found, playback of the item starts.

If you selected	The recorder plays
For Album?	the first track on the album repeatedly.
For Track?	the track repeatedly.

If there are multiple matches, press **←/→** (or turn the ALBUM dial on the recorder) to select the desired album or track.

If there are no matches, “Not Found” appears in the display.

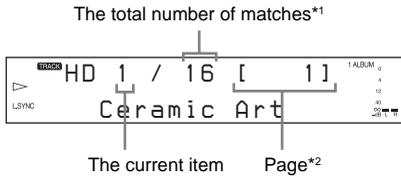
To cancel Keyword Search
Press MENU/NO.

If you press the **▷** button (or the PLAY/NEXT/PREV dial (**▷**) on the recorder) during Keyword Search, the search is cancelled and the HDD play mode returns to Normal Play.
When an album match is made, playback starts from the first track in the album. When a track match is made, playback starts from the beginning of the track.

continued

Locating a desired album or track (continued)

To confirm information about the matches



*1 Even if there are 21 or more matches, the display shows "X/20".

*2 Each page contains up to 20 items.

By pressing the DISPLAY button (or the DISPLAY/CHAR button on the recorder), you can check more information about the current item. Each time you press the button, the lower part of the display changes as follows:

Album or track name → Album (and track) number

Tips

- When you press the SEARCH button while the current item is displayed, the display for entering a keyword appears again. This allows you to do another search with another keyword under the same condition as the previous keyword.
- In step 5, you can register the track to a play list by pressing the PLAYLIST button on the remote. (see "Playing a track in a play list" on page 20).
- To display the previous or the next page, press ◀◀ (to go back) or ▶▶ (to go next) (or turn the PLAY/NEXT/PREV dial towards ◀◀/▶▶ on the recorder).

Searching by artist name (Artist Play)

If the artist's names are labeled to tracks, you can easily find the tracks on the HDD whose labels contain the artist's names.

1 While the recorder is stopped, press ARTIST.

"Artist On" appears in the display.

2 Press ◀/▶ to select the desired artist name.

Artist names appear in the order that their respective tracks were registered.

3 Press ENTER.

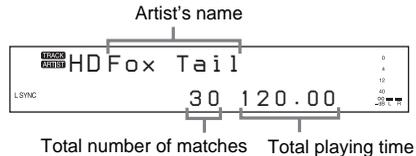
The recorder starts searching for tracks labeled with the artist's name. "Searching" appears while searching the tracks.

When searching finishes, the recorder starts playback automatically.

To cancel Artist Play

Press ARTIST again.

To confirm information about the matches



To display artist names in alphabetical order

When you do this procedure, artist names will appear in alphabetical order the next time you press the ARTIST button.

Note

Once you do this operation, you will no longer be able to display artist names by order of registration.

1 While the recorder is stopped, press ARTIST.

"Artist On" appears in the display.

2 Press ↓ to select "Sort," then press ENTER or YES.

"Sort OK?" appears in the display.

3 Press ENTER or YES.

"Sorting" appears in the display and the recorder starts to rearrange the artist names in alphabetical order. When the rearranging completes, "Sort End" appears in the display.

Note

If many tracks include the artist name, it may take a little time to rearrange all the tracks.

4 Do steps 2 and 3 of "Searching by artist name (Artist Play)" (this page).

Notes

- You cannot create a play list during playback in Artist Play mode.
- Some tracks of an artist may not be played if 400 or more tracks are found.

Playing a recently played album

—History

The recorder memorizes the 20 most recently played albums, any of which can be selected for playback.

Before the operation, press HDD or press CD/HDD on the recorder to light up the HDD indicator.

- 1 While the recorder is stopped or playing, press HISTORY.
- 2 Press **↑/↓** repeatedly until the desired album appears in the display, then press **ENTER** or **YES**.
The selected album starts playing.

To cancel the procedure
Press HISTORY again.

Notes

- When an album is played back for more than 10 seconds, the album is automatically registered in the History (except during rehearsal playback or play pause). If a new album is registered while the recorder is searching the History, searching is canceled.
- You cannot search the History while the “SHUFFLE” play mode is selected.
- If playback is stopped while the History is being searched, searching is canceled.

Editing Recorded HDD

Before editing

You can edit an HDD track only when the HDD play mode is Normal Play.

To cancel the last edit

Use Undo function to cancel the last edit and restore the contents of the HDD to the condition before the edit.

To cancel while editing

Press MENU/NO or **■**.

Erasing recordings

—Erase Function

The HDD recorder lets you erase unwanted tracks quickly and easily.

The two options for erasing recordings are:

- Erasing a single track (Track Erase)
- Erasing all tracks in an album (Album Erase)

Before the operation, press HDD or press CD/HDD on the recorder to light up the HDD indicator.

Tips

- You can use the ALBUM dial on the recorder instead of the **←**, **→**, or ENTER button on the remote to select and enter items in Edit Menu or Setup Menu.
To select an item: Turn the ALBUM dial towards +/-.
To enter a selection: Press the ALBUM dial.
- You can also use the ALBUM +/- buttons instead of the **←/→** buttons to select items in Edit Menu or Setup Menu.

