

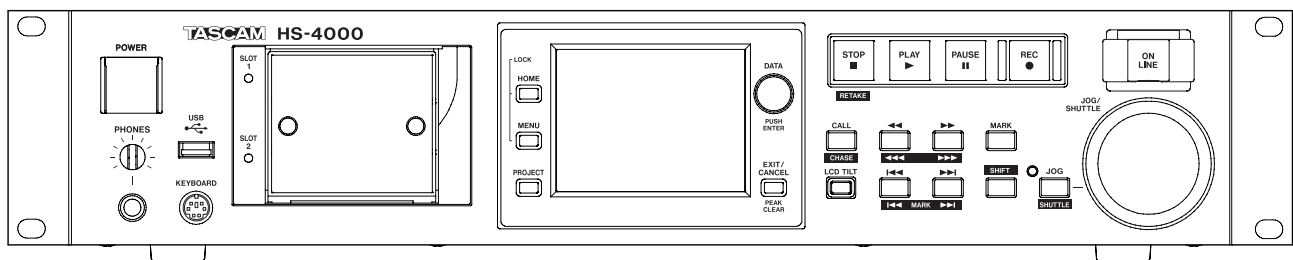
TASCAM

D01134020A

HS-4000

4 Channel Audio Recorder

OWNER'S MANUAL



IMPORTANT SAFETY PRECAUTIONS



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 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.

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

For U.S.A.

TO THE USER

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION

Changes or modifications to this equipment not expressly approved by TEAC CORPORATION for compliance could void the user's authority to operate this equipment.

In North America use only on 120V supply.

This appliance has a serial number located on the rear panel. Please record the model number and serial number and retain them for your records.

Model number _____

Serial number _____

■ For European Customers

Disposal of electrical and electronic equipment

- (a) All electrical and electronic equipment should be disposed of separately from the municipal waste stream via collection facilities designated by the government or local authorities.
- (b) By disposing of electrical and electronic equipment correctly, you will help save valuable resources and prevent any potential negative effects on human health and the environment.
- (c) Improper disposal of waste electrical and electronic equipment can have serious effects on the environment and human health because of the presence of hazardous substances in the equipment.
- (d) The Waste Electrical and Electronic Equipment (WEEE) symbol, which shows a wheeled bin that has been crossed out, indicates that electrical and electronic equipment must be collected and disposed of separately from household waste.



- (e) Return and collection systems are available to end users. For more detailed information about the disposal of old electrical and electronic equipment, please contact your city office, waste disposal service or the shop where you purchased the equipment.

WARNING

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures

CE Marking Information

- a) Applicable electromagnetic environment: E4
- b) Peak inrush current: 14 A

IMPORTANT SAFETY INSTRUCTIONS

- 1 Read these instructions.
- 2 Keep these instructions.
- 3 Heed all warnings.
- 4 Follow all instructions.
- 5 Do not use this apparatus near water.
- 6 Clean only with dry cloth.
- 7 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11 Only use attachments/accessories specified by the manufacturer.
- 12 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



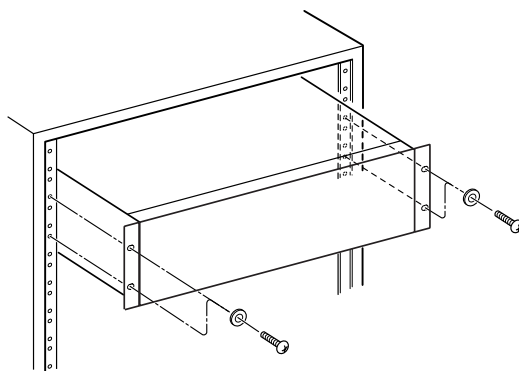
- 13 Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

- Do not expose this apparatus to drips or splashes.
- Do not place any objects filled with liquids, such as vases, on the apparatus.
- Do not install this apparatus in a confined space such as a book case or similar unit.
- The apparatus draws nominal non-operating power from the AC outlet with its POWER or STANDBY/ON switch not in the ON position.
- The apparatus should be located close enough to the AC outlet so that you can easily grasp the power cord plug at any time.
- The mains plug is used as the disconnect device, the disconnect device shall remain readily operable.
- Products with Class I construction are equipped with a power supply cord that has a grounding plug. The cord of such a product must be plugged into an AC outlet that has a protective grounding connection.
- If the product uses batteries (including a battery pack or installed batteries), they should not be exposed to sunshine, fire or excessive heat.
- CAUTION for products that use replaceable lithium batteries: there is danger of explosion if a battery is replaced with an incorrect type of battery. Replace only with the same or equivalent type.
- Caution should be taken when using earphones or headphones with the product because excessive sound pressure (volume) from earphones or headphones can cause hearing loss.

■ RACK-MOUNTING THE UNIT

Use the supplied rack-mounting kit to mount the unit in a standard 19-inch rack, as shown below.

Remove the feet of the unit before mounting.



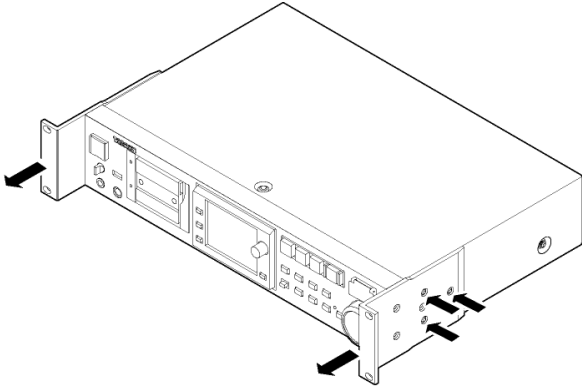
CAUTION

- Leave 1U of space above the unit for ventilation.
- Allow at least 10 cm (4 in) at the rear of the unit for ventilation.

IMPORTANT SAFETY INSTRUCTIONS

By changing the positions where the rack mount ears are attached to the unit, it is possible to install the unit into a rack so that its front panel is about 4 cm inside the front of the rack.

Remove the three screws that attach the rack mount ears from each side and then use the screws to reattach the ears as shown in the illustration below.



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1 – Introduction

Thank you very much for purchasing a TASCAM HS-4000 4 Channel Audio Recorder. Please read this manual thoroughly before using the unit so that you understand correct operating procedures and can use its functions fully. We hope that you enjoy using this unit for many years. Please keep this manual so that you can read it at any time. A digital copy of this manual can also be downloaded from our website (<http://tascam.com/>)

Features

- CompactFlash cards are used as recording media (Ultra DMA compatible)
- Two CompactFlash card slots allows two cards to be loaded and recorded to simultaneously using dual player mode (planned for a future firmware version upgrade)
- 4-track simultaneous recording is possible at up to 96 kHz, 24-bit sample rates
- Confidence monitoring allows simultaneous playback of the signal as it is being recorded (when recording two tracks at up to 44.1/48 kHz)
- Simultaneous playback of four tracks, including two stereo pairs (dual playlist mode)
- Three operation modes: timeline, take and playlist
- In timeline mode, linear recording and playback like a tape recorder are possible
- In take mode, playback and flash start of takes are possible
- In playlist mode, takes can be added to a list and played back in list order or activated using flash start
- In single playlist mode, playback of up to 4 tracks is possible
- In dual playlist mode, 2 stereo tracks can be independently played back and controlled
- Using the ONLINE key, online playback and monitoring playback are possible
- Broadcast Wave Format (BWF) file recording
- Flash start is possible using a TASCAM RC-HS32PD, RC-SS20 (both sold separately)
- In addition to using the remote controllers that are sold separately, flash start is also possible using PARALLEL control or a keyboard
- Auto cue, auto ready and incremental play functions
- Importing and exporting AES31 editing information in timeline mode are possible
- Playlist mode (compatible with JPPA flash start playlist file loading)
- JOG/SHUTTLE function
- Intuitive operation is possible using graphical interface on TFT color touchscreen
- 4 channels of XLR analog balanced inputs and outputs
- 2 stereo pairs of XLR AES/EBU digital inputs and outputs
- 2 channels of XLR analog monitoring outputs

- Headphone output
- XLR time code input and output
- BNC media reference (NTSC/PAL black burst signals, and HDTV Tri-level signals) and word clock input and output/thru
- Compatible with 48 kHz pull-up/pull-down operation
- Copying files to connected USB memory is possible (planned for a future firmware version upgrade)
- LAN (Gigabit Ethernet) functions allow file transmission, remote control and observation over a network (planned for a future firmware version upgrade)
- Parallel remote control is possible
- RS-232C serial remote control is possible (planned for a future firmware version upgrade)
- RS-422 (9-pin serial protocol) serial remote control is possible
- Rack mounting (2U) is possible

Included items

This product includes the following items.

Take care when opening the package not to damage the items. Keep the package materials for transportation in the future. Please contact the store where you purchased this unit if any of these items are missing or have been damaged during transportation.

● Main unit (HS-4000).....	1
● Power cord set.....	1
● Rack-mounting screw kit.....	1
● Security screws.....	3
● Warranty card.....	1
● Owner's manual (this manual).....	1

Conventions used in this manual

In this manual, we use the following conventions:

- Keys, jacks and other parts on the main unit and external devices are indicated like this: **MENU**
- Messages on the unit's display are shown like this: ON
- "CompactFlash card" is abbreviated as "CF card."
- Additional information is provided as necessary as tips, notes and cautions.

TIP

These are tips about how to use the unit.

NOTE

These provide additional explanations and describe special cases.

CAUTION

Failure to follow these instructions could result in injury, damage to equipment or lost recording data, for example.

Intellectual property rights

- TASCAM is a trademark of TEAC Corporation, registered in the U.S. and other countries.
- CompactFlash is a US registered trademark of SanDisk Corporation.
- Other company names, product names and logos in this document are the trademarks or registered trademarks of their respective owners.

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This product is designed to help you record and reproduce sound works to which you own the copyright, or where you have obtained permission from the copyright holder or the rightful licensor. Unless you own the copyright, or have obtained the appropriate permission from the copyright holder or the rightful licensor, your unauthorized recording, reproduction or distribution thereof may result in severe criminal penalties under copyright laws and international copyright treaties. If you are uncertain about your rights, contact your legal advisor. Under no circumstances will TEAC Corporation be responsible for the consequences of any illegal copying performed using the recorder.

Precautions for placement and use

- The guaranteed operating temperature range of this product is 5° - 35° C (41° - 95° F).
- Do not install in the following types of places. Doing so could degrade the sound quality and/or cause malfunctions.
 - Places with significant vibrations or that are otherwise unstable
 - Near windows or other places exposed to direct sunlight
 - Near heaters or other extremely hot places
 - Extremely cold places
 - Places with bad ventilation or high humidity
- Make sure that the unit is mounted in a level position for correct operation.
- In order to promote the emission of heat, do not place anything on top of this product.
- Do not place this product on top of a powered amplifier or other equipment that emits heat.

Beware of condensation

If the unit is moved from a cold to a warm place, or used immediately after a cold room has been heated or otherwise exposed to a sudden temperature change, condensation could occur. Should this happen, leave the unit for one or two hours before turning the unit on.

Cleaning the unit

Wipe the unit with a soft dry cloth to clean it. Do not use any benzene, paint thinner, alcohol or other chemical agents. Doing so could damage the surface of the unit or cause fading.

Cleaning the display

Slightly wipe the display with a soft dry cloth that does not shed dust (e.g. a cleaning cloth). Avoid wiping with a stiff cloth or rubbing with force. Doing so could damage the surface of the LCD. Do not use benzene, thinner, manicure remover, alcohol or similar substances.

About CF cards

Precautions for use

CompactFlash cards are precision devices. To prevent damage to the card or the slot, please observe the following cautions.

- Do not leave a CF card in an extremely hot or cold location.
- Do not leave a CF card in an extremely damp location.
- Do not allow a CF card to become wet.
- Do not place any object on top of a CF card, or twist or bend it.
- Do not subject a CF card to strong impact.
- Do not insert or remove a CF card during recording, playback, data transfer or other operations that access a card.

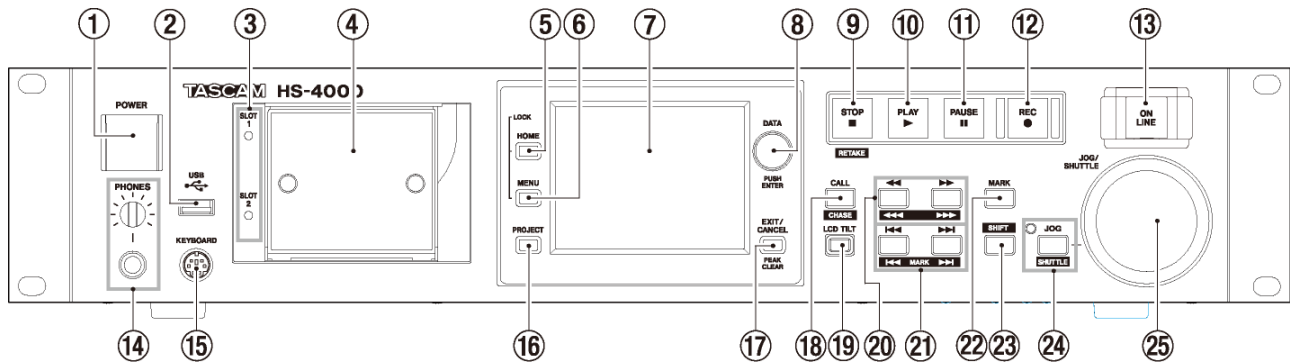
Media that has been confirmed for use with this unit

This unit uses CF cards for recording and playback. We recommend using genuine TASCAM CF cards, but use of other CF cards that are available commercially is possible. Microdrives cannot be used with this unit.

The capacities and performance of your HS-4000 will vary based on the speed and abilities of the Compact Flash (CF) media used. Older and some cheaper Compact Flash (CF) cards use slower memory components and little internal buffering which results in poor recording performance. Newer CF cards, particularly those made for high-precision DSLR cameras, not only perform reading and writing faster, but also come in larger storage size. A list of CF cards that we have confirmed to work with this unit is provided on our website (<http://www.tascam.com>). If a CF card is used that has not been confirmed, this unit might not operate correctly.

2 – Names and functions of parts

Front panel



① POWER switch

Use to turn the power on and off.
This switch has a cover to prevent misoperation. Open the cover from below to access and operate the switch.

② USB connector

By connecting a USB flash drive, for example, you can back up data from a CF card and save files to the card. (Support planned in a version upgrade.)
By connecting a USB keyboard, you can input the names of projects and sessions, for example.
By default, the unit is set to use Japanese keyboards, which have a different layout from US keyboards. To use a US keyboard, change the setting on the **PREFERENCES** page of the **SYSTEM SETUP** screen. (See “PREFERENCES page” on page 80.)

NOTE

Do not disconnect USB flash memory when using it to copy files. You can connect and disconnect USB flash memory at all other times.
You can connect and disconnect USB keyboards at any time.
This unit is not compatible with USB hubs and other devices with USB hub functions.

③ SLOT 1 and SLOT 2 indicators

The indicator for the currently selected CF card slot lights.
When recording or copying, it blinks rapidly.
When no CF card is inserted in the current slot, it blinks slowly.

CAUTION

Do not remove a CF card from a slot when its indicator is blinking rapidly.

④ CF card slot (SLOT 1/SLOT 2)

Insert CF cards here. (See “Inserting and removing CF cards” on page 21.)

⑤ HOME key

Press to open the Home Screen.
Press the **MENU** key while pressing and holding the **HOME** key to open the **LOCK SETUP** screen. (See “Lock function” on page 24.)
Turn the **DATA** dial while pressing and holding the **HOME** key to adjust the brightness of the color display, the **PAUSE**, **REC**, **PLAY** and **ONLINE** keys and the **JOG (SHUTTLE)**, **SLOT 1** and **SLOT 2** indicators.
Push and turn the **DATA** dial while pressing and holding the **HOME** key to adjust the brightness of only the color display.

⑥ MENU key

Press to open the **MENU** screen.
Press the **MENU** key while pressing and holding the **HOME** key to open the **LOCK SETUP** screen. (See “Lock function” on page 24.)

⑦ Color display

This 3.5-inch TFT color display has a 320 x 240 resolution.
It shows various types of information and is used for numerous operations.

⑧ DATA dial

Turn this to use as a **DATA** dial and press it to use it as an **ENTER** key. When setting parameter values, press while turning to change them in large increments (coarse mode).
When a pop-up window is open, this works as an **OK** or **CLOSE** button.
Turn the **DATA** dial while pressing and holding the **HOME** key to adjust the brightness of the color display, the **PAUSE**, **REC**, **PLAY** and **ONLINE** keys and the **JOG (SHUTTLE)**, **SLOT 1** and **SLOT 2** indicators.
Push and turn the **DATA** dial while pressing and holding the **HOME** key to adjust the brightness of only the color display.

⑨ STOP [RETAKE] key

Press to stop recording or playback.
Press this while pressing and holding the **SHIFT** key to retake the recording (erasing the last recorded take).

⑩ PLAY key/indicator

When stopped or in playback standby, press this key to start playback. This key lights during playback.
Press this key when in recording standby to start recording.
In timeline mode, press the **PLAY** key while pressing and holding the **REC** key to start recording from that point.
Both the **PLAY** and **REC** keys light during recording.

⑪ PAUSE key/indicator

Press this key when stopped or during playback to put the unit in playback standby. This key lights when in standby.
Press this key while recording to put the unit in recording standby. Both the **PAUSE** and **REC** keys light when in recording standby.

12 REC key/indicator

When a recordable CF card is installed and the unit is stopped in timeline mode, press this key to put the unit into recording standby. Both the **PAUSE** and **REC** keys light during recording standby.

In timeline mode, press the **PLAY** key while pressing and holding the **REC** key to start recording from that point.

Both the **PLAY** and **REC** keys light during recording.

13 ONLINE key/indicator

Press to turn online playback mode on/off. The indicator lights when on and is unlit when off. (When dual playlist mode is active, the indicator reflects the currently selected player.)

The switch has a cover to prevent misoperation. Open the cover from below to access and operate the switch. (See "Online functions" on page 89.)

14 PHONES knob/jack

Connect stereo headphones to this standard stereo phone jack.

This jack outputs the signal from the internal monitoring mixer.

Use the **PHONES** knob to adjust the headphones output level.