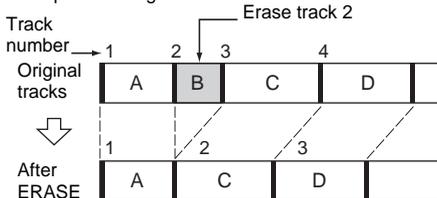
continued

Erasing recordings (continued)

Erasing a single track (Track Erase)

You can erase a track simply by selecting its track number. When you erase a track, the total number of tracks in the album decreases by one and all the tracks following the erased one are renumbered.

Example: Erasing track 2



1 While the recorder is stopped, playing or paused, press MENU/NO after selecting the album you want to edit.
“Edit Menu” appears in the display.

2 Press ◀/▶ repeatedly until “Track Erase?” appears in the display, then press ENTER or YES.

The display for erasing tracks appears and playback of the displayed track starts.

3 Press ◀/▶ repeatedly until the track number you want to erase appears, then press ENTER or YES.

“Complete!” appears for a few seconds.

The track following the erased track starts playing. If you erase the last track in the album, the track preceding the erased track starts playing.

Notes

- If erasing a track causes an album or play list to become empty, the album or the play list will be also erased.
- If you erase a track that is registered to a play list, the track is erased from the play list also. Afterwards, the contents of the play list cannot be restored to the condition before the edit even if you use the Undo function.

Erasing all tracks in an album (Album Erase)

Do the procedure below to erase all tracks, track names, album name and artist name at once.

1 While the recorder is stopped, playing or paused, press MENU/NO after selecting the album you want to edit.
“Edit Menu” appears in the display.

2 Press ◀/▶ repeatedly until “Album Erase?” appears in the display, then press ENTER or YES.
“Album Erase??” flashes in the display.

3 Press ENTER or YES again.
“Complete!” appears for a few seconds.

Notes

- Once an album is erased by the Album Erase function, it cannot be restored, even if you use Undo function.
- Make sure not to turn off the recorder while “Erasing” appears in the display.

Dividing recorded tracks

— Divide Function

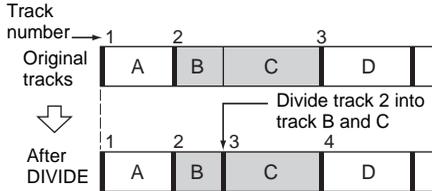
You can use this function to mark numbers after recording. The total number of tracks in the album increases by one and all the tracks following the divided one are renumbered.

Before the operation, press HDD or press CD/HDD on the recorder to light up the HDD indicator.

Tips

- You can use the ALBUM dial on the recorder instead of the **←**, **→**, or **ENTER** button on the remote to select and enter items in Edit Menu or Setup Menu.
To select an item: Turn the ALBUM dial towards +/-.
To enter a selection: Press the ALBUM dial.
- You can also use the ALBUM +/- buttons instead of the **←/→** buttons to select items in Edit Menu or Setup Menu.

Example: Dividing track 2 into two tracks



1 While the recorder is stopped, playing or paused, press MENU/NO after selecting the album you want to edit.

“Edit Menu” appears in the display.

2 Press **←/→ repeatedly until “Divide?” appears in the display, then press **ENTER** or **YES**.**

3 Press **←/→ repeatedly until the track number you want to divide appears, then press **ENTER** or **YES** at the dividing point.**

“– Rehearsal –” appears and the recorder repeatedly plays several seconds of the track from the point where you pressed the **ENTER** or the **YES** button.

4 While monitoring the sound, press **←/→ repeatedly to locate the dividing point.**

You can shift the starting point in 1-frame (f) intervals (1 frame = 1/43 second), second, or minute.

The time indication (frame, second and minute) of the current point is displayed and the recorder plays several seconds of the track from that point repeatedly.

To specify the unit (frame, second, or minute)

Press **⏮/⏭** (or turning the **PLAY/NEXT/PREV** dial towards **⏮/⏭** on the recorder) repeatedly. The selected unit flashes in the display.

5 Press **ENTER or **YES**.**

“Complete!” appears for a few seconds.

The newly created track starts playing.

Note that new track has no name.

Notes

- You cannot divide a track at its beginning or end.
- You cannot divide a track if the total number of tracks in the album will exceed 400 after the division.
- You cannot divide a track if the total number of tracks on the HDD will exceed 40,000 after the division.
- You cannot divide tracks in a play list.
- You cannot divide MP3-format tracks.
- If a division results in a track that is shorter than 2 seconds long, then division at that point will be disabled (“Impossible” appears).

Tip

You can divide a track automatically while recording.

For details, see “Marking track numbers automatically while recording (Level Synchro Recording)” on page 15.

Combining recorded tracks

— Combine Function

You can use this function to combine 2 tracks into a single track. The total number of tracks in the album decreases by one and all the tracks following the combined ones are renumbered.

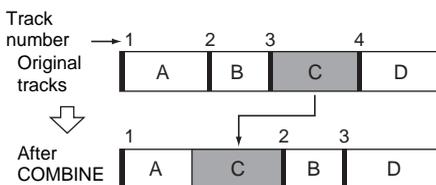
You can also use this function to erase unnecessary track numbers.