CAUTION

*Before connecting headphones, turn the **PHONES** knob to the minimum volume. Failure to do so could cause sudden loud noises to occur, which might damage your hearing or equipment.*

15 KEYBOARD connector

Connect an IBM PC-compatible keyboard with a PS/2 interface here, and use it to input project and session names, for example.

By default, the unit is set to use Japanese keyboards, which have a different layout from US keyboards. To use a US keyboard, change the setting on the **PREFERENCES** page of the **SYSTEM SETUP** screen. (See "PREFERENCES page" on page 80.)

16 PROJECT key

Press to open screens related to projects (PROJECT selection, SESSION selection, AES31 file selection, TAKE selection and PLAYLIST selection screens). The last used project-related screen opens.

(See "PROJECT screen" on page 32.)

17 EXIT/CANCEL (PEAK CLEAR) key

Press to cancel input or item selection.

When a pull-up or pull-down menu is open, press to close it. On the Home Screen, when no pull-up/pull-down menu is open, this key functions as a reset button for peak hold marks shown on the level meters

When the **MENU** screen or project screen is open, press this to return to the Home Screen.

On other screens, press this to return to the previous screen.

When a pop-up window is open, press this to cancel an operation.

18 CALL [CHASE] key

Press to locate to and pause playback at the call point, which is where playback last started from playback standby.

Press this key while pressing and holding the **SHIFT** key to turn synchronization with timecode ON/OFF.

19 LCD TILT button

Press this button to unlock the color display, so that you can adjust its angle by pulling the bottom of the display outward.

To put the display away, press this button to unlock it and push the bottom inward.

20 ◀◀ [◀◀◀] and , [▶▶▶] keys (search)

Press one of these keys to search.

◀◀ [◀◀◀] key: search backward

▶▶ [▶▶▶] key: search forward

Press one of these keys while pressing and holding the **SHIFT** key to search at high speed.

21 ◀◀ / ▶▶ [MARK ◀◀ / ▶▶] keys (skip)

Use these keys to skip between regions, takes and entries.

Press these keys while pressing and holding the **SHIFT** key to move to the previous/next mark. After moving, the same playback state resumes (stopped/playback standby/playback).

22 MARK key

Press this key to add a mark at the currently located time.

The maximum number of marks, including automatic marks, possible in a single session/take is 99. (See "Mark functions" on page 84.)

23 SHIFT key

When stopped/in playback standby/during playback:

- Press the ◀◀ key while pressing and holding this key to move to the previous mark, and resume the same playback state.
- Press the ▶▶ key while pressing and holding this key to move to the next mark, and resume the same playback state.
- Press the ◀◀ [◀◀◀] or ▶▶ [▶▶▶] key while pressing and holding this key to search at high speed.
- Press the **JOG (SHUTTLE)** key while pressing and holding this key to activate the shuttle operation mode.
- Press the **STOP (RETAKE)** key while pressing and holding this key to retake the recording (erasing the last recorded take).
- Press the **CALL** key while pressing and holding this key to turn synchronization with timecode ON/OFF.

24 JOG (SHUTTLE) key and indicator

Use to enable use of the **JOG/SHUTTLE** dial. Press this key to enable the jog operation mode of the **JOG/SHUTTLE** dial. When this mode is enabled, this indicator lights.

Press this key while pressing the **SHIFT** key to enable the shuttle operation mode of the **JOG/SHUTTLE** dial. When this is enabled, this indicator blinks.

Press this key again to disable either mode.

25 JOG/SHUTTLE dial

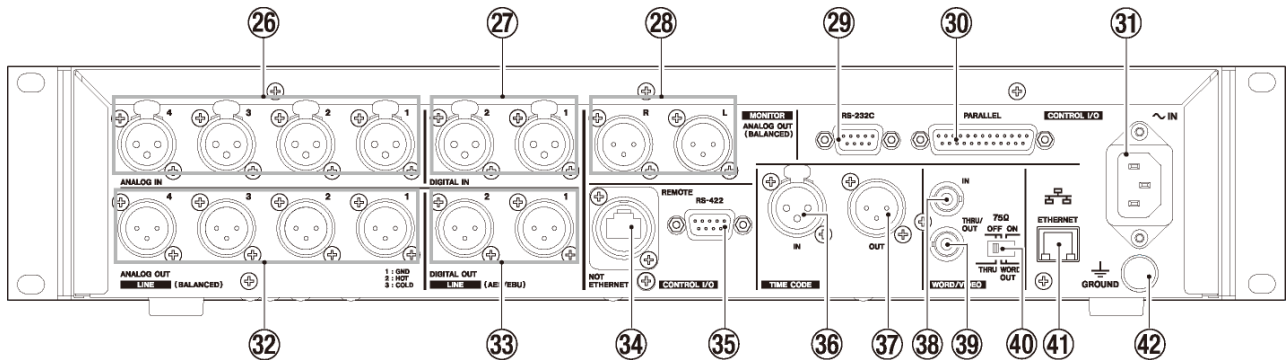
When in jog operation mode, turn this to change the playback position by a corresponding amount.

When in shuttle operation mode, turn this to adjust the playback speed according to the degree of rotation.

If you return to the original position when in shuttle operation mode, the transport status is restored to how it was before shuttle playback was begun.

2 – Names and functions of parts

Rear panel



26 ANALOG LINE IN 1–4 connectors

These XLR connectors are balanced analog line inputs. (1: GND, 2: HOT, 3: COLD)

27 DIGITAL LINE IN 1–2 connectors

Use these balanced XLR connectors (1 and 2) for digital audio input in AES3-2003/IEC60958-4 (AES/EBU) or IEC60958-3 (S/PDIF) format.

Sampling frequencies of 88.2 and 96 kHz are transmitted at double speed.

The built-in sampling rate converter can handle 32–192 kHz.

28 MONITOR ANALOG OUT L/R connectors

These balanced analog XLR connectors output the left and right signals from the internal monitoring mixer. (1: GND, 2: HOT, 3: COLD)

29 RS-232C connector

Connect an external controller, for example, to this 9-pin D-sub connector for RS-232C serial control.

NOTE

- The **RS-232C** connector will be made functional in a future firmware version update.
- It cannot be used at the same time as the **RS-422** connector. (See "RS-232C page" on page 77.)

30 PARALLEL connector

Connect an external controller, for example, to this 25-pin D-sub parallel control connector.

31 AC IN connector

Connect the included power cord here.

32 ANALOG LINE OUT 1–4 connectors

These XLR connectors are balanced analog line outputs. (1: GND, 2: HOT, 3: COLD)

In dual playlist mode, player A outputs from connectors 1 and 2, while player B outputs from connectors 3 and 4.

33 DIGITAL LINE OUT 1/2 connectors

These XLR connectors are balanced outputs for digital audio in AES3-2003/IEC 60958-4 (AES/EBU) format.

Sampling frequencies of 88.2 and 96 kHz are transmitted at double speed.

In dual playlist mode, player A outputs from connector 1, while player B outputs from connector 2.

34 REMOTE connectors

Connect a TASCAM RC-HS32PD remote control (sold separately) here.

CAUTION

This is not an Ethernet connector (LAN, etc.). Never connect this to a network using an Ethernet cable. Doing so could damage this unit or equipment in the network.

35 RS-422 connectors

Connect an external controller, for example, to this 9-pin D-sub connector for RS-422 serial control.

NOTE

It cannot be used at the same time as the **RS-232C** connector. (See "RS-422 page" on page 77.)

36 TIMECODE IN connector

This XLR connector is a balanced input for SMPTE timecode input.

37 TIMECODE OUT connector

This XLR connector is a balanced output for SMPTE timecode output.

38 WORD/VIDEO IN connectors

This BNC-type connector is for input of a word clock signal (44.1 kHz, 48 kHz, 48 kHz pull-down, 48 kHz pull-up, 88.2 kHz, 96 kHz) or a video reference signal (NTSC/PAL black burst signal, HDTV Tri-Level signal). Use the switch to set whether or not to terminate with 75 Ω.

39 WORD/VIDEO THRU/WORD OUT connector

This BNC-type connector is for output of a word clock signal (thru, 44.1 kHz, 48 kHz, 48 kHz pull-down, 48 kHz pull-up, 88.2 kHz, 96 kHz) or a video reference signal (IN connector signal thru only).

Use the THRU/WORD OUT switch to set the signal output.

40 75Ω OFF/ON and THRU/WORD OUT switch

Use this switch to make the following settings.

- Whether or not the WORD/VIDEO IN connector has termination resistance (75 Ω)
- The WORD/VIDEO output THRU/OUT setting (OUT is only for WORD)

④1 **ETHERNET connector**

Use this Ethernet connector to connect with a network for file transfer and to control this unit from an external source. (This is planned to be made functional in a future firmware version update.)

④2 **GROUND terminal**

When using a TASCAM RC-HS32PD remote control (sold separately), depending on the operating environment, the color display might flicker or noise might be heard when monitoring. If this occurs, use the **GROUND** terminal. (Please prepare a wire to use with the **GROUND** terminal.)

2 – Names and functions of parts

PARALLEL connector

The PARALLEL connector on the rear panel allows external control of this unit. The pin assignments are as follows.

Pin No.	Timeline / Take / Playlist [Single]	Playlist [Dual]	RC-SS20 PonMode	I/O
1	GND	GND	GND	
2	PLAY	PLAY A	FLASH 1	I
3	STOP	STOP A	FLASH 2	I
4	RECORD	(Reserved)	FLASH 3	I
5	SKIP FWD	SKIP FWD	FLASH 4	I
6	SKIP BWD	SKIP BWD	FLASH 5	I
7	(Reserved)	STOP B	STOP	I
8	FADER_START	FADER_START A	FADER_START	I
9	TALLY_BC_STOP	TALLY_PAUSE B	TALLY_BC_STOP	O
10	TALLY_PAUSE / TALLY_BC_PAUSE	TALLY_PAUSE A	TALLY_PAUSE A / TALLY_BC_PAUSE	O
11	TALLY_RECORD	(Reserved)	RESERVED	O
12	TALLY_STOP	TALLY_STOP A	TALLY_STOP	O
13	TALLY_PLAY	TALLY_PLAY A	TALLY_PLAY	O
14	REMOTE_SELECT, H or Open	REMOTE_SELECT, H or Open	REMOTE_SELECT, L	I
15	PAUSE	PAUSE	FLASH 6	I
16	(Reserved)	PLAY B	FLASH 7	I
17	AUX1, FF	AUX1, FF	FLASH 8	I
18	AUX2, REW	AUX2, REW	FLASH 9	I
19	AUX3, MARK	AUX3, MARK	FLASH 10	I
20	(Reserved)	A/B SELECT	FLASH_PAGE	I
21	TALLY_BC_STANDBY	TALLY_PLAY B	TALLY_BC_STANDBY	O
22	TALLY_BC_CM	TALLY_STOP B	TALLY_CF1 / TALLY_BC_CM	O
23	TALLY_ONLINE	TALLY_ONLINE A	TALLY_ONLINE	O
24	TALLY_BC_END	TALLY_ONLINE B	TALLY_CF2 / TALLY_BC_END	O
25	+5V	+5V	+5V	

- I : Command input for transport control
Internal circuit, +5V pull-up
Operates with low commands of 50 msec or more
- O : Command output, for tally output
The internal circuit is open collector (10 Ω output impedance)
Low command output when operating
20 V dielectric strength, 35 mA maximum current
- *+5V: 50 mA maximum supplied current

When REMOTE Select (pin 14) is set to high, it functions according to the operation mode and can be used as an ordinary parallel controller. When set to low, flash start mode is enabled. In addition, depending on the high/low setting of the Flash Page (pin 20), the key assignments are as follows.

Pin 14	Pin 20	Flash start take
Low	High	1–10
Low	Low	11–20

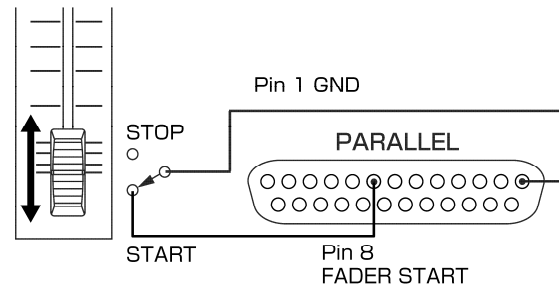
TALLY_BC_*: Use menu setting to switch output (OFF, ON)
(When an RC-SS20 is connected set output to OFF.)
TALLY_BC_STOP/CM/END: 250 msec pulse output
TALLY_BC_STANDBY/PAUSE: Level output

When the main unit's playlist mode is set to [dual], and REMOTE Select (pin 14) is set to hi, use pin 20 (A/B SELECT) to select player A or B (Hi for player A and Lo for player B).

The following pins affect the selected player.

- Pin 5 (SKIP FWD)
- Pin 6 (SKIP BWD)
- Pin 15 (PAUSE)
- Pin 17 (AUX1)
- Pin 18 (AUX2)
- Pin 19 (AUX3)

The following example is of a connection that uses a fader to start and stop playback of this device.



For information about the assignment of AUX 1–3 (pins 17–19) functions, see the "PARALLEL page" on page 76.

NOTE

When controlling this unit with an external device that is connected to the PARALLEL connector, by simultaneously inputting PLAY and RECORD signals while this unit is stopped, you can start recording immediately. In addition, by simultaneously inputting PLAY and RECORD signals during playback in timeline mode, you can start overwriting the recording.

RS-232C connector

The RS-232C connector on the rear panel can be connected to an RS-232C connector on a computer to allow control of this unit from that computer.

Make settings related to communication on the RS-232C page of the REMOTE SETUP screen. (See "RS-232C page" on page 77.)

NOTE

- RS-232C connector functions will be supported in a future firmware version update.
- Please contact TASCAM customer support for information about this unit's RS-232C command protocol.

RS-422 connector

You can control this unit remotely by connecting the RS-422 connector on its rear panel to a controller or editor compatible with SONY P2 protocol (RS-422).

Make settings related to operation on the REMOTE SETUP screen RS-422 page. (See "RS-422 page" on page 77.)

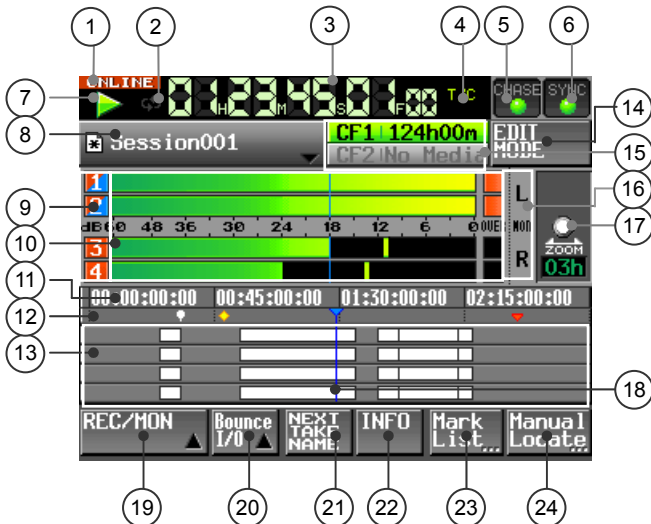
NOTE

Please contact TASCAM customer support for information about this unit's protocol compatibility.

Home Screen

Press the **HOME** key to open the Home Screen.

In timeline mode



① ONLINE status indicator

When the online sending mode is ON, the red icon appears.

When the online sending mode is OFF, the icon does not appear.

② Repeat status indication

When repeat playback is ON, the green icon appears.

When repeat playback is OFF, the icon does not appear.

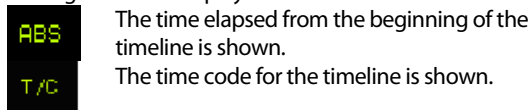
③ Time counter (button)

The time displayed is the elapsed time, the remaining time or the time code time.

Touch this area to change the time display mode.

④ Time mode indicator (button)

This shows the current time display mode. Touch this area to change the time display mode.



The time elapsed from the beginning of the timeline is shown.

The time code for the timeline is shown.

⑤ Time code status button/indicator

When accurate time code is input and recognized correctly, the **TC** indicator appears green.

When time code is not recognized correctly, the **TC** indicator does not appear.

Synchronized playback status is shown when playback is synchronized to timecode.

The **CHASE** indicator appears green only when playback or recording is synchronized with external timecode or the built-in timecode generator (selectable).

The **CHASE** indicator blinks when not operating with timecode synchronization (for example, when stopped). This includes when synchronization is lost during synchronized playback.

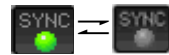


Touch this area to open the **SYNC T/C** screen. (See "Sync and time code settings (SYNC T/C)" on page 73.)

⑥ Audio synchronization status button/indicator



When synchronized to a Master clock, the **SYNC** indicator appears green.



The **SYNC** indicator blinks when not synchronized to a Master clock.

Touch this area to open the **SYNC T/C** screen. (See "Sync and time code settings (SYNC T/C)" on page 73.)

⑦ Transport status indicator

This icon shows the current transport status.



Playing back or jogging playback (forward)

Jogging playback (reverse)

Playback standby

Stopped

Searching backward

Searching forward

Searching backward (high-speed search)

Searching forward (high-speed search)



The number shown when searching backward (shuttle operation) changes with the current speed: x2, x4, x8, x16, x32.



The number shown when searching forward (shuttle operation) changes with the current speed: x2, x4, x8, x16, x32.



Recording



Recording standby

Touch this area to open the **PLAY SETUP** screen.

⑧ Session name (button)

This shows the currently active session name.

A "*" appears when the session has not been saved after editing (including the addition and removal of session editing marks).

Touch this area to open a pull-down menu.



START TIME EDIT button

This opens the **START TIME** screen where you can set the timeline mode starting time. This can only be selected when stopped.

SAVE button

Save the contents of the session.

This can only be selected when the transport is stopped.

EXPORT AES31 button

This outputs (exports) the session as an AES31 file. This can only be selected when stopped. (See "Exporting AES31 editing information" on page 46.)

2 – Names and functions of parts

9 Track numbers and record function and input monitoring indicators

The indicators at the left end of the level meters show the status of record arming and input monitoring. The background colors of the indicators mean the following.

	REC OFF	REC ON
MON OFF	4	3
MON ON	4	1

10 Level meters

The input signal level for a track is shown if input monitoring for it is set to ON or if it is armed for recording and not playing back.