Before the operation, press HDD or press CD/HDD on the recorder to light up the HDD indicator.

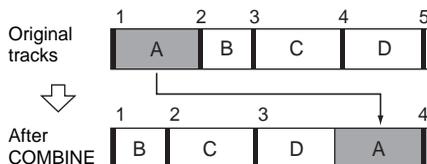
Tips

- You can use the ALBUM dial on the recorder instead of the \leftarrow , \rightarrow , or ENTER button on the remote to select and enter items in Edit Menu or Setup Menu.
To select an item: Turn the ALBUM dial towards +/-.
To enter a selection: Press the ALBUM dial.
- You can also use the ALBUM +/- buttons instead of the \leftarrow / \rightarrow buttons to select items in Edit Menu or Setup Menu.

Example: Combining track 3 to track 1



Example: Combining track 1 to track 4



- While the recorder is stopped, playing or paused, press MENU/NO after selecting the album you want to edit. "Edit Menu" appears in the display.
- Press \leftarrow / \rightarrow repeatedly until "Combine?" appears in the display, then press ENTER or YES.
- Press \leftarrow / \rightarrow repeatedly until the track number of the first track you want to combine appears, then press ENTER or YES.
The display for selecting a second track appears and the recorder plays the portion where joining will occur (the end of the first track and the beginning of the second track following it) repeatedly.
- Press \leftarrow / \rightarrow repeatedly until the track number of the second track you want to combine appears, then press ENTER or YES.
"Complete!" appears for a few seconds.
The combined track starts playing.

Notes

- If both of the combined tracks have track names, the name of the second track is erased.
- If "Impossible" appears in the display, the tracks cannot be combined because repeated editing has been done to the track(s). This is a technical limitation of the HDD system and is not a mechanical error.
- You cannot combine tracks if the total playing time of the tracks will exceed 120 minutes after the combination.
- You cannot combine tracks in a play list.
- You cannot combine tracks with different format (Linear PCM/ATRAC3/MP3).
- You cannot combine MP3 format files.
- It is not possible to combine tracks that have different copy restriction information (Serial Copy Management System information (page 35)).

Moving recorded tracks or albums

— Move Function

You can use this function to change the order of any track or album on the HDD.

Before the operation, press HDD or press CD/HDD on the recorder to light up the HDD indicator.

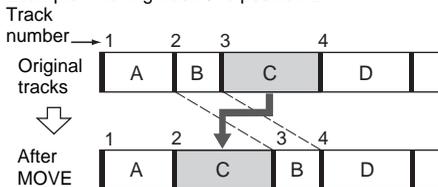
Tips

- You can use the ALBUM dial on the recorder instead of the **←**, **→**, or ENTER button on the remote to select and enter items in Edit Menu or Setup Menu.
To select an item: Turn the ALBUM dial towards +/-.
To enter a selection: Press the ALBUM dial.
- You can also use the ALBUM +/- buttons instead of the **←/→** buttons to select items in Edit Menu or Setup Menu.

Moving recorded tracks

When you move tracks, the tracks are automatically renumbered.

Example: Moving track 3 to position 2



1 While the recorder is stopped, playing or paused, press MENU/NO after selecting the album you want to edit.

“Edit Menu” appears in the display.

2 Press **←/→ repeatedly until “Move?” appears in the display, then press ENTER or YES.**

3 Press **←/→ repeatedly until the track number you want to move appears, then press ENTER or YES.**

4 Press **←/→ repeatedly until the new track position appears, then press ENTER or YES.**

“Complete!” appears for a few seconds.

The moved track starts playing.

Moving recorded albums

You can change the order of album numbers 1 to 999 (album numbers P01 to P10 in the case of play lists).

All tracks in an album can be simultaneously moved to an album that contains no tracks.

1 While the recorder is stopped, playing or paused, press MENU/NO after selecting the album you want to edit.

“Edit Menu” appears in the display.

2 Press **←/→ repeatedly until “Move?” appears in the display, then press ENTER or YES.**

3 Press **←/→ repeatedly until “Album” appears, then press ENTER or YES.**

4 Press **←/→ repeatedly until the new album position appears, then press ENTER or YES.**

“Complete!” appears for a few seconds.

The album after being moved becomes the current album.

Notes

- You cannot move a track in an album to a play list, or a track in a play list to an album.
- It is not possible to move an album numbered 1 to 999 to produce an album with a number of P01 to P10 (a play list number). It is not possible to move an album numbered P01 to P10 to produce an album with a number of 1 to 999.
- It is not possible to move an album (or play list) when there is no album (or play list) that contains no tracks.
- Moving an album does not affect the order of its tracks.

Tip

When selecting the position of a new track, you can switch to another album by pressing the ALBUM button. If you switch to another album, the track is moved to the last position in the album.

Assigning a title or artist name to a track, album or play list

— Name Function

You can enter a title or artist name for albums and play lists as well as for individual tracks. Name can consist of uppercase and lowercase letters, numbers and symbols. Up to 127 characters can be entered for each name.