Each track also has an overload indicator at its right end that appears red when the input overloads.

During playback, the playback level of a track is shown if input monitoring is set to OFF.

When the input source is set to a digital input, but there is no input signal or if the input signal differs from the internal setting, the channel meter display area appears gray and one of the following messages appears. (The “x” indicates the channel.)

Display	Meaning
D-INx NO SIGNAL	No input signal
D-INx UNLOCK	Input signal is not synchronized with the system
D-INx NOT AUDIO	Cbit information of the input signal is not audio
D-INx Cbit ERROR	Other input signal Cbit information differs from the actual operation mode

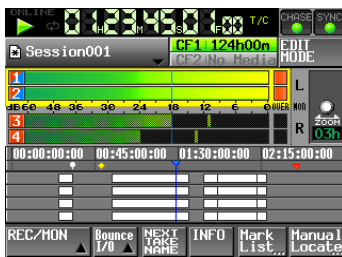


D-IN1 UNLOCK shown

The following settings can be made for the display of the level meters on the **METER SETUP** screen from the **MENU** screen.

- Metering point
- Peak hold time
- Release time
- Overload indicator peak level
- Reference level line display on/off

You can also touch these areas to output just one pair of channels (1-2 or 3-4) for monitoring (solo function).



The level meters and track numbers for the soloed channels appear highlighted in yellow. The level meters for the

channels that are not soloed appear shaded.

Touch the same channel pair again to stop soloing them.

11 Time display area

When the time display mode has been set to show a timeline with four equal divisions, four times are shown.

This area has 4 equal divisions, showing 4 time points on the timeline. The values match the time display mode.

12 Mark display area

Timeline marks appear here.

This area scrolls horizontally to correspond with the time counter.

- BC\$CM mark
- BC\$END mark
- BC\$FILE mark
- BC\$PAUSE mark
- BC\$STANDBY mark
- BC\$START mark
- BC\$STOP mark
- IN mark
- OUT mark
- Other types of marks

13 Track display area

The regions of tracks 1–4 (from top to bottom) are shown here.

Region fade-ins, fade-outs and cross-fades are shown in blue.

Normal areas: white

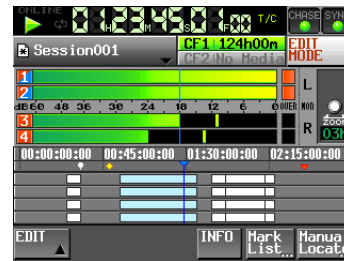
Being recorded: red

Fade-in, fade-out, cross-fade regions: blue

This area scrolls horizontally to correspond with the time counter.

14 EDIT button

Touch this to turn ON/OFF the edit mode, which allows you to divide, erase and cut parts of regions. (See “Editing regions” on page 47.)



15 Recording media display (button)

This shows which of the CF card slots is being used and its remaining recording time.

The background of the media that is currently being used appears green during playback and red when recording.

If there is no media in the CF card slot, **No Media** appears on a light gray background.

If the CF card has no projects or sessions, **No Project** appears. When an unformatted CF card is inserted, **UNFORMAT** appears.

When a CF card is inserted in the CF card slot that is not being used during recording, **UNMOUNT** appears. When recording is stopped, the usual screen is shown.

If the total number of entries, including files and subfolders, inside a session folder exceeds about 5000, recording becomes impossible and **Rec Limit** is shown. For details, see “Recording operation limitations” on page 30.

2 – Names and functions of parts

Press this area to open the **CF SELECT** screen. (See “CF card selection” on page 26.)

16 Monitoring mixer overload indicators

When the monitoring mixer L or R channel has overloaded, the background of that channel appears red.

17 Zoom rate

This shows the track area zoom ratio and extent of the area displayed.

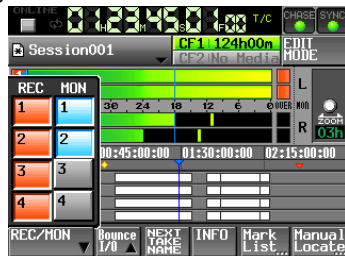
Turn the **DATA** dial to the right to zoom in (reduce the displayed area) and turn it to the left zoom out (increase the displayed area).

18 Timeline cursor

This cursor shows the position of recording or playback. It is always shown in the middle of the screen.

19 REC/MON button

Press this button to open a pull-up with **REC** and **MON** buttons that allow you to enable recording and input monitoring for the tracks.



Record arm buttons (REC buttons)

These buttons arm tracks for recording.

The signals of tracks that are armed are recorded during recording. When a channel is armed for recording, the signal from the assigned input connector is input when the unit is stopped, recording or in recording standby.

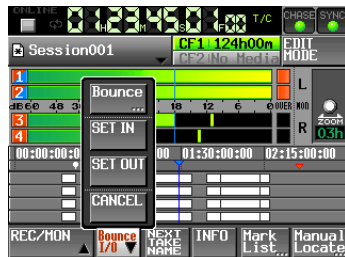
Input monitoring button (MON buttons)

These buttons enable/disable input monitoring.

When enabled for a channel, sound input through the assigned input connector is always input.

20 BOUNCE I/O button

Touch this button to open a pull-up with buttons related to bouncing.



Bounce button

Touch this button to bounce. In the following circumstances, this button appears gray and cannot be used.

- When both starting (IN) and ending (OUT) points have not been set
- During playback or recording

SET IN button

Touch to set the current position as the bounce starting (IN) point.

SET OUT button

Touch to set the current position as the bounce ending

(OUT) point.

CLEAR button

Touch to discard the currently set bounce starting (IN) and ending (OUT) points.

(See “Bouncing” on page 48)

21 NEXT TAKE NAME button

Touch this button to open the **NEXT TAKE NAME** page where you can set the name that will be given to takes or files recorded in the future.

● First half of take names

The first half of the take name can be set to either the **User Word** or the **Session Name** (default).

CAUTION

The first half of the take name can only be changed when the unit is stopped.

● “User Word” mode (button)

Use the user word for the first half of the take name.

Press the **EDIT** button to open the screen where you can change the user word. (This works the same as the screen for editing project names.)



● “Session Name” mode (button)

Use the session name as the first half of the take name.



● Second half of take names

The second half of the take name is comprised of one alphabetical letter and a three-digit number.

Press the **EDIT** button to open the screen where you can change the letter.

You can change the three-digit number with the **+** and **-** buttons. You can also touch the numerical part to highlight it in yellow and use the **DATA** dial to change the number.

In the following cases, “—” appears and the value cannot be changed.

- No project or session is loaded
- The selected CF card is unavailable
- When the numerical part of the file name of the current take is 999

NOTE

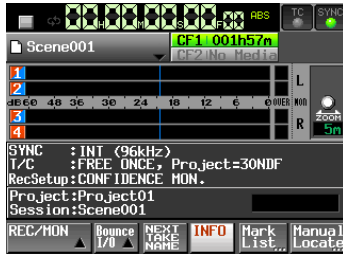
- The **Next Take Name** setting is saved with each project. If you change projects, the setting of the loaded project is used.
- The numerical part of the second half of the take name can be changed even during playback and recording. (The first half of the take name and the letter in the second half can only be changed when stopped.)

2 – Names and functions of parts

- If the first half of the take name or the letter in the second half is different, a take that has the same three-digit number in the second half can be created.

22 INFO button

Touch this button to open an information display that shows the current settings of the unit and information about the loaded file.



The upper section shows the current settings of this unit. Touch this area to open the **SYNC T/C** screen. The lower section shows information about the currently loaded session. Touch this area to open the project screen. The name of the previous mark most recently passed or at the current time is shown on the right. When the name of a mark other than an automatic mark is shown, touch this area to open the **MARK NAME** editing screen.

23 Mark List button

Touch this button to open the mark list. (See "Mark list screen" on page 84.)

24 Manual Locate button

Touch this button to open the **MANUAL LOCATE** screen. (See "Manual locate function" on page 87.)

In take mode or single playlist mode



In take mode

When in single playlist mode, the **REC/MON** and **NEXT TAKE NAME** buttons are not shown.

25 Take/entry number

The number of the currently selected take or entry is shown. Take numbers are assigned in the order that they are recorded within a session.

26 Time bar

This shows the current playback position. What is shown depends on the time display mode.

Mode	Meaning	Bar display
	The current playback position relative to the length of the take or entry is shown.	Elongates from left end to right end
REMAIN		Shortens from left end to right end
TOTAL	The current playback position relative to the length of all the takes in the session or the entire playlist is shown.	Elongates from left end to right end
TOTAL REMAIN		Shortens from left end to right end
T/C		Elongates from left end to right end

During recording and recording standby, however, the time bar and division lines are not shown.

27 Take/entry name (button)

This shows the name and mode icon of the currently active take or entry.

When in recording standby, this shows the file name that will be given to the next recorded take.

The two types of file mode icons are as follows.

Monophonic mode

Polyphonic mode

When in playlist mode, a "*" appears in the icon if the playlist has not been saved after editing (including the addition and removal of entries).

Touch this area to open a pull-down menu.

In take mode



TAKE List button

This opens the take selection screen (**TAKE** screen). At this time, even if you press the session name display area, the **SESSION** selection screen will not open. (See "Project screen" on page 32.)

CIRCLE @ TAKE button

Touch this to add or remove "@" at the beginning of the current take name. (See "Using @ with take names" on page 55.)

In single playlist mode



2 – Name and functions of parts

ASSIGN FILE button

This shows the **ASSIGN** screen where you can assign files. (See “Assign File screen” on page 60.)

ENTRY LIST button

This shows the entry list (**ENTRY**) screen. (See “Entry list screen” on page 60.)

ADJUST ENTRY button

This opens the **ADJUST ENTRY ***** screen where you can edit an entry. (See “Editing entry titles” on page 63, “Edit the playback starting time” on page 64, “Editing the playback starting point” on page 65 and “Editing the playback end point” on page 66.)

SAVE button

This saves the current playlist. This can only be selected when stopped. (See “Saving a playlist” on page 67.)

SAVE AS button

This adds a name to the current playlist and saves it. This can only be selected when stopped. (See “Saving a playlist” on page 67.)

EXPORT PPL button

This creates a JPPA PPL file from the current playlist. This can only be selected when stopped. (See “Creating a JPPA PPL file from the loaded playlist” on page 68.)

28 Level meters

These are the same as on the Home Screen in timeline mode.

As on the Home Screen in timeline mode, you can touch this area to use the solo function.

29 Time display area

The Time display area is divided into 4 equal regions. The times displayed in each region depend on the time display mode as shown in the following table.

	Left		Right	
	00:00:00:00	Empty	Empty	Total take or entry length
REMAIN	Total take or entry length	Empty	Empty	00:00:00:00
TOTAL	00:00:00:00	Empty	Empty	Total session or playlist length
TOTAL REMAIN	Total session or playlist length	Empty	Empty	00:00:00:00
T/C	Starting time of session or playlist	Empty	Empty	Ending time of session or playlist

During recording and recording standby, however, the time bar and division lines are not shown.

30 Flash Page number and knob

This shows the Flash Page number. Touch this area to enable selection (yellow background), and turn the DATA dial to change the page number (turn right to increase and turn left to decrease).

31 Current time cursor

This cursor shows the playback position and scrolls horizontally in correspondence with the time counter. It is not shown during recording (take mode only).

32 Mark name

This is the name of the mark at the current time or the nearest preceding mark. When the name of a mark other than any automatic mark is

shown, touch this area to open the MARK NAME editing screen.

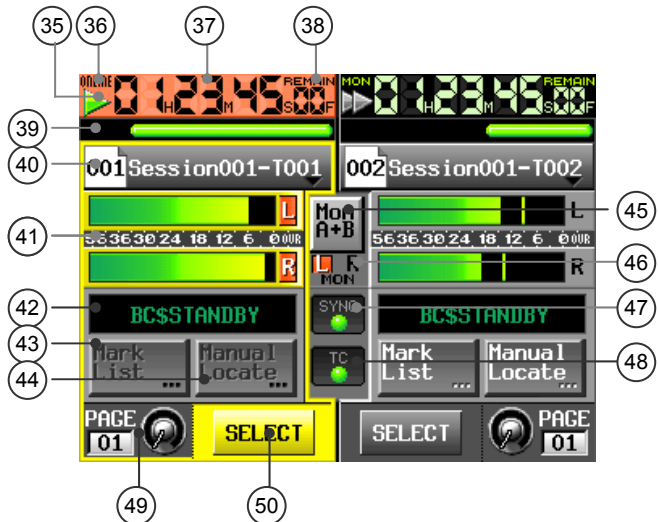
33 REC/MON button

This is the same as on the Home Screen in timeline mode.

34 NEXT TAKE NAME button

This is the same as on the Home Screen in timeline mode.

In dual playlist mode



The left side is Player A, which can be used to play playlist A, and the right side is Player B, which can be used to play playlist B. Operation of both Players A and B is the same. Items 45–48 in the center are shared by both players.

35 Transport status indicator

This icon shows the current transport status.

Touch this area to open the **PLAY SETUP** screen.

The icons have the same meanings as on the Home Screen in timeline mode.

36 ONLINE status indication

ONLINE When the online playback mode is **ON**, the **ONLINE** icon appears.

MON When online playback mode is **OFF**, the **MON** icon appears with green letters.

37 Time counter display (button)

The time displayed is the elapsed time or the remaining time.

When online playback mode is **ON**, the background appears red.

Otherwise, this is the same as on the Home Screen in timeline mode.

38 Time mode indicator (button)

This shows the current time display mode. Touch this area to change the time display mode.

REMAIN The time elapsed from the beginning of the entry is shown.

TOTAL The time remaining until the end of the entry is shown.

T.REM The time elapsed from the beginning of the playlist is shown.

T/C The time remaining until the end of the playlist is shown.

T/C The time code time of the playing entry is shown.

2 – Names and functions of parts

39 Time bar

This shows the playback position of the currently playing entry or playlist.

Otherwise, this is the same as on the Home Screen in take mode.

40 File or title name (button)

The currently active playlist entry number is shown inside the icon.

Blank: CF card not available or loading

000: No entry

Three-digit number: The number of the currently selected entry

The name of the currently active entry is shown to the right of the icon. If the title has been set for the corresponding entry in the playlist, that title is shown.

A "*" appears in the icon if the playlist has not been saved after editing (including the addition and removal of entries).

Touch this area to open a pull-down menu.

ASSIGN FILE button

This shows the **ASSIGN** screen where you can assign files. (See "Assign File screen" on page 60.)

ENTRY LIST button

This shows the entry list (**ENTRY**) screen. (See on page 60. "Entry list screen")

ADJUST ENTRY button

This opens the **ADJUST ENTRY** *** screen where you can edit an entry. (See "Editing entry titles" on page 63, "Edit the playback starting time" on page 64, "Editing the playback starting point" on page 65 and "Editing the playback end point" on page 66.)

SAVE A+B button

This saves the current playlists. This can only be selected when stopped. (See "Saving a playlist" on page 67.)

SAVE AS(A) or SAVE AS(B) button

Use this to name and save the currently selected player's playlist. This can only be selected when stopped. (See on page 67. "Saving a playlist")

EXPORT PPL button

Create a JPPA PPL file from the current playlist. This can only be selected when stopped. (See "Creating a JPPA PPL file from the loaded playlist" on page 68.)

41 Level meters (button)

The playback level is shown.

Touch this area to enable monitoring of a playlist.

When selected for monitoring, the area around the meters appears yellow.

When an input overloads, the corresponding **L** or **R** appears red.

42 Mark name

This is the name of the mark at the current time or the nearest preceding mark. This is the same as on the Home Screen in take mode.

43 Mark List button

Touch this button to open the mark list for that player. This is the same as on the Home Screen in timeline mode.

44 Manual Locate button

Touch this button to open the **MANUAL LOCATE** screen for that player. Otherwise, this is the same as on the Home Screen in timeline mode.

45 MON A+B button

When ON, the button is highlighted in blue and meters for both players are highlighted. When first turned OFF, monitoring is disabled for both players.

46 Monitoring mixer overload indicator

If the left or right channel of the monitoring mixer overloads, the background of the corresponding **L** or **R** will appear red.

47 Audio synchronization status (button/indicator)

This is the same as on the Home Screen in timeline mode.

48 Time code status (button/indicator)

This is the same as on the Home Screen in timeline mode.

49 Flash Page number and knob

This is the same as on the Home Screen in take mode.

However, touching this in the unselected player will, in addition to enabling flash page selection, also assign the transport keys, **ONLINE** key and **JOG/SHUTTLE** dial on the front panel to the corresponding player.

50 SELECT button

Touch this button on a player to assign the transport keys, **ONLINE** key and **JOG/SHUTTLE** dial on the front panel to the corresponding player.

3 – Preparation

Inserting and removing CF cards

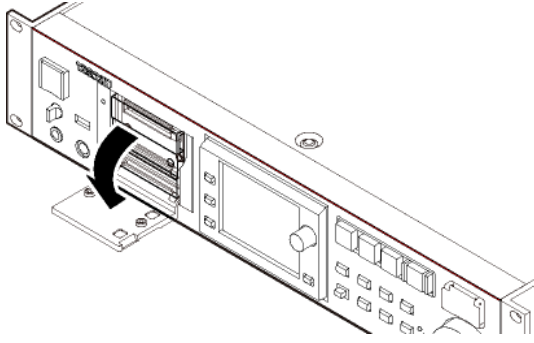
Inserting CF cards

Insert a CF card into CF card **SLOT 1** or **SLOT 2** on the front panel of the unit in order to use it for recording and playback.

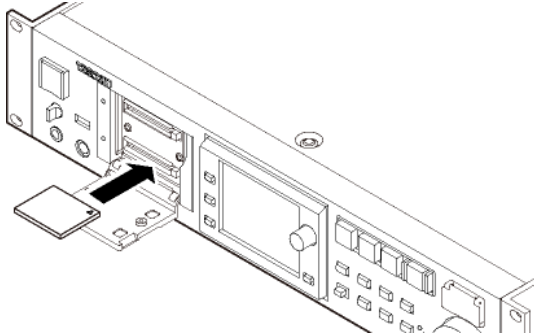
NOTE

CF cards can be inserted whether the power is ON or OFF.