You can assign titles or artist names in the following ways.

- Using the buttons and controls on the remote or the recorder (this page and page 29).
- Using a keyboard connected to the recorder's KEYBOARD connector (page 33).
- Using the keyboard of your computer. (Refer to the "M-crew for HAR-LH500" Help included on the supplied CD-ROM.)
- Using the "M-crew for HAR-LH500" software to assign titles or artist names automatically from Gracenote CDDB® server. (Refer to the "M-crew for HAR-LH500" Help included on the supplied CD-ROM.)

Before the operation, press HDD or press CD/HDD on the recorder to light up the HDD indicator.

Notes

- You cannot add a title or an artist name while recording.
- You cannot name tracks in a play list. Track names in a play list cannot be erased or changed.

Tips

- You can use the ALBUM dial on the recorder instead of the , , or ENTER button on the remote to select and enter items in Edit Menu or Setup Menu.
To select an item: Turn the ALBUM dial towards +/-.
To enter a selection: Press the ALBUM dial.
- You can also use the ALBUM +/- buttons instead of the ,  buttons to select items in Edit Menu or Setup Menu.

Assigning a title using the controls on the remote

- 1 After selecting the album you want to edit, press NAME EDIT/SELECT depending on what you want to name.

To name	Press while
A track	The recorder is playing (the track number is displayed).
An album or play list	The recorder is stopped with the total number of tracks displayed.

A flashing cursor appears in the display.

- 2 Press NAME EDIT/SELECT repeatedly to select the character type.

Each time you press the button, the display changes as follows:

"Selected AB" (Upper cases or symbols*)

→ "Selected ab" (Lower cases or symbols*) → "Selected 12" (Numbers)

* Only ' - / , . () : ! ? can be selected.

You can enter a space by pressing the 0/10 button.

- 3 Enter a character using letter/numeric buttons.

If you have selected upper cases or lower cases

- 1 Press corresponding letter/numeric button repeatedly until the character you want to enter flashes.

Or press ALBUM +/- repeatedly.

- 2 Press  .

The flashing character is entered and lights continuously and the cursor shifts to the right.

- 4 Repeat steps 2 and 3 to enter the rest of the name.

To change a character

Press   repeatedly until the character you want to change flashes, press CLEAR to erase the character, then repeat steps 2 and 3.

- 5 Press YES.

"Complete!" appears for a few seconds.

Assigning a title or artist name using the Edit Menu

1 While the recorder is stopped, playing or paused, press MENU/NO after selecting the album you want to edit.

“Edit Menu” appears in the display.

2 Press ←/→ repeatedly until “Name In?” appears in the display, then press ENTER or YES.

3 Press ←/→ repeatedly to select the item, then press ENTER or YES.

To	Select
Assign a title to a track, album or play list	Name Title?
Assign an artist name to a track, album or play list	Name Artist?

4 Press ←/→ repeatedly to select the item, then press ENTER or YES.

To	Select
Name a track	Name In Tr X
Name an album or play list	Name In Album

A flashing cursor appears.

The recorder starts playing and you can assign a title or artist name while monitoring the sound. (for track only)

5 Press DISPLAY (DISPLAY/CHAR on the recorder) repeatedly to select the character type.

Each time you press the button, the display changes as follows:

A (Upper cases) → a (Lower cases) → 0 (Numbers) → ' (Symbols)

To enter a space

Press □ (0/10) (or the Album dial on the recorder) while the cursor is flashing.

6 Press ←/→ repeatedly to select the character.

The selected character flashes.

To enter a symbol

You can use the following symbols in names:

' - / , . () : ! ? & + < > _ = " ; # \$ % @ * `

To change a selected character
Repeat steps 5 and 6.

7 Press ENTER.

The selected character is entered and lights continuously. The cursor shifts to the right, flashes and waits for the input of the next character.

8 Repeat steps 5 through 7 to enter the rest of the name.

To change a character

Press ◀◀/▶▶ (or turn the PLAY/NEXT/PREV dial towards ◀◀/▶▶ on the recorder) repeatedly until the character you want to change flashes, press CLEAR to erase the character, then repeat steps 5 through 7.

9 Press YES.

“Complete!” appears for a few seconds.

continued

Assigning a title or artist name to a track, album or play list (continued)

Copying a title or an artist name (Name Copy)

You can copy a title or an artist name from a previously named track or album.

- 1 While the recorder is stopped, playing, or paused, press MENU/NO after selecting the album that contains the information that you want to copy.

“Edit Menu” flashes in the display.

- 2 Press \leftarrow/\rightarrow repeatedly until “Name Copy?” appears in the display, then press ENTER or YES.

- 3 Press \leftarrow/\rightarrow repeatedly to select the item you want to copy, then press ENTER or YES.

To copy	Select
Track name or album name	Copy Title?
Artist name	Copy Artist?

- 4 Press \leftarrow/\rightarrow repeatedly to select the track or an album from which you want to copy the name, then press ENTER or YES.

To copy from	Select
An album	Name Cpy Album
A track	Name Cpy Tr X

- 5 Press \leftarrow/\rightarrow repeatedly to select the destination track or album for the copied name, then press ENTER or YES.