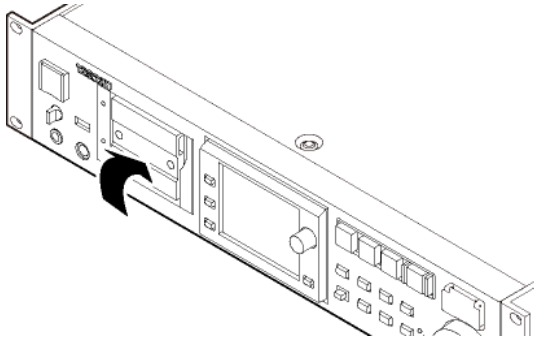
1. Pull the CF card slot cover forward to open it.



2. Insert the CF card with the correct orientation. With the labeled side up, insert the end with the connector completely.



3. Close the cover.



NOTE

If you cannot close the slot cover, remove the CF card once, press the square button to the right of the slot and then reinsert the card.

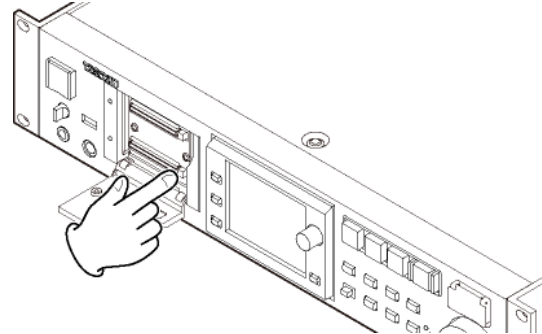
Removing CF cards

Turn the unit power OFF or stop operations before removing a CF card.

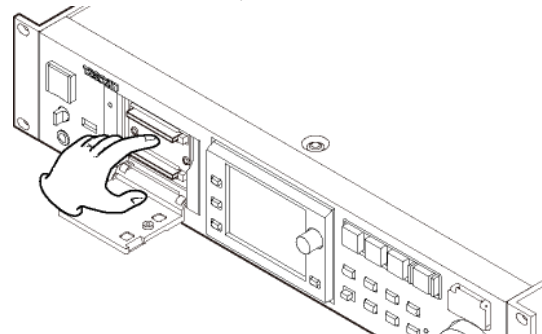
CAUTION

Never remove a CF card during recording, playback or any other operation that accesses the CF card. Doing so could, for example, cause recording errors, loss of recorded data, and sudden loud noises to be output through monitoring equipment, which could result in damaged equipment and hearing loss.

1. Pull the CF card slot cover forward to open it.
2. Press the square button to the right of the CF card slot to bring the button out.



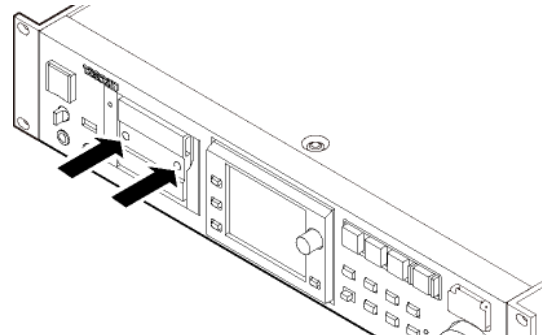
3. Press the square button in again to partially eject the CF card.
4. Pull the CF card out by hand.



Security screws

The included security screws can be used to lock the CF card slot covers.

Use a Phillips head screwdriver to install or remove the screws.



3 – Preparation

About the display

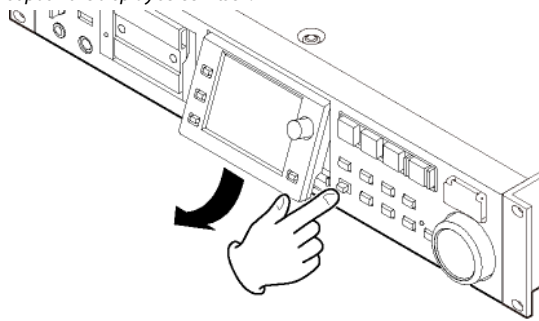
Adjusting the display angle

Push the **LCD TILT** button to unlock the display, and then pull the bottom of the display forward to adjust the angle. Pull the bottom of the display until you hear a clicking sound.

To restore it to its flat position, push the **LCD TILT** button again to unlock the display, and push the bottom of the display. Push the bottom of the display until you hear a clicking sound.

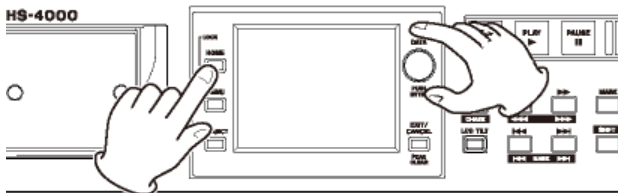
CAUTION

Do not push the display screen itself.



Adjusting display and indicator brightness

Turn the **DATA** dial while pressing and holding the **HOME** key to adjust the brightness of the color display, the **PAUSE**, **REC**, **PLAY** and **ONLINE** keys, and the **JOG (SHUTTLE)**, **SLOT 1** and **SLOT 2** indicators. Push and turn the **DATA** dial while pressing and holding the **HOME** key to adjust only the brightness of the color display.



Cautions related to display use

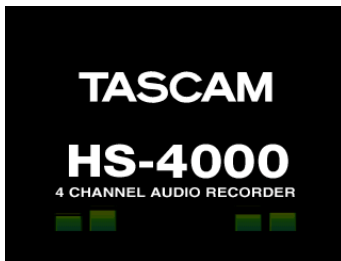
- The display can easily be scratched, so do not use pointed objects, including fingernail tips, to touch it. Always touch it with your fingers.
- Do not press the display forcefully with a finger or poke it with a pen, toothpick or other pointed object. Doing so could scratch the display or cause malfunction.
- The display touch screen is constructed of a film and glass. Do not apply strong force to its surface. Doing so could break the glass.
- When using the display, do not put a hand on the panel or push around the display forcefully. Doing so could prevent accurate position detection.
- Do not place anything on top of the display or otherwise put weight on the same place for a long time. Doing so could cause the panel to warp or result in inaccurate position detection.
- Do not apply a commercially-available screen protection film to the display. Doing so could prevent normal operation.
- Gently wipe the display with a soft dry cloth that does not shed dust (e.g. a cleaning cloth). Avoid wiping with a stiff cloth or rubbing with force. Doing so could damage the surface of the LCD. Do not use benzene, thinner, manicure remover, alcohol or similar substances.

NOTE

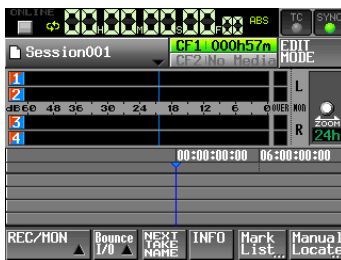
The display is produced with extremely high-precision manufacturing technologies, and 99.99% or more of the pixels are effective, but sometimes pixels might not appear or might appear as red or black dots. This is not a malfunction.

Turning the power ON and OFF

Open the front panel POWER switch cover and press the **POWER** switch.



Startup screen



Home Screen

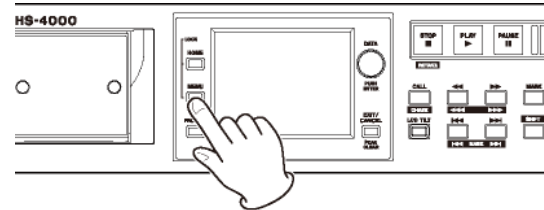
To turn the power OFF, push the **POWER** switch on the front panel again.

CAUTION

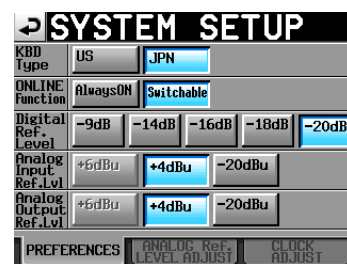
Never turn the power OFF during recording, playback, or any other operation that accesses the CF card. Doing so could, for example, cause recording errors, loss of recorded data, and sudden loud noises to be output through monitoring equipment, which could result in damaged equipment and hearing loss.

Setting the time of the built-in clock

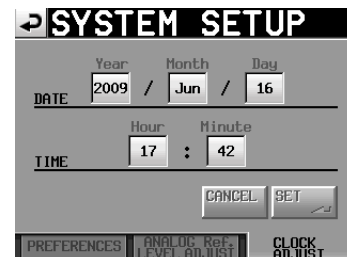
1. Press the **MENU** key on the front panel to open the **MENU** screen.



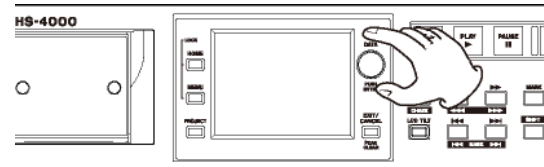
2. Touch the **SYSTEM SETUP** button to open the **SYSTEM SETUP** screen.



3. Touch the **CLOCK ADJUST** tab to open the page where you can set the built-in clock.



4. Touch the item that you want to change, and use the **DATA** dial on the front panel to change the value.



5. Touch the **SET** button or push the **DATA** dial to confirm the setting.

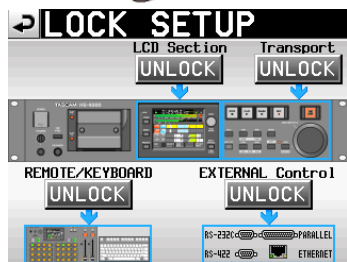
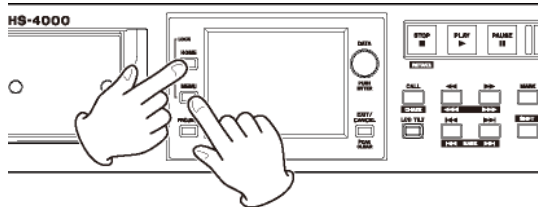
NOTE

After purchasing this unit, set the clock before making your first recording. If you do not set the clock, the time stamps on recording files will not be correct.

3 – Preparation

Lock function

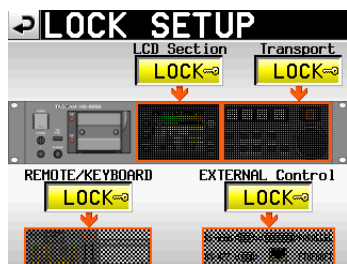
Press the **MENU** key while pressing and holding the **HOME** key on the front panel to open the **LOCK SETUP** screen where you can disable or enable operation from the front panel and external devices.



The front panel is divided into two sections, which can be locked and unlocked separately.

Types of external devices are also divided into two categories, which can be locked and unlocked separately.

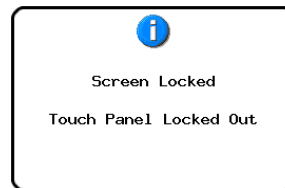
If you press the button for a section, it changes from **UNLOCK** to **LOCK** (with a yellow background) and the locked area appears dimmed.



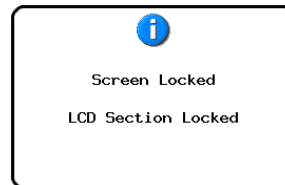
Everything locked

■ When the **LCD Section** is set to **LOCK**:

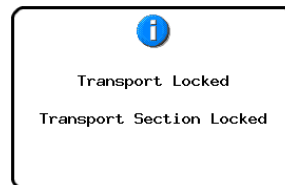
- If the display is touched, the following pop-up message appears when the display (panel) is locked.



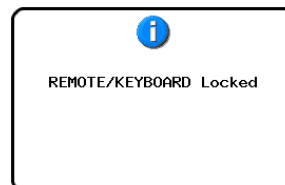
- If one of the keys around the display is pressed, the following pop-up message appears when the display (keys) is locked.



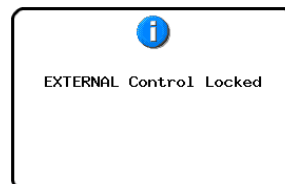
■ When **Transport** is set to **LOCK**, if one of the transport keys is pressed, the following pop-up message appears when the transport is locked.



■ When **REMOTE/KEYBOARD** is set to **LOCK**, if a remote control or keyboard connected to a remote connector is used, the following pop-up message appears when remote/keyboard control is locked.



■ When **EXTERNAL CONTROL** is set to **LOCK**, if an operation is conducted using **RS-232C**, **RS-422**, **PARALLEL** or **ETHERNET**, the following pop-up message appears when external input is locked.



Recording times

The table below shows the total amount of recording time (in hours and minutes) possible on CF cards of various capacities for each available recording format.

File recording format and number of tracks recorded	CF card capacity		
	8 GB	16 GB	32 GB
16-bit, 44.1 kHz, 4 tracks	6:18	12:36	25:12
16-bit, 48 kHz, 4 tracks	5:48	11:34	23:08
24-bit, 44.1 kHz, 4 tracks	4:12	8:24	16:48
24-bit, 48 kHz, 4 tracks	3:52	7:42	15:26
24-bit, 88.2 kHz, 4 tracks	2:06	4:10	8:24
24-bit, 96 kHz, 4 tracks	1:56	3:50	7:42

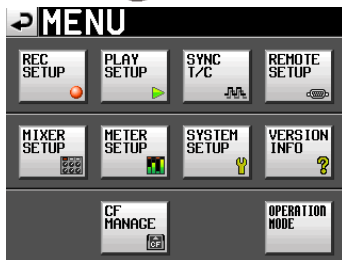
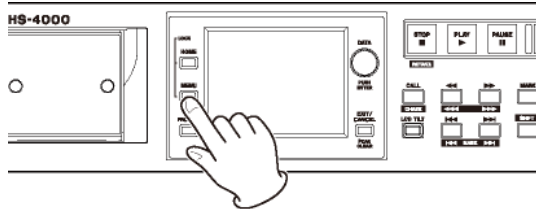
- The recording times shown above are estimates. They might differ depending on the CF card in use.
- The recording times shown above are not continuous recording times, but rather they are the total possible recording times for the CF card.

Formatting a CF card

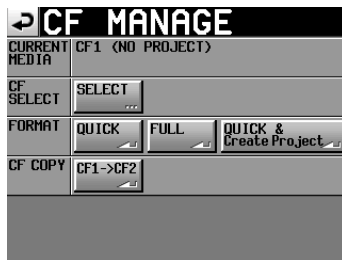
CAUTION

- Formatting a CF card erases all the data on it.
- Always format CF cards with this unit before using them in it. If a CF card that has been formatted by another device or PC is used, operation might be affected.

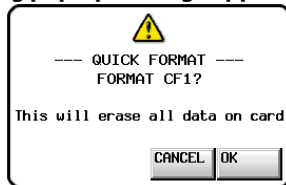
7. Press the MENU key on the front panel to open the MENU screen.



8. Touch the CF MANAGE button to open the CF MANAGE screen.



9. Touch the QUICK button next to the FORMAT item. The following pop-up message appears.

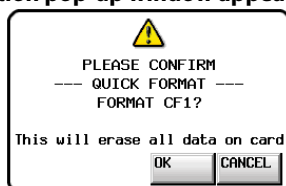


NOTE

If no CF card is inserted in that slot, the following pop-up message appears.

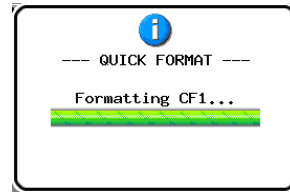


10. Click the OK button in the pop-up window. A reconfirmation pop-up window appears.



11. Touch the OK button on the pop-up message. During

formatting, the following pop-up message appears.



When formatting completes, the following pop-up message appears.



12. Touch the OK button on the pop-up message. The CREATE PROJECT screen automatically opens.



To make a new project, follow the procedures starting with step 2 in the following "Creating a new project" section.

Creating a project automatically after quick formatting

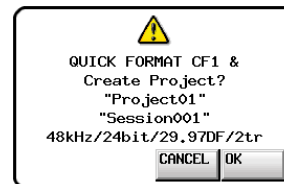
If you press the QUICK & Create Project button instead of the QUICK button next to the FORMAT item, a new project will be created after the CF card is quick-formatted.

When doing this, however, you cannot change the project settings. The new project will be created with the same settings as the current project.

1. Press the MENU key on the front panel to open the MENU screen. Then, touch the CF MANAGE button on the MENU screen to open the CF MANAGE screen.

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2. Touch the Quick & Create Project button next to the FORMAT item. The following pop-up window message appears.



This window shows the project name, session name, sampling frequency, bit rate, frame type and number of tracks in the project to be created.

4 – Basic operation

3. Touch the **OK** button in the pop-up window.
Another pop-up window appears to reconfirm.



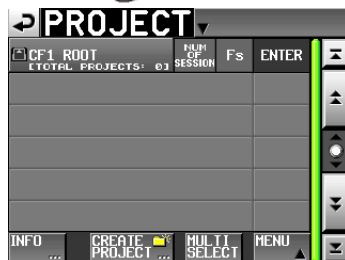
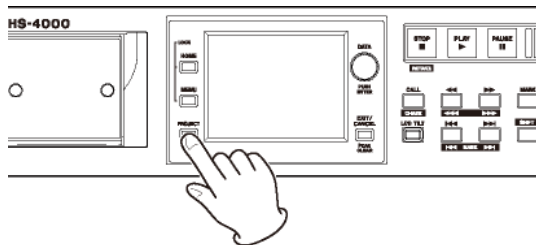
4. Touch the **OK** button in the pop-up window to start quick formatting.
After quick formatting completes, a new project is created automatically.
After the project is created, the Home Screen reopens.

NOTE

Touch the **CANCEL** button in the pop-up window to cancel formatting and return to the **CF MANAGE** screen.

Creating a new project

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.



2. Touch the **CREATE PROJECT** button to open the **CREATE PROJECT** screen.



The **CREATE PROJECT** screen has 3 pages. On the first page, you can set the project name, the name of the first created session, the sampling frequency, and the sampling frequency written to BWF chunks. For details about each item, see “Creating new projects” on page 34.

Touch the **NEXT** button to open the next page.

On this page, you can set the frame type and bit length.

Touch the **NEXT** button again to open the third page where

you can set the starting time and number of tracks in timeline mode, for example.

For details about each item, see “Creating new projects” on page 34.