“Complete” appears for a few seconds.

Note

After you use the Name Copy function, it will not be possible to restore the original contents with the Undo function.

Tip

You can name all tracks in the selected album at the same time. Select “ALL” as the destination in step 5. The copied name is entered for all tracks in the album.

Renaming a track, album or play list

- 1 Do step 1 of “Assigning a title using the controls on the remote” on page 28 or steps 1 through 4 of “Assigning a title or artist name using the Edit Menu” on page 29.

A title or artist name appears in the display.

- 2 Press and hold down CLEAR until the selected name is erased completely.

- 3 Do steps 2 through 4 of “Assigning a title using the controls on the remote” on page 28 or steps 5 through 8 of “Assigning a title or artist name using the Edit Menu” on page 29.

- 4 Press YES.

“Complete!” appears for a few seconds.

Erasing a title or artist name

You can use this function to erase a title or artist name.

- 1 While the recorder is stopped, playing or paused, press MENU/NO after selecting the album you want to edit.

“Edit Menu” appears in the display.

- 2 Press **←/→** repeatedly until “Name Erase?” appears in the display, then press ENTER or YES.

- 3 Press **←/→** repeatedly to select the item, then press ENTER or YES.

To	Select
Erase a title	Erase Title?
Erase an artist name	Erase Artist?

While the recorder is recording, “Complete!” appears for a few seconds and the name of the track being recorded is erased.

- 4 Press **←/→** repeatedly to select the item, then press ENTER or YES.

To	Select
Erase a name of a track	Name Ers Tr X
Erase a name of an album or play list	Name Ers Album

“Complete!” appears for a few seconds.

Undoing the last edit

—Undo Function

You can undo the last edit operation and restore the contents of the HDD to the condition that existed before the operation. Note, however, that you cannot undo an edit operation if you perform any of the following operation after the edit:

- Do another edit.
- Start recording.
- Perform a play list
- Turn off the recorder.
- Disconnect the power cord.

Before the operation, press HDD or press CD/HDD on the recorder to light up the HDD indicator.

Tips

- You can use the ALBUM dial on the recorder instead of the **←**, **→**, or ENTER button on the remote to select and enter items in Edit Menu or Setup Menu.
To select an item: Turn the ALBUM dial towards +/-.
To enter a selection: Press the ALBUM dial.
- You can also use the ALBUM +/- buttons instead of the **←/→** buttons to select items in Edit Menu or Setup Menu.

- 1 While the recorder is stopped, playing or paused, press MENU/NO.

“Edit Menu” appears in the display.

- 2 Press **←/→** repeatedly until “Undo?” appears in the display.

“Undo?” does not appear if no editing has been done.

- 3 Press ENTER or YES.

One of the messages appears depending on the last edit operation.

- 4 Press ENTER or YES.

“Complete!” appears for a few seconds.

Falling asleep to music

— Sleep Timer

You can set the recorder so that it turns off automatically after a specified duration.

Press SLEEP repeatedly until the desired time appears in the display.

“SLEEP” appears in the display.

To set Sleep Timer using the Setup Menu

Tips

- You can use the ALBUM dial on the recorder instead of the **←**, **→**, or **ENTER** button on the remote to select and enter items in Edit Menu or Setup Menu.
To select an item: Turn the ALBUM dial towards **+/-**.
To enter a selection: Press the ALBUM dial.
- You can also use the ALBUM **+/-** buttons instead of the **←/→** buttons to select items in Edit Menu or Setup Menu.

1 Press MENU/NO.

“Edit Menu” appears in the display.

When the recorder is set to CD by pressing the CD button, “Setup Menu” appears in the display. In this case, go to step 3.

2 Press **←/→** repeatedly until “Setup?” appears in the display, then press ENTER or YES.

“Setup Menu” appears in the display.

3 Press **←/→** repeatedly until “Sleep Off” (or “Sleep XXmin”) appears in the display, then press ENTER or YES.

4 Press **←/→** repeatedly to select a desired time (“Off”, “30min”, “60min”, “90min”, “120min”), then press ENTER or YES.

“SLEEP” appears in the display.

5 Press MENU/NO.

Tip

You can check the remaining time. Once you turn on Sleep Timer, the remaining time is displayed when you select “Sleep” in Setup Menu.

Converting the format of recorded tracks

You can convert tracks recorded in the linear PCM format (factory setting) to the ATRAC3 format. By doing so, the recorded data will be compressed and the recordable time on the HDD will be extended.

Before the operation, press HDD or press CD/HDD on the recorder to light up the HDD indicator.

1 While the recorder is stopped and the track or an album to be converted is selected, press ATRAC3 CONVERT.

“PCM → ATRAC3?” appears in the display.

2 Press YES.

“PCM → ATRAC3???” appears again.

3 Press YES again.

Converting starts and the percentages of current status appears in the display.

When it finishes, “Complete” appears in the display.

Notes

- If the selected track is in the linear PCM format, the conversion will take about half the playing time of that track. If you select an album with many linear PCM-format tracks, the conversion will take about half the total playing time of all of the linear PCM-format tracks.
- You cannot convert MP3- or ATRAC3-format tracks.

Tip

If you choose an album for conversion, only tracks recorded in linear PCM format are converted.

Preparing

You can connect any IBM PC-compatible keyboards with a PS/2 interface to the recorder to operate the recorder. A keyboard is convenient for labeling tracks and albums.

Connecting a keyboard to the recorder

Connect the keyboard connector to the KEYBOARD connector on the front panel of the recorder.

Naming a track or an album using the keyboard

If you use a keyboard, you can quickly enter or edit names. While editing a name, you can move the cursor in jumps or scroll the name.

- 1 **While the recorder is in one of the operating modes listed below, press [Enter].**

To name	Press while
A track	The track number is displayed.
An album	The recorder is stopped with total number of tracks in an album is displayed.

A flashing cursor appears in the display.

- 2 **Enter a name.**

In addition to letter keys, you can also use the keys shown in the following table.

- 3 **Press [Enter].**

The whole name appears in the display.

Operations you may want to do while naming a track or an album

To	Press on the keyboard
Cancel the operation	[Esc]
Switch between uppercase and lowercase letters	[Caps Lock]
Move the cursor	[←] or [→]
Erase the character at the cursor position	[Delete]
Erase the character preceding the cursor	[Back Space]

Operating the recorder using the keyboard

You can use the following keys to operate the recorder.

As the keyboard substitutes for the following functions	Press
▷	[F1]
	[F2]
■	[F3]
ALBUM -	[F9]
◀◀	[F10]
▶▶	[F11]
ALBUM +	[F12]

Precautions

On safety

- Caution — The use of optical instruments with this product will increase eye hazard.
- Should any solid object or liquid fall into the cabinet, unplug the recorder and have it checked by qualified personnel before operating it any further.
- Discs with non-standard shapes (e.g., heart, square, star) cannot be played on this unit. Attempting to do so may damage the unit. Do not use such discs.

On power sources

- Before operating the recorder, check that the operating voltage of the recorder is identical with your local power supply. The operating voltage is indicated on the nameplate at the rear of the recorder.
- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Be sure to turn off the recorder before disconnecting the power cord.
- If you are not going to use the recorder for a long time, be sure to disconnect the recorder from the wall outlet. To disconnect the AC power cord (mains lead), grasp the plug itself; never pull the cord.
- AC power cord must be changed only at the qualified service shop.

On placement

- Place the recorder in a location with adequate ventilation to prevent heat build-up in the recorder.
- Do not place the recorder on a soft surface such as a rug that might block the ventilation holes on the bottom.
- Do not place the recorder in a location near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Do not place heavy objects such as an amplifier, deck, etc. on top of the recorder.

On operation

If the recorder is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the recorder. Should this occur, the recorder may not operate properly. In this case, remove the CD and leave the recorder turned on for about an hour until the moisture evaporates.

Notes on CDs

- Before playing, clean the disc with a cleaning cloth. Wipe the disc from the center out.
- Do not use solvents such as benzene, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight.
- Do not use discs encircled with a protection ring. This may cause a malfunction to the recorder.
- When using discs that have glue or similar tacky substance on the label side of the disc or that used a special ink when the label was printed, there is a chance that the disc or label may become attached to parts inside this unit. When this occurs, it may not be possible to remove the disc, and may also cause this unit to malfunction. Be sure to check that the label side of the disc is not sticky before using. The following types of disc should not be used:
 - Rental or used discs with attached seals where the glue extends beyond the seal. The perimeter of the seal on the disc is tacky.
 - Discs that have labels printed using a special ink that feels tacky when touched.
- CDs with non-standard shapes (e.g., heart, square, star) cannot be played on this unit. Attempting to do so may damage the unit. Do not use such CDs.

Cleaning the cabinet

Clean the cabinet, panel and controls with a soft cloth slightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as thinner, benzene or alcohol.

Note on High-Speed CD-HDD Synchro-Recording

Certain CD conditions may cause sound dropout or noise in the recording results, or even create unwanted tracks on the HDD. If this happens, clean the CD as instructed on “Notes on CDs” on page 34, and record material to the HDD using normal-speed CD-HDD Synchro-Recording only.

Notes on handling the hard disc

The hard disc has a high storage density and reads or writes data in a short time with compared to the floppy disk. On the other hand, it may be easily damaged by mechanical vibration, shock or dust. Keep the hard disc away from magnets.

Although the hard disc has safety devices to prevent losing data due to mechanical vibration, shock or dust, you should be careful when handling the recorder. Avoid damaging your data:

- Do not cause a shock or strong vibration to the recorder.
- Do not place the recorder in a location subject to mechanical vibration or in unstable location.
- Do not move the recorder while the power is on.
- Before disconnecting the power cord, be sure to turn off the power by pressing the **I/⏻** (power) button on the recorder.
- Do not use the recorder in a place subject to extreme changes in temperature (temperature gradient less than 18 °F (10 °C)/ hour).
- Keep any magnetic objects, including a TV set, speaker, magnet, and magnetic bracelet, away from the recorder.