NOTE

Instead of touching the **NEXT** button, you can touch the **CREATE PROJECT** button on **CREATE PROJECT** screen page one (1/3 at the bottom of the page) to create a project with the current settings without adjusting them on the following screens. Touching the **CREATE PROJECT** button on **CREATE PROJECT** page two (2/3 at the bottom of the page) has the same effect. In either case, continue the procedures from step 4.

3. After you complete making settings touch the **CREATE PROJECT** button.

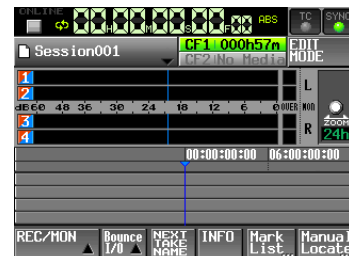
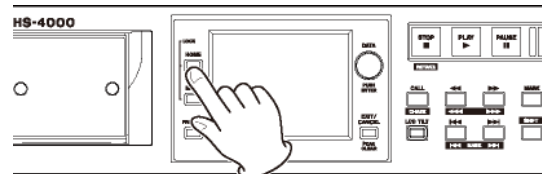
NOTE

If a project with the same project name already exists, the **CREATE PROJECT** button appears gray and you will not be able to create a new project. If this happens, change the project name.

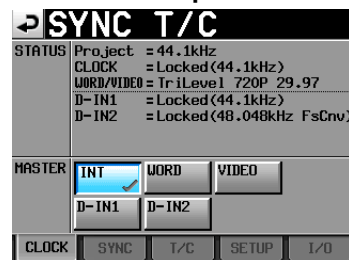
4. Check the settings on the confirmation pop-up message that appears. Press the **OK** button to confirm them and return to the Home Screen.

Setting the master clock

1. Press the **HOME** key on the front panel to open the Home Screen.



2. Touch the **SYNC** button to open the **SYNC T/C** screen.

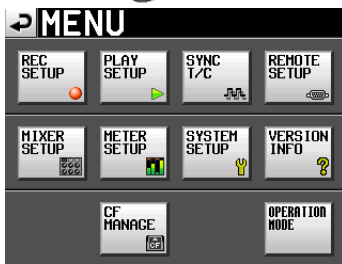
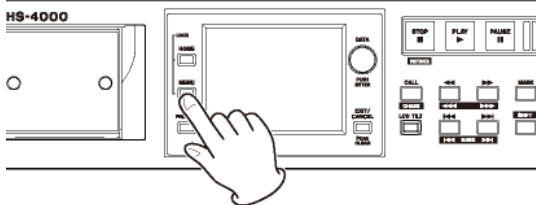


3. Select the master clock that you want to use from the **MASTER** item. (See “Sync and time code settings (SYNC T/C)” on page 73.)

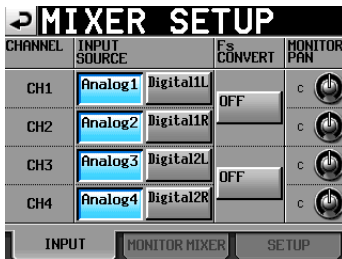
Setting inputs and outputs

Setting the inputs

1. Press the MENU key on the front panel to open the MENU screen.



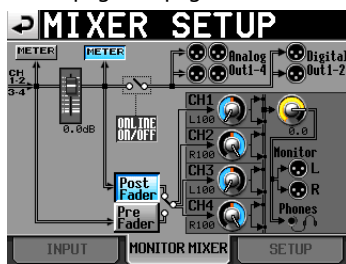
2. Touch the MIXER SETUP button to open the MIXER SETUP screen.



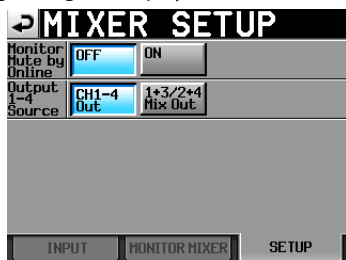
On the **INPUT** page, make settings for each channel's input source. For details, see "INPUT page" on page 78.

3. If necessary, touch the MONITOR MIXER or SETUP tab to open the corresponding page where various settings can be made.

On the **MONITOR MIXER** page, make settings related to the internal monitoring mixer. For details about this screen, see "MONITOR MIXER page" on page 78.

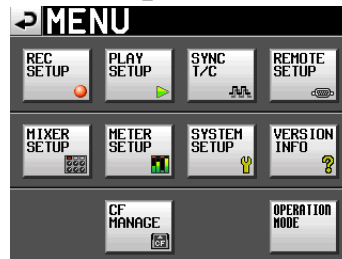
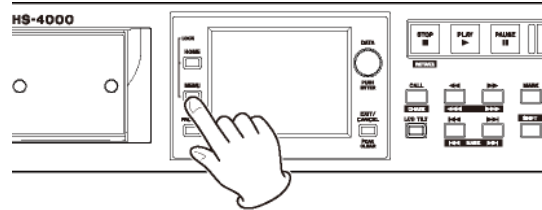


On the **SETUP** page, you can turn the muting function for monitoring during online playback on/off.

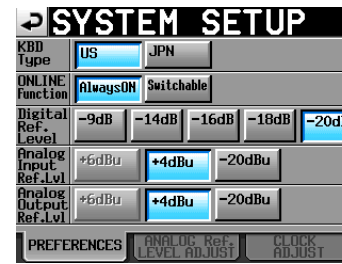


Setting reference levels

1. Press the MENU key on the front panel to open the MENU screen.

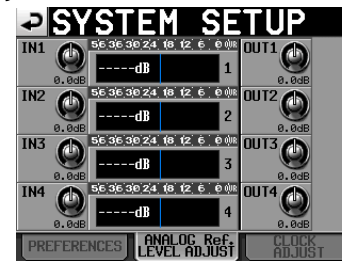


2. Press the SYSTEM SETUP button to open the SYSTEM SETUP screen.



On the **PREFERENCES** page, set the digital reference level, analog input reference level and analog output reference level. (You can also set the keyboard type and online function on this page.)
For details, see "PREFERENCES page" on page 80.

3. If necessary, touch the ANALOG Ref. LEVEL ADJUST tab to adjust each channel.



On the **ANALOG Ref. LEVEL ADJUST** page, you can make precise adjustments to the reference levels of the analog inputs and outputs for each channel independently. For details about this screen, see "ANALOG Ref. LEVEL ADJUST page" on page 80.

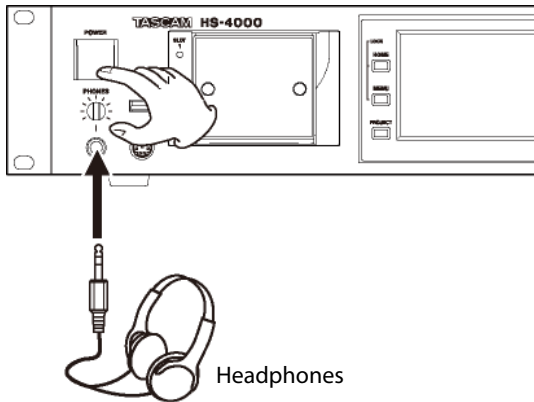
NOTE

On the **CLOCK ADJUST** page, you can change the system time.

4 – Basic operation

Connecting headphones

Connect headphones to the **PHONES** jack on the front panel. Keep the headphones knob turned all the way to the left (volume minimized) when connecting headphones.

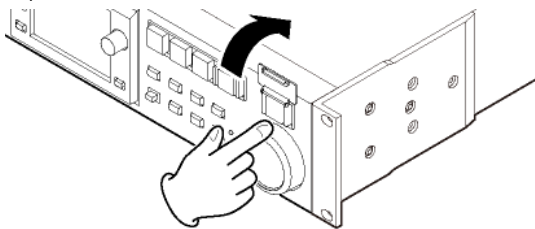


CAUTION

Before connecting headphones, turn the **PHONES** knob to the minimum volume. Failure to do so could cause sudden loud noises to occur, which might damage your hearing or equipment.

Online function

Turn the **ONLINE** switch on the front panel ON to enable sound to be output through the unit's output connectors. (The **ONLINE** switch has a cover, so open this cover to press the **ONLINE** switch.)



The **ONLINE** switch lights when ON. You can also connect a TASCAM RC-HS32PD remote controller (sold separately), for example, and use its master fader to adjust the level suitably. When the master fader is lowered completely, sound is not output from the output connectors. Press the **ONLINE** switch again to turn it OFF. That switch becomes unlit, and sound ceases to be output from the output connectors. For details about the online function, see "Online functions" on page 89.

Recording operation limitations

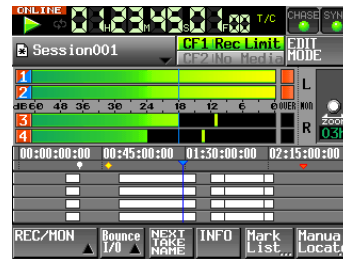
A limitation of this unit is that recording in a folder becomes impossible when the total number of files, subfolders and other items in it becomes large. For this reason, the following things might occur.

- **When the total number of items in one folder exceeds about 20000**

Recording of a new take might not be possible even when starting recording from a stopped state. When a project or session is loaded, recording to that session might not be possible. In these cases, the following pop-up message appears.



In this case, the remaining recording time indicator for the currently selected CF card on the Home Screen shows **Rec Limit**.



CAUTION

The total number of items inside one folder includes files and folders not created by this unit. Management files, system files and other files and folders that are not ordinarily visible are also included in the total.

Project organization

This unit manages audio files in projects. A CF card contains project folders, and each project folder contains session folders that hold audio files, which are called takes.

Project

Contains all the materials for one program or work

Session

A collection of materials within a project

Take

Materials recorded in a session

However, in timeline mode, instead of takes, recordings are managed in units called regions.

CAUTION

The sampling frequency in a project is fixed.

File formats

This unit can record and play files with the following types of formats.

File format

BWF

Sampling frequencies

44.1, 48, 47.952, 48.048, 88.2, 96 kHz
(47.952, 48.048: 48 kHz \pm 0.1% pull-down/pull-up)

Bit-length

16/24-bit

Number of tracks

4 tracks

File modes

Monophonic, polyphonic (monophonic mode is planned for a future firmware version upgrade)

Monophonic and polyphonic modes

In monophonic mode, each track is recorded as an independent monaural BWF file.

In polyphonic mode, multiple tracks are recorded together as a single BWF file.

When transferring a file to an audio application that is compatible with polyphonic files, multiple tracks can be imported at once.

NOTE

In current version, monophonic mode cannot be selected. It will be set automatically to polyphonic mode. Monophonic mode is planned for a future firmware version upgrade.

Folders where files are saved in mono mode

In monophonic mode, files can be saved in one of two places (folders).

- **SubFolder mode**

Subfolders are created for each take inside session folders, and recorded audio files are saved in them.

- **Session Root mode**

Recorded audio files are saved directly inside the session folder.

CAUTION

- *When Session Root mode is selected, the number of files created in the session folder is large. For this reason, the maximum number of takes that can be recorded in one session is greatly reduced. (See "Recording operation limitations" on page 30.)*
- *During recording, you can press the **REC** key to start recording a new take. This function can be used 4 seconds after beginning recording in Polyphonic and SubFolder modes, but in Session Root mode, you might have to wait more than 4 seconds.*

NOTE

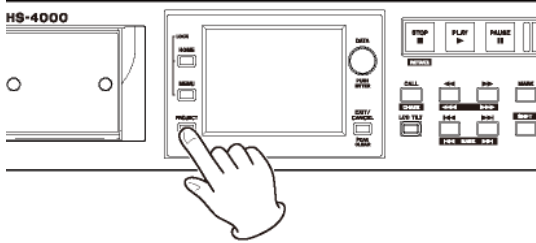
- *The default setting is **SubFolder**.*
- *Monophonic mode is planned for a future firmware version upgrade.*

5 – Projects

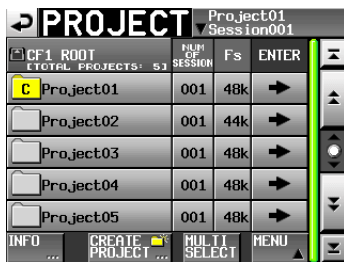
PROJECT screen

Press the **PROJECT** key on the front panel to open the project screen.

The last used project screen page (project selection, session selection, AES31 file selection, take selection or playlist selection) opens. The following explanations assume that the PROJECT selection screen is open.



Project selection screen



- Directory display**

The current directory level and number of projects is shown. (In the example above, the root directory of CF card 1 contains 12 projects.)

- NUM OF SESSION**

This shows the number of sessions in each project.

- Fs**

This shows the sampling frequency of the project. The sampling frequency values are abbreviated as follows.

Sampling frequency	Fs abbreviation
44.1 kHz	44k
47.952 kHz (48 kHz -0.1% pull-down)	48k -
48.048 kHz (48 kHz +0.1% pull-up)	48k +
88.2 kHz	88k

- ENTER buttons**

Touch the ➔ button for the current project, which is shown as a yellow folder with a “C” on it, to view the contents of that project.

If you touch the ➔ button for any project other than the current project a pop-up window will appear confirming that you want to load that project. Touch the **OK** button to show the contents of that project after it completes loading.

- Project name buttons**

Touch to select that project. The folder icon for the currently loaded project is yellow and has a “C” on it.

- INFO button**

Touch this button to open a pop-up window that shows information about the project that is currently selected.

If no project is selected, press this button to show information about the entire CF card.

- CREATE PROJECT button**

Touch to open the **CREATE PROJECT** screen.

- MULTI SELECT button**

Touch to enable the selection of multiple projects.

- MENU button**

Touch to open a pull-up menu where you can select **LOAD**, **REBUILD**, **EDIT NAME** and **DELETE**.

- Scroll buttons**

Use these buttons to scroll to the beginning or end of the project list or scroll one page (five lines) forward or backward. You can also scroll through the project list one line at a time using the **DATA** dial.

- Project name/session name at the top right of the screen**

Touch to open the following screen according to mode.

- Timeline mode:**

AES31 file selection screen for the current session

- Take mode:**

Take selection screen for the current session

- Playlist mode:**

Playlist selection screen for the current session

Session selection screen



- Project name display**

This shows the current project name.

Touch this area to open the project selection screen.

- NUM OF TAKE (timeline and take modes)**

This shows the number of takes in the session.

- TOTAL TIME (timeline and take modes)**

This shows the total time of the takes in the session.

- NUM OF PLAYLISTS (playlist mode)**

This shows the number of playlists in the session.

- ENTER buttons**

Depending on the mode, touch the ➔ button for the current session, which is shown as a yellow folder with a “C” on it, to open that session’s AES31 file selection screen (timeline mode), take selection screen (take mode) or playlist selection screen (playlist mode).

If you touch the ➔ button for any session other than the current session a pop-up window will appear confirming that you want to load that session. Touch the **OK** button to show the contents of that session.

- Session name buttons**

Touch to select that session. The folder icon for the currently loaded session is yellow and has a “C” on it.

- INFO button**

Touch this button to open a pop-up window that shows information about the session that is currently selected.

If no session is selected, press this button to show information about the current project.

- **MAKE SESSION button**

Touch to open the screen where you can create a new session.

- **MULTI SELECT button**

Touch to enable the selection of multiple sessions.

- **MENU button**

Touch to open a pull-up menu where you can select **LOAD**, **REBUILD**, **COPY** and **DELETE**.

- **Scroll buttons**

Use these buttons to scroll to the beginning or end of the session list or scroll one page (five lines) forward or backward. You can also scroll through the session list one line at a time using the **DATA** dial.

- **Project name/session name at the top right of the screen**

Touch to open the following screen according to mode.

Timeline mode:

AES31 file selection screen for the current session.

Take mode:

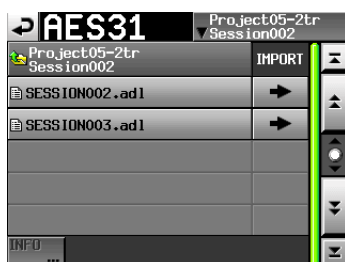
Take selection screen for the current session

Playlist mode:

Playlist selection screen for the current session

AES31 file selection screen

The AES31 file selection screen is only shown when the operation mode is timeline mode.



- **Session name display**

This shows the current session name.

Touch this area to open the session selection screen.

- **IMPORT buttons**

Touch the ➔ button for the corresponding AES31 file to import its editing information.

- **AES31 file name buttons**

Touch to select the corresponding AES31 file.

- **INFO buttons**

Touch this button when an AES31 file is selected to open a pop-up window with information about the selected file.

When no AES31 file is selected, this button is disabled.

Take selection screen

The take selection screen is only shown when the operation mode is take mode.



- **Session name display**

This shows the current session name.

Touch this area to open the session selection screen. Note, however, the session selection screen cannot be opened from a take selection screen that was opened by touching the **TAKE LIST** button in the pull-down menu that appears when you touch a take name button on the Home Screen.

- **LENGTH buttons**

This shows the take length (time).

- **LOAD buttons**

Press a take's ➔ button to load that take.

- **Take name buttons**

Touch to select a take.

The icon for the currently loaded take is yellow and has a "C" (indicating current) on it.

- **INFO button**

Touch this button to open a pop-up window that shows information about the take that is currently selected.

If no take is selected, press this button to show information about the current session.

- **CIRCLE @ TAKE button**

Touch this button when a take is selected to add an "@" to the beginning of that take's name. If that take already has "@" at its beginning, touch this to remove it.

- **MULTI SELECT button**

Touch to enable the selection of multiple takes.

- **MENU button**

Touch to open a pull-up menu where you can select **LOAD**, **REBUILD** and **EDIT TC**.

- **Scroll buttons**

Use these buttons to scroll to the beginning or end of the take list or scroll one page (five lines) forward or backward. You can also scroll through the take list one line at a time using the **DATA** dial.

Playlist selection screen

The playlist selection screen is only shown when the operation mode is playlist mode.



- **Session name display**

This shows the current session name

Touch this area to show the session selection screen.

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• LOAD buttons

Press the loaded playlist's ➔ button to open the playlist selection screen, where you can view and work with playlist entries.

If you press the ➔ button for a playlist that is not loaded, a pop-up appears to confirm that you want to load that playlist.

• Playlist name buttons

Touch to select a playlist.

In single mode, "C" (current) appears inside the icon of the currently loaded playlist. In dual mode, "A" appears inside the icon of the playlist loaded for player A and "B" appears inside the icon of the playlist loaded for player B.