If the hard disc is damaged, data cannot be restored or recovered.

Serial Copy Management System

Guide to the Serial Copy Management System

Digital audio components, such as CDs, MDs and DATs let you copy music easily with high quality by processing music as a digital signal.

To protect the copyrighted music programs, this recorder uses the Serial Copy Management System that allows you to make only a single copy of a digitally recorded source through digital-to-digital connections.

You can make only a first generation copy* through a digital-to-digital connection

For example:

- 1** You cannot make a second digital copy via the digital input jack onto another DAT or MD deck from the first-generation copy recorded by the recorder digitally.
- 2** You can make a copy of a digital signal from a digitally recorded analog sound program (for example, an analog record or a music cassette tape) or from a digital satellite broadcast program, but you cannot make a second copy.

* A first-generation copy means a digital recording of a digital signal made on digital audio equipment. For example, if you record from this recorder's CD player to the MD deck, you make a first-generation copy.

Troubleshooting

If you experience any of the following difficulties while using the recorder, use this troubleshooting guide to help you remedy the problem. Should any problem persist, consult your nearest Sony dealer.

General

There is no sound.

- Check that the recorder is connected securely.
- Make sure you have operated the amplifier correctly.

The remote does not function.

- Remove the obstacles in the path of the remote and the recorder.
- Replace all the batteries in the remote with new ones if they are weak.

The recorder functions incorrectly.

- The microcomputer chips may be operating incorrectly. Turn the recorder off, then turn it back on to reset the recorder.

CD

The CD does not play.

- There is no CD inside the recorder. "No Disc" appears. Load a CD.
- Load the CD with the label side up on the disc tray correctly.
- Clean the CD (see page 34).
- Moisture has condensed inside the recorder. Remove the CD and leave the recorder turned on for about an hour.
- Load the CD in the correct position on the disc tray.

HDD

The HDD does not play.

- Moisture has condensed inside the recorder. Leave the recorder turned on for about an hour.
- Press I/C to turn the recorder on.

The HDD does not record.

- Make connections properly to the sound source.
- The sound source is not connected to the selected input connector. Select the correct input connector using the respective button on the remote.
- The recording level is not adjusted properly. Adjust the recording level properly (see page 17).
- There has been a power failure or the power cord has been disconnected during recording. Data recorded to that point may be lost. Repair the recording procedure.
- Recording to play lists (album numbers P01 to P10) is not possible. Make sure a play list is not displayed.

The HDD does not edit.

- Press PLAY MODE repeatedly until "SHUFFLE" disappears.

The sound has a lot of static.

- Strong magnetism from a television or similar device is interfering with operations. Move the recorder away from the source of strong magnetism.

Display Messages

One of the following messages may appear or flash in the display during operations. Also, the recorder has a Self-Diagnosis Function.

Album Full!

There are no more albums containing no tracks on the HDD. It is not possible to record tracks to create a new album.

Auto Cut

The recorder is pausing the recording because silence continued for 30 seconds or more during digital recording.

Blank Disc

There is no track on the HDD.

Cannot Copy

You tried to play a CD with a format that the recorder does not support, such as a CD-ROM. The sound source is a copy of commercially available music software.
The digitally dubbed material cannot be recorded digitally (page 35).

Cannot Edit

You tried to edit in Shuffle Play, or you tried to register a track to a play list that already contains 400 tracks.

Cannot Play

The recorder cannot play the track because of damage to the audio data.
An unplayable disc is inserted in the recorder (e.g., a CD-ROM, Video CD, or DVD).

Cannot Rec

You tried to record a track while a play list was displayed.

Din Unlock

A moment's lighting is due to the signals of the digital program being recorded. This does not affect the recorded material.

While recording from a digital component connected through the DIGITAL OPTICAL IN connector, the digital connecting cable was unplugged or the digital component turned off.

Drive Error

Consult your nearest Sony dealer.

Drive Full!

Recording tracks is not possible because there is not enough recordable space on the HDD or the maximum number of recordable tracks has been reached.

Erasing

The recorder is erasing data from the HDD. Do not disconnect the power cord.

Format Error

Consult your nearest Sony dealer.

Impossible

You tried to make an impossible editing or recording operation.

Name Full!

The naming capacity of the HDD has reached its limit (about 127 characters).

No Artist

You tried to show the name of a non-labeled artist.

No Disc

There is no CD, or a DVD is inserted on the disc tray.

No Name

You tried to show the title of a non-labeled CD, album or track.

No Signal

The recorder has detected a silent portion during recording.

Reading

The recorder is reading data from the HDD.

Rec Error

Proper recording is not possible.

REMOTE

The recorder is being connected to your computer.*

Smart Space

The signal was input again after silence continued for 3 or more but less than 30 seconds during digital recording.

Step Full!

The program contains the maximum number of tracks. You cannot set additional tracks.

TOC Reading

The recorder is reading the TOC information of the CD.

Track Full!

Recording tracks is not possible because there are 400 tracks in the album. Select another album for recording.

* If "REMOTE" appears under other circumstances, turn off the recorder, then turn on it again.