• INFO button

Touch this button to open a pop-up window that shows information about the playlist that is currently selected.

If no playlist is selected, press this button to show information about the current session.

• NEW/IMPORT button

Touch this to open a pull-up menu where you can select **NEW** and **IMPORT**.

• MULTI SELECT button

Touch to enable the selection of multiple playlists.

• MENU button

Touch to open a pull-up menu where you can select **LOAD** (**LOAD to A** and **LOAD to B** in dual mode), **EDIT NAME** and **DELETE**.

• Scroll buttons

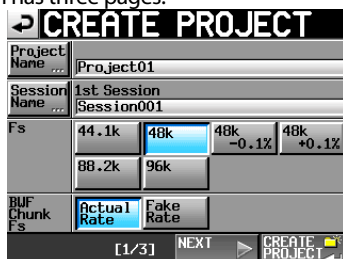
Use these buttons to scroll to the beginning or end of the playlist or scroll one page (five lines) forward or backward. You can also scroll through the playlist one line at a time using the **DATA** dial.

Project operations

Creating new projects

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **CREATE PROJECT** button on the **PROJECT** screen to open the **CREATE PROJECT** screen.

This screen has three pages.



CREATE PROJECT screen 1

You can make the following settings on this screen.

■ Project Name

Touch the Project Name button to open the screen where you can edit the project name.

The maximum number of characters for project and session names is 31. Extra characters are discarded.

■ Session Name

Touch the **Session Name** button to open the **1st. SESSION** screen where you can change the name of the first session.

On the **1st. SESSION** screen, the maximum number of

characters allowed is indicated by a yellow background.

■ Fs

Set that sampling frequency of the project.

48k-0.1% sampling frequency is pull-down compatible, and 48k+0.1% is pull-up compatible.

■ BWF Chunk Fs

Set the sampling frequency written to the BWF chunk of each recorded audio file. To use the actual sampling frequency of the recordings, select Actual Rate.

For pull-up/pull-down, select Fake Rate to write 48k instead of 48k±0.1%.

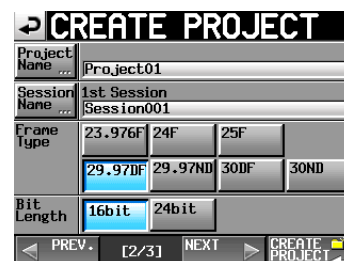
■ NEXT button

Touch to open the next page.

■ CREATE PROJECT button

Touch this to create a project with the current settings. If a project with the same name already exists, this button appears gray and you will not be able to create a new project.

3. After you complete making settings, press the **NEXT** button.



CREATE PROJECT screen 2

You can make the following settings on this screen.

■ Frame Type

Set the time code frame type.

■ Bit Length

Set the bit length used during recording.

■ PREV button

Open the previous screen.

4. After you complete making settings, press the **NEXT** button.



CREATE PROJECT screen 3

You can make the following settings on this screen.

■ TIMELINE START TIME

Set the starting time used in timeline mode. Press the **EDIT** button to open a screen where you can change the starting time.

■ TIMELINE Rec Tracks

Set the number of recording tracks used in timeline mode.

■ OTHERS

Touch the Current Setting button to use the current settings of other parameters when creating the project or touch Factory Preset to use the default settings.

- After you complete making settings touch the **CREATE PROJECT** button.

NOTE

- If a project with the same project name already exists, the **CREATE PROJECT** button appears gray and you will not be able to create a new project. If this happens, change the project name.
- On screens 2 and 3, press the **PREV** button to return to the previous screen.

- When the confirmation message appears in a pop-up, press the **OK** button.



When project creation completes, the Home Screen reopens.

NOTE

- Immediately after creation, the new project becomes the current (loaded) project.
- The letter "C" appears in the **C** icon, which is also highlighted yellow, to the left of the name of the current project name on the **PROJECT** screen.

Editing the project name

- Touch the **Project Name** button on the **CREATE PROJECT** screen to open the **PROJECT NAME** screen.



■ **Date button**

Touch this button to change the project name to the date currently set for the unit in a "yyyy-mm-dd" format.

NOTE

- If the same project name or session name already exists, an underscore () followed by a number that has not been used is added.
- After pressing the **Date** button to change the name to the date, you can further edit the name on this screen.

■ **Project name display area**

The input project name is shown. The maximum number of characters allowed is indicated by a yellow background.

■ **Character buttons**

Use these to input the project name.

■ **BS button**

Use this to erase the character to the left of the cursor.

■ **DEL button**

Use this to erase the character to the right of the cursor.

■ **Shift button**

Touch this to switch between numerals and symbols and uppercase and lowercase Roman letters.

■ **Caps button**

Use to input uppercase letters.

■ **Space button**

Use to input a space.

■ **<- /-> buttons**

Use these to move the cursor.

■ **Enter button**

Touch this to confirm the input name.

NOTE

When the **PROJECT NAME** screen is open, you can also use an external keyboard to input names.

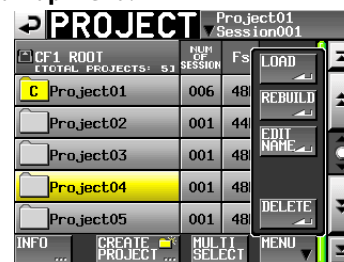
- Touch the **Enter** button on the **PROJECT NAME** screen or press the **DATA** dial to confirm the project name.

Character input limitation

The maximum number of characters allowed is indicated by the yellow background in the project name display area. Excess characters have a gray background and are discarded when the **Enter** button is pressed.

Changing a project name later

- Select the project that you want to change on the **PROJECT** screen. The background of the selected project name appears yellow.
- Touch the **MENU** button on the **PROJECT** screen to open a pull-up menu.



- Touch the **EDIT NAME** button in the pull-up menu to open the **PROJECT NAME** screen.

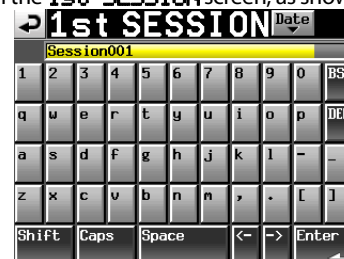
NOTE

When multiple projects are selected, the **EDIT NAME** button in the pull-up menu is not available.

- Input the project name using the procedures described above.
- Touch the **Enter** button on the **PROJECT NAME** screen or press the **DATA** dial to confirm the project name and return to the **PROJECT** screen.

Editing the name of the first session

Touch the **Session Name** button on the **CREATE PROJECT** screen to open the **1st SESSION** screen, as shown below.



Follow the same procedures as in "Editing the project name" on page 35 to change the name.

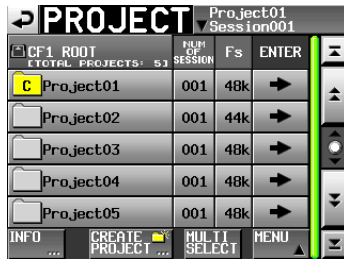
NOTE

Session names cannot be changed later.

Loading projects

- Press the **PROJECT** key on the front panel to open the **PROJECT** screen.

5 – Projects



2. Select the project that you want to load.
3. Touch the MENU button on the PROJECT screen to open a pull-up menu.
4. Touch the LOAD button in the pull-up menu.

NOTE

When multiple projects are selected, the LOAD item is not available.

5. Touch the OK button or press the DATA dial when the confirmation pop-up message appears. After loading completes the Home Screen opens.



Rebuilding projects

Rebuilding a project makes it possible to play files that were not recorded by this unit, including files that have been copied between sessions on the unit and audio files that have been copied to a CF card session from a computer. These files will be indexed by this unit.

1. Press the PROJECT key on the front panel to open the PROJECT screen.
2. Select the project that you want to rebuild. You can touch the MULTI SELECT button on the PROJECT screen to allow the selection of multiple projects.
3. Touch the MENU button on the PROJECT screen to open a pull-up menu.



One project selected



Multiple projects selected

4. Touch the REBUILD button in the pull-up menu.

5. Touch the OK button or press the DATA dial when a confirmation pop-up message appears. During rebuilding, a progress status pop-up appears. When rebuilding completes, the pop-up disappears.

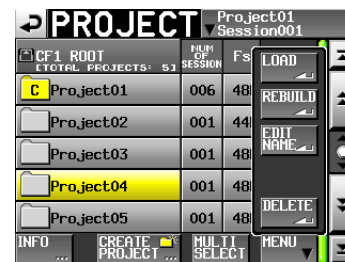


NOTE

If you rebuild when no project has been selected in the PROJECT screen, the selected CF card is rebuilt entirely.

Erasing a project

1. Press the PROJECT key on the front panel to open the PROJECT screen.
2. Select the project that you want to erase. Touch the MULTI SELECT button on the PROJECT screen to allow the selection of multiple projects.
3. Touch the MENU button on the PROJECT screen to open a pull-up menu.



One project selected



Multiple projects selected

4. Touch the DELETE button in the pull-up menu.
5. Touch the OK button or press the DATA dial when a confirmation pop-up message appears. During erasure, a progress status pop-up appears. When erasure completes, the pop-up disappears.



CAUTION

When you erase a project, all session folders, session data, takes and playlists in the project are also erased.

Session operations

Creating new sessions

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➔** button of the project to which you want to add a session to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.



3. Touch the **MAKE SESSION** button to open the **MAKE SESSION** screen.



You can make the following settings on this screen.

Session Name

Touch the **Session Name** button to open a screen where you can change the name of the session.

The maximum number of characters for session names is 31. Extra characters are discarded. The maximum number of characters allowed is indicated by a yellow background.

TIMELINE START TIME

Press the **EDIT** button to open a screen where you can change the starting time in timeline mode.

TIMELINE Rec Tracks

Set the number of recording tracks used in timeline mode.

Options: **2tr**, **3tr**, **4tr**

CAUTION

- Session names cannot be changed later.
 - You cannot use the "@" symbol at the beginning of a session name.
4. Touch the **MAKE SESSION** button.
 5. Touch the **OK** button or press the **DATA** dial when the confirmation pop-up message appears.



During the creation of a session, a progress status pop-up appears.

When session creation completes, the pop-up disappears.

NOTE

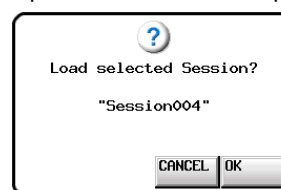
- Immediately after creation, the new session becomes the current (loaded) session.
- The letter "C" appears in the **C** icon to the left of the name of the current session on the session selection screen.

Loading sessions

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➔** button for the project that contains the session that you want to load to open the session list.
3. Select the session that you want to load.
4. Touch the **MENU** button on the **SESSION** screen to open a pull-up menu.



5. Touch the **LOAD** button in the pull-up menu.
6. Touch the **OK** button or press the **DATA** dial when a confirmation pop-up message appears. After loading completes the Home Screen opens.



NOTE

The letter "C" appears in the **C** icon to the left of the name of the current session.

5 – Projects

Rebuilding sessions

Rebuilding a session makes it possible to play back files that were not recorded by this unit, including files that have been copied between session folders on the unit and audio files that have been copied to a CF card session folder from a computer. These files will be indexed by this unit.

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➔** button for the project that contains the session that you want to rebuild to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
3. Select the session that you want to rebuild.
Touch the **MULTI SELECT** button to enable the selection of multiple sessions.
4. Touch the **MENU** button on the session selection screen to open a pull-up menu.

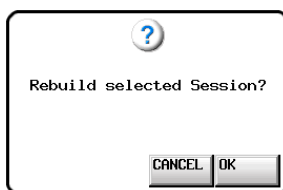


One session selected



Multiple sessions selected

5. Touch the **REBUILD** button in the pull-up menu.
6. Touch the **OK** button or press the **DATA** dial when a confirmation pop-up message appears.



During rebuilding, a progress status pop-up appears. When rebuilding completes, the pop-up disappears.

NOTE

You can also rebuild a session from that session's take selection screen.

Copying sessions

You can copy session folders between CF 1 and CF 2 (two CF cards are necessary). When you copy a session, the same directory structure is created at the copy destination.

NOTE

- To play copied session on this unit, you must rebuild the destination project or session.
- If you copy a session with a different sampling frequency into a project, the session cannot be rebuilt.

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➔** button for the project that contains the session that you want to copy to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
3. Select the session that you want to copy.
Touch the **MULTI SELECT** button to enable the selection of multiple sessions.
4. Touch the **MENU** button on the session selection screen to open a pull-up menu.

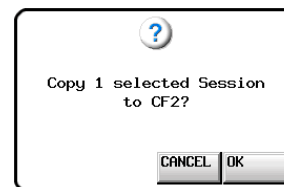


One session selected



Multiple sessions selected

5. Touch the **COPY** button in the pull-up menu.
6. Touch the **OK** button or press the **DATA** dial when a confirmation pop-up message appears.



During copying, a progress status pop-up appears. When copying completes, the pop-up disappears.

NOTE

If a session with the same name already exists on the destination CF card, a message confirming that you want to overwrite the existing one appears. Touch the **OK** button or press the **DATA** dial to overwrite the existing file and copy the selected session to the destination.



Erasing sessions

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➔** button for the project that contains the session that you want to erase to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
3. Select the session that you want to erase.
Touch the **MULTI SELECT** button to enable the selection of multiple sessions.
4. Touch the **MENU** button on the session selection screen to open a pull-up menu.



One session selected



Multiple sessions selected

5. Touch the **DELETE** button in the pull-up menu.
6. Touch the **OK** button or press the **DATA** dial when a confirmation pop-up message appears.



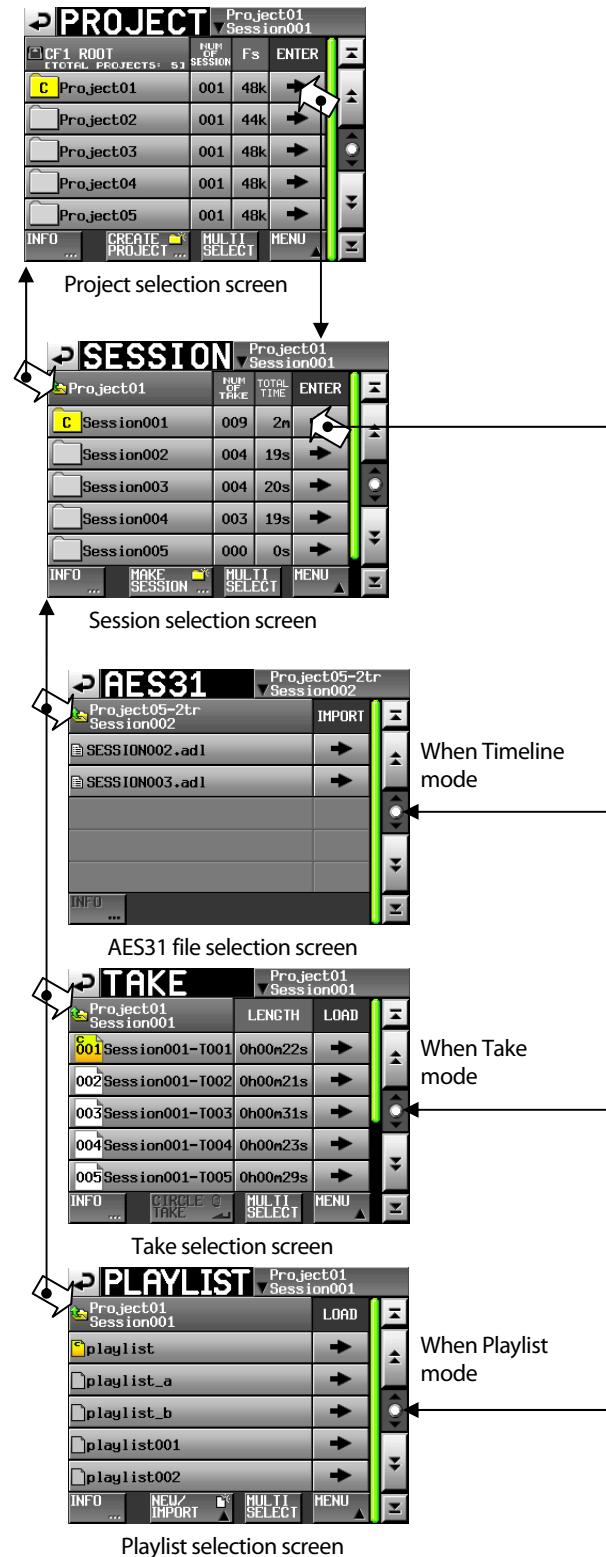
During erasure, a progress status pop-up appears. When erasure completes, the pop-up disappears.

CAUTION

When you erase a session, all session data, takes and playlists in that folder are also erased.

Switching project screens

When you press the **ENTER** button or a folder name (project name or session name) button on a project screen (project selection screen, session selection screen, AES31 file selection screen, take selection screen, playlist selection screen), a different screen will open as shown below.



6 – Overview of operation modes

This unit has the following three operation modes.

- Timeline mode provides a working environment (session) based on linear time similar to a tape recorder. In timeline mode, up to 4 tracks can be recorded and played back. Marks, including BWF–J CUE points, can also be edited.
- Take mode uses takes (files) as recording and playback units. Up to 4 tracks can be played back. Marks, including BWF–J CUE points, can also be edited.
- Playlist mode provides a playlist playback function. Furthermore, playlist mode has both a single mode, which allows one playlist to be played back, and a dual mode, which allows two playlists to be played back independently. In single mode, up to four tracks can be played during playlist playback. In dual mode, two two-track playlists can be played back and controlled independently.

Timeline mode functions

The following functions can be used in timeline mode.

- Up to four channels of simultaneous recording and playback is possible at all compatible sampling frequencies (Fs).
- Confidence monitoring during recording allows the recorded sound to be read back from the CF card and output simultaneously. (This function can only be used during 2-track recording with sampling frequencies of 44.1 or 48 kHz.)
- Recording on both of the CF cards in slots 1 and 2 at the same time is possible. (This function is planned for a future firmware version upgrade.) (Confidence monitoring cannot be used with this function.)
- Recording and playback with time code synchronization is possible.
- A single file can be created from a designated time interval in a session using the bounce function.
- Different types of marks, including BWF–J CUE points, can be set, managed, edited and used for playback.
- Reading and editing of BWF–J chunks is possible. (Support for BEXT and CM chunks is planned for a future firmware version upgrade.)
- Compatibility with AES31 format allows importing, exporting and the exchange of data with other devices

In timeline mode, playback units are called “regions,” and their extent is shown in the track area of the Home Screen.

Take mode functions

The following functions can be used in take mode.

- Up to four channels of simultaneous recording and playback is possible at all compatible sampling frequencies (Fs).
- Confidence monitoring during recording allows the recorded sound to be read back from the CF card and output simultaneously. (This function can only be used during 2-track recording with sampling frequencies of 44.1 or 48 kHz.)
- Auto cue, auto ready and incremental play functions are available.
- Using a TASCAM RC–HS32PD or other remote controller, flash start playback is possible (three pages of 32 keys each).
- Different types of marks, including BWF–J CUE points, can be set, managed, edited and used for playback.
- Reading and editing of BWF–J chunks is possible. (Support for BEXT and CM chunks is planned for a future firmware version upgrade.)

Playlist mode functions

The following functions can be used in playlist mode.

- Playlists can be edited and managed.
- Auto cue, auto ready and incremental play functions are available.
- Compatibility with JPPA flash start standards enable importing and exporting, and the exchange of playlists with other devices.

In addition, single mode and dual mode each of the following options.

Single mode

- Unit functions as a single playback system.
- Playback of polyphonic files with up to four channels is possible at all compatible sampling frequencies (Fs).
- Using a TASCAM RC–HS32PD or other remote controller, flash start playback is possible (three pages of 32 keys each).
- Playback with time code synchronization is possible.

Dual mode

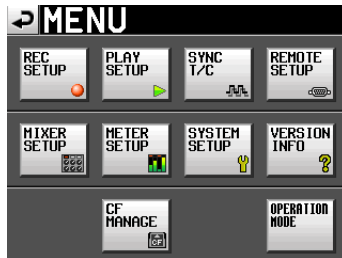
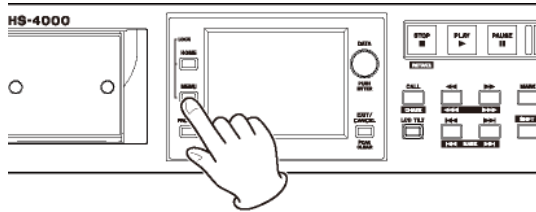
- Unit functions as two independent playback systems (using separate playlists for each).
- Simultaneous playback of two polyphonic files with up to two channels each is possible at all compatible sampling frequencies (Fs).
- Using a TASCAM RC–HS32PD or other remote controller, flash start playback is possible (each player can have 6 pages of 16 keys each or 8 pages of 12 keys each and independent page switching).

CAUTION

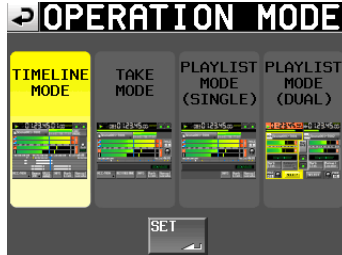
- *In dual mode, the playlists must be loaded from the same session. (Loading playlists from different sessions into player A and player B is not possible.)*
- *The same playlist cannot be loaded into both player A and player B at the same time.*

Selecting the operation mode

1. Press the MENU key on the front panel to open the MENU screen.



2. Press the OPERATION MODE button to open the OPERATION MODE screen.



3. Press the button for the mode that you want to use to select it.

The button for the selected mode appears yellow.

TIMELINE MODE

TAKE MODE

PLAYLIST MODE (SINGLE)

PLAYLIST MODE (DUAL)

4. Press the SET button to enable the selected mode and return to the Home Screen.

7 – Timeline mode

In this chapter, we explain how to use the timeline mode. To use this unit in timeline mode, set the unit's operation mode to TIMELINE MODE. (See "Selecting the operation mode" on the previous page.)

Please refer to "4 – Basic operation" when reading this chapter.

Preparing to record

Basic preparations

Refer to "4 – Basic operation" and make the basic preparations for recording.

Creating a new project

Create new projects as necessary. You do not need to create a new project if you plan to record into an existing one.

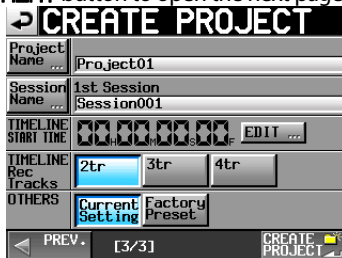
1. Press the PROJECT key on the front panel to open the PROJECT screen.
2. Press the CREATE PROJECT button on the PROJECT screen to open the CREATE PROJECT screen.



On this screen, set the project name, the name for the first session, the sampling frequency and the sampling frequency written to the BWF chunk in recorded audio files. Touch the NEXT button to open the next page.



Set the frame type then bit length. Touch the NEXT button to open the next page.



Finally, set the starting time and number of tracks to be recorded in timeline mode, and then set whether other settings should be retained from the currently open project or whether the factory defaults should be used instead. For further details about these settings, see "Creating new projects" on page 34.

3. After you complete making settings touch the CREATE PROJECT button.

NOTE

- If a project with the same project name already exists, the CREATE PROJECT button appears gray and you will not be able to create a new project. If this happens, change the project name.
- You can also touch the CREATE PROJECT button on CREATE PROJECT screens 1/3 and 2/3 to create a project.

4. Touch the OK button when the confirmation pop-up message appears.

When creation of the project completes, the Home Screen reopens.

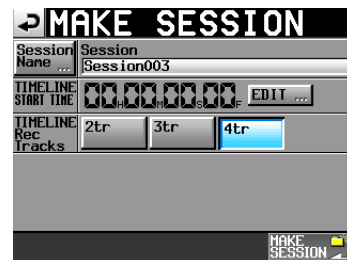
Creating new sessions

Create new sessions as necessary. You do not need to create a new session if you plan to record into an existing one.

1. Press the PROJECT key on the front panel to open the PROJECT screen.
2. Touch the → button of the project in which you want to create a new session to open its session selection screen.



3. Touch the MAKE SESSION button to open the MAKE SESSION screen.



4. Touch the Session Name button to open the SESSION NAME screen where you can change the session name.



To input the session name follow the same procedures in "Editing the project name" on page 35.

NOTE

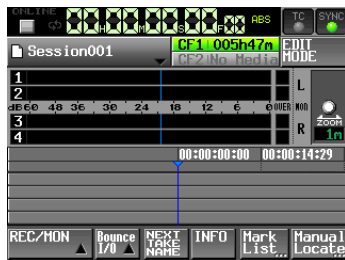
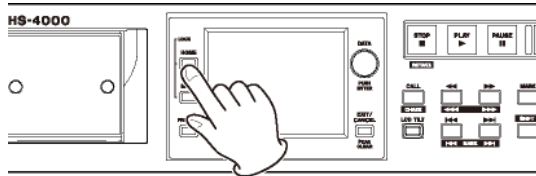
You cannot use the "@" symbol at the beginning of a session name.

5. Touch the Enter button or press the DATA dial to return to the MAKE SESSION screen.
6. If necessary, set the timeline starting time and number of recording tracks.
7. When you have finished making settings, press the MAKE SESSION button.
8. Touch the OK button or press the DATA dial when the confirmation pop-up message appears. After session creation completes, the Home Screen opens.

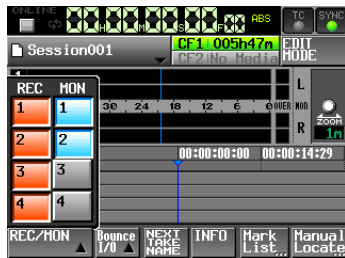
For details about session operations, see "Session operations" on page 37.

Arming tracks for recording

1. Press the HOME key on the front panel to open the Home Screen.



2. Touch the REC/MON button to open a pull-up with REC and MON buttons.



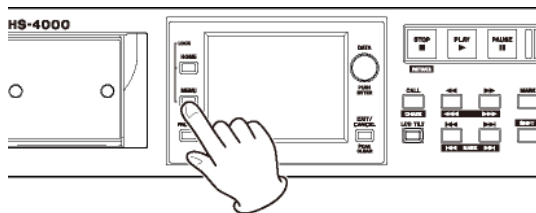
To arm tracks for recording, touch their record arm buttons. When a track is armed to record, its button appears red.

NOTE

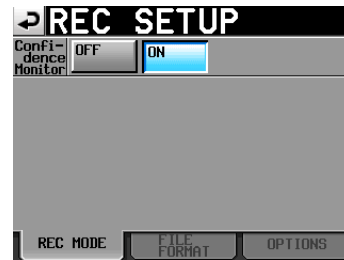
In the current version, all tracks are armed for recording together. They cannot be individually armed. Record arming by track is planned in a future version upgrade.

Recording mode settings

1. Press the MENU key on the front panel to open the MENU screen.



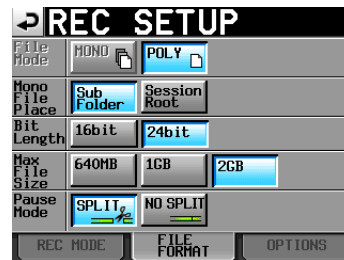
2. Press the REC SETUP button to open the REC SETUP screen.



On the REC MODE page, you can turn confidence monitoring on or off. For details, see “Confidence monitoring” on page 88.

Setting the file format

Touch the FILE FORMAT tab on the REC SETUP screen to open the following screen.



On the FILE FORMAT page, set bit-length, maximum file size, and how files are treated when recording is paused. The selected items appear light blue.

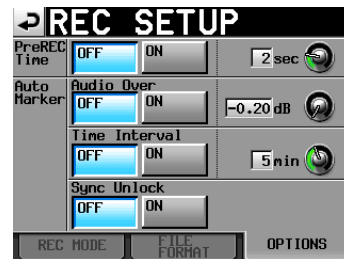
For details, see “FILE FORMAT page” on page 71.

NOTE

In timeline mode, you cannot select the file mode. The mono file recording folder setting cannot be changed.

Other recording settings

Touch the OPTIONS tab of the REC SETUP screen to open the following screen.



On the OPTIONS page, you can set the pre-recording time and the use of auto markers. For details, see “OPTIONS page” on page 72.

7 – Timeline mode


Making a recording

Locate to the recording start position

Use the ◀◀ [◀◀◀◀] and ▶▶ [▶▶▶▶] keys, jump to a mark or use the manual locate function to locate to the time where you want to start recording.

When time code synchronization is ON, recording will occur at the input time code, so locating as described above is not necessary.

Recording

When unit is stopped, press the **REC** key to put the unit into recording standby. At this time, the  icon indicates this transport status.

In recording standby, press the **PLAY** key to start recording at the located point (current point). When synchronized to time code, recording starts at the time input by time code at the moment that the **PLAY** key is pressed.

The transport status display at the top left of the Home Screen changes into the recording status display and part of the background of the Home Screen becomes red, indicating that the unit is recording. The time counter starts at the same time. When the elapsed time (ABS time) from the beginning of the timeline reaches 23:59:59:MM (MM is the maximum number of frames), "RECORD stopped. ABS time is over 24h" appears in a pop-up message and recording stops.

NOTE

When stopped, pressing the **PLAY** key while pressing and holding the **REC** key will also start recording.



Overwriting a recording

During playback, press the **REC** and **PLAY** keys simultaneously to start recording instantaneously from that point.

NOTE

- Recording can also be controlled using parallel control (except retaking).
- When in recording standby, the parallel control signals output are high for TALLY_RECORD and low for TALLY_PAUSE.
When in recording standby, the REC and PAUSE keys on the front panel will be lit.

Stopping recording

To stop recording, press the **STOP (RETAKE)** key.

Retaking a recording

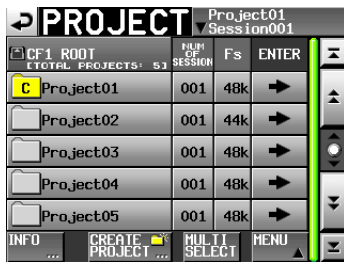
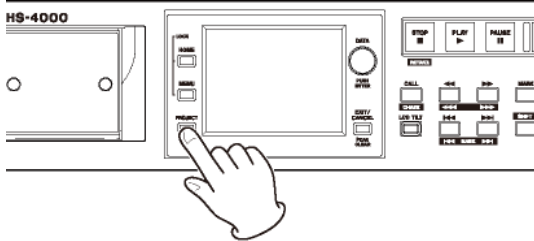
Press the **STOP (RETAKE)** key while pressing and holding the **SHIFT** key to erase the last recorded region. The recorded sound file itself will remain as a take.

Even if you press the **PAUSE** key during recording to create multiple consecutive regions (files) during recording, all regions from the start to the end of recording will be erased.

Playback in timeline mode

Project/session selection

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.



2. Touch the **→** button next to the project that you want to play to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
3. Touch a session name button to select that session.
4. Touch the **MENU** button to open a pull-up menu and touch the **LOAD** button.
The "Load selected Session?" pop-up appears.



5. Touch the **OK** button.
When loading completes, the Home Screen opens.

Setting input monitoring

Turn input monitoring OFF for the channels (tracks) that you are playing back. If input monitoring is ON for a channel, sound will be input through the corresponding input connector.

1. Touch the **REC/MON** button on the Home Screen to open a pull-up with **REC** and **MON** buttons.



2. If input monitoring is on for any playback channels (**MON** buttons appear blue), touch those **MON** buttons to turn them off (turning them gray).

Setting the online function

Refer to "Online functions" on page 89 and make settings for the online outputs.

Locate to the playback start position

Use the **◀◀** [**◀◀◀◀**] and **▶▶** [**▶▶▶▶**] keys, jump to a mark or use the manual locate function to locate to the time where you want to start playback

When time code synchronization is ON, playback will occur at the input time code, so locating as described above is not necessary.

Playback control in timeline mode

Press the **PLAY** key to start playback.

Press the **PAUSE** key to pause playback.

Press the **PLAY** key again to resume playback.

Press the **STOP (RETAKE)** key to stop playback.

Press the **◀◀** [**MARK◀◀**] key or **▶▶** [**MARK▶▶**] key to skip to the start of another region.

Press and hold the **◀◀** [**◀◀◀◀**] or **▶▶** [**▶▶▶▶**] key to search backward or forward.

Press the **◀◀** [**MARK◀◀**] or **▶▶** [**MARK▶▶**] key while pressing and holding the **SHIFT** key to move between marks.

Press and hold the **◀◀** [**◀◀◀◀**] or **▶▶** [**▶▶▶▶**] key while pressing and holding the **SHIFT** key to search at high-speed.

While pressing the STOP key, press the . [MARK .] key or / [MARK /] key to skip to the beginning of the first region recorded or the end of the last region. (This only works with the front panel keys.)

NOTE

Playback functions can also be used through parallel control.

Using the call function

Press the **CALL (CHASE)** key to locate to the point where playback was last started from playback standby (call point) and put the unit in playback standby mode.

BWF-J cue point

When the Follow BWF-J item is set to ON, if a BWF-J cue point is detected during playback, the following corresponding operation will occur. In addition, if the BWF-J Tally Out item is set to ON, in response to each BWF-J cue point, the CUE signal and tally signal will be output from the parallel remote connector. However, when playback is synchronized with time code, only the CUE signal and tally signal will be output.

BC\$STANDBY	When a session is loaded, the transport locates to the first BC\$STANDBY point that occurs and pauses. During playback, playback pauses when this point is reached. In either case, a BC\$STANDBY tally is output.
BC\$CM	During playback, when this point is reached, a BC\$CM CUE signal is output.
BC\$END	During playback, when this point is reached, a BC\$END CUE signal is output.
BC\$STOP	During playback, when this point is reached, a BC\$STOP CUE signal is output, and playback stops.
BC\$FILE	During playback, when this point is reached, a BC\$END CUE signal is output. If the beginning of a following entry (BC\$STANDBY CUE point) exists, that CUE will be followed.
BC\$PAUSE	During playback, when this point is reached, a BC\$PAUSE tally is output, and playback pauses.

7 – Timeline mode

Importing and exporting AES31 editing information

Importing AES31 editing information

You can import AES31 editing information located in the current session to the currently loaded session.

When viewed on a computer, the directory of the CF card should be as follows.

{CF drive name}\{project name}\{session name}\{AES31 editing information}

NOTE

You cannot import an AES31 editing information file from a folder other than that of the current session.

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➡** button next to the project that contains the session with the AES31 editing information that you want to import to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
3. Touch the **➡** button for the session with the AES31 editing information that you want to import to open the AES31 selection screen. If it is not the current session, a pop-up window appears confirming that you want to load it. Touch the **OK** button.

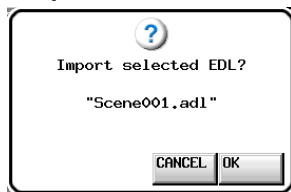
If AES31 editing files are found in the session, they appear in the list.



TIP

If you press the **INFO** button after selecting a file by touching the filename area, the date and time last changed and the file size of that file are shown.

4. Press the **➡** button next to the AES31 editing information file that you want to import.
5. When a confirmation message pop-up appears, touch the **OK** button or press the **DATA** dial.



While importing AES31 editing information, a progress status pop-up appears.

When importing completes, the pop-up disappears.

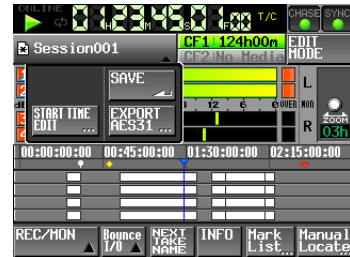
NOTE

The imported contents replace contents in the current session. After importing, touch the session name button to open the pull-down menu, and touch the **Save** button to save the session to the CF card.

Exporting AES31 editing information

You can export the currently loaded session to an AES31 file. The exported file is created in the current session.

1. Press the **HOME** key on the front panel to open the Home screen.
2. Touch the session name button on the Home Screen to open a pull-down menu.



3. Press the **EXPORT AES31** button on the pull-up menu to open the **AES31 NAME** screen where you can input the AES31 data file name.



Input the file name. Follow the procedures in "Editing the project name" on page 35.

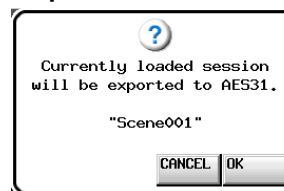
NOTE

If the current session has already had an AES31 file imported or exported, a pop-up window appears confirming that you want to overwrite that file.