Setup menu table

Menu item	Reference page
Rec Mode (LinearPCM/ATRAC3)	12
Sync (High/Normal)	11
Analog (XX dB)	17
Tr.Mark (Lsync/Off)	15
L.Sync(T) (-XX dB)	16
SmartSpace (On/Off)	17
Sleep (Off/XX min)	32

Specifications

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser ($\lambda = 780 \text{ nm}$)
	Emission duration: continuous
Frequency response	5 Hz – 20 kHz ($\pm 0.5 \text{ dB}$)
Signal-to-noise ratio	More than 95 dB
Wow and flutter	Below measurable limit

HDD section

Capacity	80 GB
Recording system	LINEAR PCM/ATRAC 3
Maximum recording time	About 1,340 h (ATRAC3) About 125 h (LinearPCM)
Maximum number of albums	999
Maximum number of tracks	40,000
Maximum number of tracks per album	400
Maximum CD-HDD ripping speed	Max. $\times 3$ (ATRAC3) Max. $\times 12$ (Linear PCM)

Input

	Jack type	Input impedance	Rated input	Minimum input
ANALOG IN	Phono jacks	47 kilohms	500 mVrms	125 mVrms
DIGITAL OPTICAL IN	Square optical connector jack	Optical wave length: 660 nm	—	—

Output

	Jack type	Rated output	Load impedance
ANALOG OUT	Phono jacks	2 Vrms (at 50 kilohms)	Over 10 kilohms
DIGITAL OPTICAL OUT	Square optical connector jack	—	Optical wave length: 660 nm

General

Power requirements	
European model:	230 V AC, 50/60 Hz
Power consumption	25 W
Dimensions (Approx.) (w/h/d)	430 \times 65 \times 288 mm incl. projecting parts and controls
Mass (Approx.)	4.3 kg

Supplied accessories

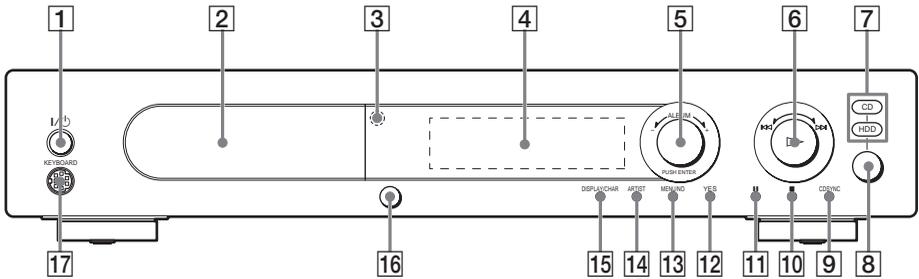
Digital optical cord (1)
Audio connecting cord (2)
Remote control (remote) (1)
Sony R6 (size AA) battery (2)
USB cable (1)
Be sure to use the supplied USB cable with ferrite cores when connecting to a computer.
“M-crew for HAR-LH500” CD-ROM (1)

US and foreign patents licensed from Dolby Laboratories.

Design and specifications are subject to change without notice.

List of button locations and reference pages (continued)

Front Panel



ALPHABETICAL ORDER

A-C

- ALBUM (+/-) dial **5** (11, 18, 23, 32)
- ARTIST **14** (22)
- CD cover **2** (8)
- CD/HDD **8** (8, 11, 18, 23, 32)
- CD/HDD indicator **7** (8, 11, 18, 23, 32)
- CD SYNC **9** (12)

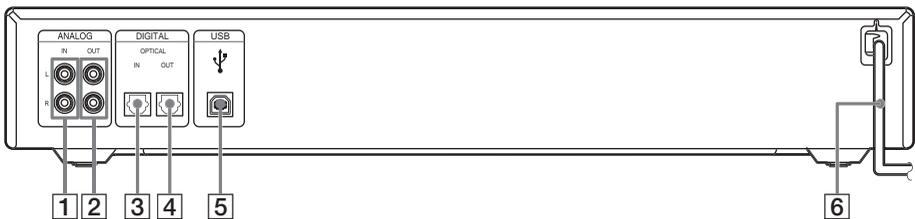
D-Z

- DISPLAY/CHAR **15** (9, 19, 29)
- Display window **4** (9, 17, 19)
- KEYBOARD connector **17** (33)
- MENU/NO **13** (11, 24, 32)
- PLAY/NEXT/PREV ($\triangleright/\llcorner/\llcorner$) **11** (8, 12, 18, 25)
- Remote sensor **3**
- YES **12** (11, 20, 24, 32)

BUTTON DESCRIPTIONS

- I/O (power) **1** (8, 11, 18)
- \blacktriangle **16** (8)
- \blacksquare **11** (9, 12, 18)
- \blacksquare **10** (9, 12, 18, 23)

Rear Panel



ALPHABETICAL ORDER

A-O

- ANALOG IN L/R jacks **1** (7)
- ANALOG OUT L/R jacks **2** (7)
- DIGITAL OPTICAL IN connector **3** (7)
- DIGITAL OPTICAL OUT connector **4** (7)

P-Z

- Power cord **6**
- USB connector **5** (7)