Touch the **OK** button to overwrite that file or press the **RENAME** button to open the **AES31 NAME** screen.

4. Touch the **Enter** button on the **AES31 NAME** screen or press the **DATA** dial.
5. When a confirmation message pop-up appears, touch the **OK** button or press the **DATA** dial.



While the file is being created, a progress status pop-up appears.

When file creation completes, the pop-up disappears.

NOTE

If a file with the same name already exists, a pop-up window opens to confirm whether you want to overwrite that file or not. Touch the **OK** button to overwrite that file, or touch the **CANCEL** button to return to the **AES31 NAME** screen.

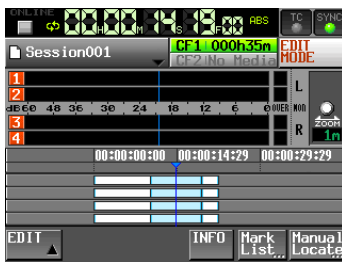
Editing regions

You can cut, erase and divide regions.

1. Press the HOME key to open the Home Screen.



2. Touch the EDIT MODE button to enter edit mode.



The EDIT MODE button becomes white with red lettering, and the REC/MON, Bounce I/O and NEXT TAKE NAME buttons disappear and are replaced by the EDIT button. The region where the timeline cursor (blue vertical line) is becomes light blue, showing that it is the one that can be edited.

If the timeline cursor is on a border between regions, the one to the right can be edited.

3. Touch the EDIT button to open a pull-up menu.

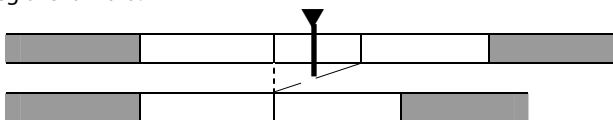


The pull-up menu includes three buttons used for editing—Cut, Erase and Divide—and the UNDO and REDO buttons.

NOTE
If you do not save a session after editing it, all changes will be cleared when you load another session, remove a CF card or turn off the unit's power, for example.

Cutting a region (Cut)

You can erase the selected region and move the following regions forward.



1. Use the PLAY, ◀ and ▶ keys, for example, to move the timeline cursor to the region that you want to cut.
2. Touch the EDIT button, and touch the Cut button in the pull-up menu.

After cutting a region, a pop-up window appears showing

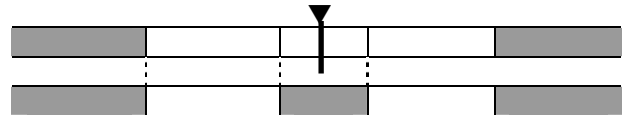
completion and the Home Screen reopens.



The EDIT pull-up window will still be open.

Erasing a region (Erase)

You can erase a region without changing the positions of the following regions. (The erased region becomes silent.)

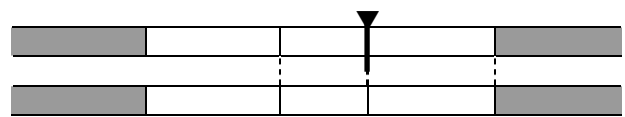


1. Use the PLAY, ◀ and ▶ keys, for example, to move the timeline cursor to the region that you want to erase.
2. Touch the EDIT button, and touch the Erase button in the pull-up menu.

After erasing a region, a pop-up window appears showing completion and the Home Screen reopens. The EDIT pull-up window will still be open.

Dividing a region (Divide)

You can divide the selected region at the position of the timeline cursor into two regions.



1. Use the PLAY, ◀ and ▶ keys, for example, to move the timeline cursor to the time where you want to divide the region.
2. Touch the EDIT button, and touch the Divide button in the pull-up menu.

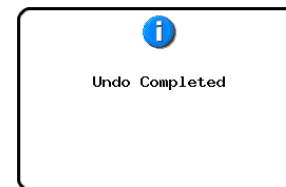
After dividing a region, a pop-up window appears showing completion and the Home Screen reopens. The EDIT pull-up window will still be open.

Undoing the previous edit (UNDO)

You can undo the previous cut, erase or divide edit.

1. Touch the EDIT button, and touch the UNDO button in the pull-up menu.

After undoing an edit, a pop-up window appears showing completion and the Home Screen reopens.



The EDIT pull-up window will still be open.

NOTE

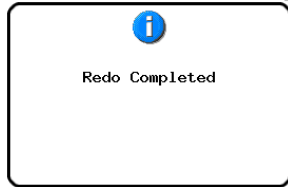
- If no editing has been conducted, the UNDO button is disabled. The UNDO button appears with white letters when it is possible to undo an edit.
- Only the last edit can be undone. Undoing earlier edits is not possible.

7 – Timeline mode

Redoing an edit (REDO)

After undoing an edit, you can redo it.

1. Touch the **EDIT** button, and touch the **REDO** button in the pull-up menu.
After redoing an edit, a pop-up window appears showing completion and the Home Screen reopens.



The **EDIT** pull-up window will still be open.

NOTE

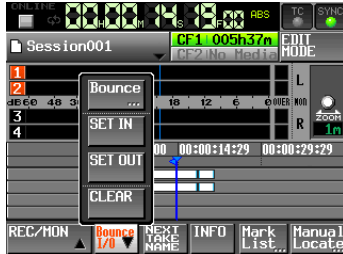
- If no edit has been undone, the **REDO** button is disabled. The **REDO** button appears with white letters when it is possible to redo an edit.
- Only the last undone edit can be redone. Redoing multiple undo operations is not possible.

Bouncing

You can output part of a region or an interval that crosses multiple regions as a single take.

Designating the bounce starting point

1. Press the **HOME** key to open the Home Screen.
2. Use the **◀** and **▶** keys, for example, to locate the bounce start point (time).
3. Touch the **Bounce I/O** button to open a pull-up menu with buttons related to bouncing.



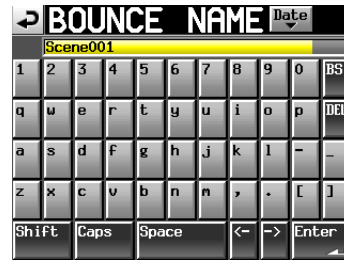
4. Touch the **SET IN** button on the pull-up menu to set the bounce starting point (IN point).
The IN mark (▶) appears at the current position in the mark display area.

Designating the bounce ending point

5. Use the **◀** and **▶** keys, for example, to locate the bounce ending position (time).
6. Touch the **Bounce I/O** button to open a pull-up with buttons related to bouncing.
7. Touch the **SET OUT** button on the pull-up menu to set the bounce ending point (OUT point).
The OUT mark (◀) appears at the current position in the mark display area.

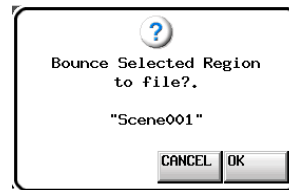
Bouncing the interval

8. Touch the **Bounce I/O** button to open a pull-up with buttons related to bouncing.
9. Touch the **BOUNCE** button on the pull-up menu to open the **BOUNCE NAME** screen where you can input the bounce file name.



Input the file name. Follow the procedures in "Editing the project name" on page 35.

10. Touch the **Enter** button on the **BOUNCE NAME** screen.
11. When a confirmation message pop-up appears, touch the **OK** button or press the **DATA** dial.



While the file is being created, a progress status pop-up appears.

When file creation completes, the pop-up disappears.

NOTE

You can cancel a bounce by pressing the **CANCEL** button while the progress pop-up window is open.

Clearing the bounce starting and ending points

12. Touch the **Bounce I/O** button to open a pull-up with buttons related to bouncing.
13. Touch the **CLEAR** button on the pull-up menu to discard the currently set IN and OUT points.
14. When a confirmation message pop-up appears, touch the **OK** button or press the **DATA** dial. The IN (▶) and OUT (◀) marks in the mark display area will disappear.

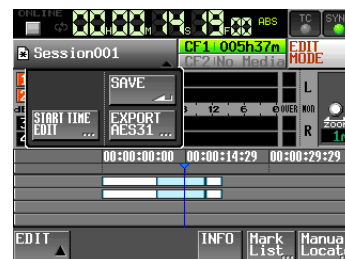
Saving a session

If you do not save a session after editing it, including adding or changing marks, all changes will be cleared when you load another session, remove a CF card or turn off the unit's power, for example.

NOTE

After regions have been edited or marks have been added or edited in a session, an "*" appears in the session name icon.

1. Press the **HOME** key to open the Home Screen.
2. Touch the session name button on the Home Screen, and then touch the **SAVE** button in the pull-down menu to save the session.



After saving completes, the Home Screen reopens.

8 – Take mode

In this chapter, we explain how to use the take mode. To use this unit in take mode, set the unit's operation mode to TAKE MODE. (See "Selecting the operation mode" on page 41.) Please refer to "4 – Basic operation" on page 26 when reading this chapter.

Preparing to record

Basic preparations

Refer to "4 – Basic operation" and make the basic preparations for recording.

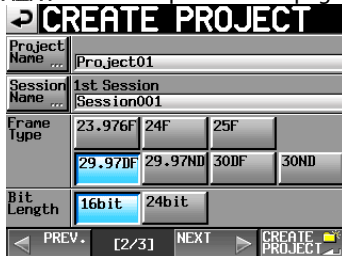
Creating a new project

Create new projects as necessary. You do not need to create a new project if you plan to record into an existing one.

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Press the **CREATE PROJECT** button on the **PROJECT** screen to open the **CREATE PROJECT** screen.



On this screen, set the project name, the name for the first session, the sampling frequency and the sampling frequency written to the BWF chunk in recorded audio files. Touch the **NEXT** button to open the next page.



Set the frame type then bit length. Touch the **NEXT** button to open the next page.



Finally, set the starting time and number of tracks to be recorded in timeline mode, and then set whether other settings should be retained from the currently open project or whether the factory defaults should be used instead. For further details about these settings, see "Creating new projects" on page 34.

3. After you complete making settings touch the **CREATE PROJECT** button.

NOTE

If a project with the same project name already exists, the **CREATE PROJECT** button appears gray and you will not be able to create a new project. If this happens, change the project name.

4. Touch the **OK** button when the confirmation pop-up

message appears.

When creation of the project completes, the Home Screen reopens.

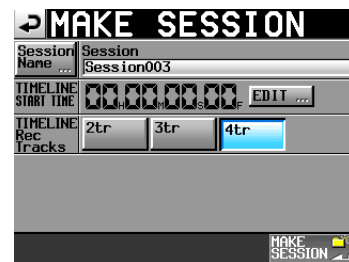
Creating new sessions

Create new sessions as necessary. You do not need to create a new session if you plan to record into an existing one.

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➔** button of the project in which you want to create a new session to open its session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.



3. Touch the **MAKE SESSION** button to open the **MAKE SESSION** screen.



4. Touch the **Session Name** button to open the **SESSION NAME** screen where you can change the session name.



To input the session name follow the same procedures in "Editing the project name" on page 35.

NOTE

You cannot use the "@" symbol at the beginning of a session name.

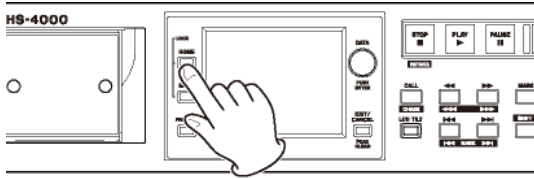
5. Touch the **Enter** button or press the **DATA** dial to return to the **MAKE SESSION** screen.
6. If necessary, set the timeline starting time and number of recording tracks.
7. When you have finished making settings, press the **MAKE SESSION** button.
8. Touch the **OK** button or press the **DATA** dial when the confirmation pop-up message appears. After session creation completes, the Home Screen opens.

For details about session operations, see "Session operations" on page 37.

8 – Take mode

Arming tracks for recording

1. Press the HOME key on the front panel to open the Home Screen.



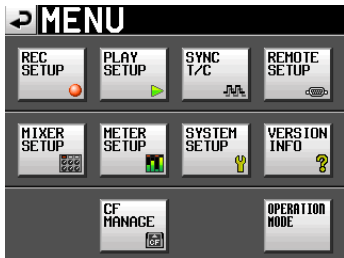
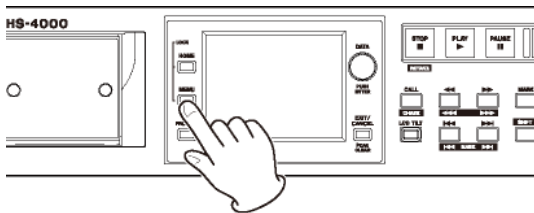
2. Touch the REC/MON button to open a pull-up with REC and MON buttons.



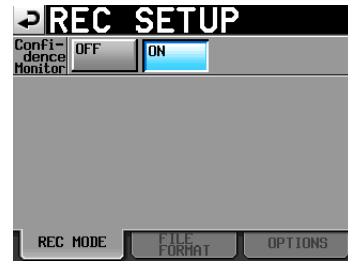
To arm tracks for recording, touch their record arm buttons. When a track is armed to record, its button appears red.

Recording mode settings

1. Press the MENU key on the front panel to open the MENU screen.



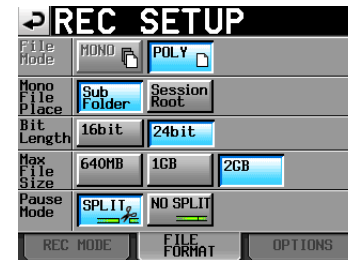
2. Press the REC SETUP button to open the REC SETUP screen.



On the REC MODE page, you can turn confidence monitoring on or off. For details, see “Confidence monitoring” on page 88.

Setting the file format

Touch the FILE FORMAT tab on the REC SETUP screen to open the following screen.



On the FILE FORMAT page, set bit-length, maximum file size, and how files are treated when recording is paused. The selected items appear light blue.

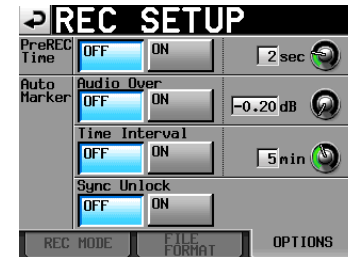
For details, see “FILE FORMAT page” on page 71.

NOTE

In take mode, you cannot select the file mode. The mono file recording folder setting cannot be changed.

Other recording settings


Touch the OPTIONS tab of the REC SETUP screen to open the following screen.



On the OPTIONS page, you can set the pre-recording time and the use of auto markers. For details, see “OPTIONS page” on page 72.

Making a recording

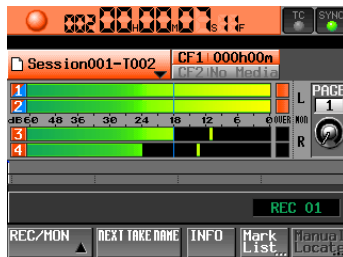
Recording

When unit is stopped, press the **REC** key to put the unit into recording standby. At this time, the  icon indicates this transport status.

In recording standby, press the **PLAY** key to start recording. The transport status display at the top left of the Home Screen changes into the recording status display and part of the background of the Home Screen becomes red, indicating that the unit is recording. The time counter starts at the same time.

NOTE

When stopped, pressing the **PLAY** key while pressing and holding the **REC** key will also start recording.



NOTE

- Recording can also be controlled using parallel control (except retaking).
- In take mode, even if you press the **REC** and **PLAY** keys at the same time during playback, you cannot overwrite a recording.
- When in recording standby, the parallel control signals output are high for TALLY_RECORD and low for TALLY_PAUSE.
When in recording standby, the **REC** and **PAUSE** keys on the front panel will be lit.

Stopping recording

To stop recording, press the **STOP (RETAKE)** key.

Retaking a recording

Press the **STOP (RETAKE)** key while pressing and holding the **SHIFT** key to erase the last recorded take. (The recorded audio file itself will be erased.)

If you press the **PAUSE** key during recording to record multiple consecutive takes (files) and the **PAUSE MODE** item is set to **SPLIT**, this will only erase the last take. If it is set to **NO SPLIT**, the recording is not split into multiple takes, so this will erase the entire recording from start to finish.

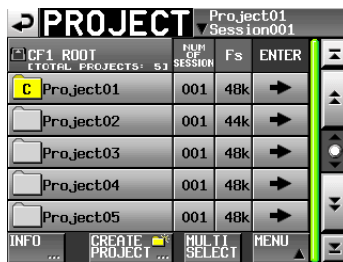
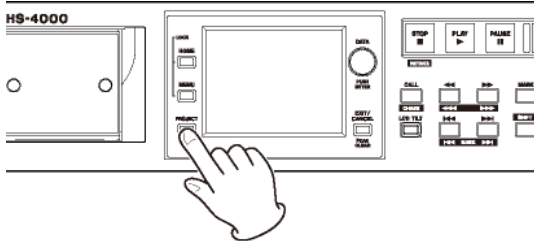
For details about the **PAUSE MODE** item see the FILE FORMAT page on page 71.

8 – Take mode

Playback

Project/session/take selection

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.



NOTE

You can also touch the session/take name area on the Home Screen to open the **PROJECT** screen.

2. Touch the ➔ button for the project that contains the take you want to load to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.



3. Touch the ➔ button for the session that contains the take you want to load to open the take selection screen. If it is not the current session, a pop-up window appears confirming that you want to load it. Touch the **OK** button.



NOTE

To load a take from the current session, instead of steps 1–4 above, touch the session name button at the top right of the project screen or touch the take name button on the Home Screen, and touch the **TAKE List** button in the pull-down menu to open the take selection screen for the current session.

4. Select the take that you want to load.
5. Touch the **MENU** button in the take selection screen to open the pull-up menu.



6. Touch the **LOAD** button in the pull-up menu.
7. When a confirmation message appears in the pop-up window, touch the **OK** button or press the **DATA** dial.



When loading completes, the Home Screen opens.

NOTE

You can also press the ➔ button for a take to load it.

In this case, no pop-up window appears, and the take selection screen remains open after loading (the Home screen does not reopen.)

Setting input monitoring

Turn input monitoring OFF for the channels (tracks) to be played back. When input monitoring is ON for a channel, sound will be input through that channel's audio input.

1. Touch the **REC/MON** button on the Home Screen to open a pull-up with **REC** and **MON** buttons.



2. If input monitoring is on for any playback channels (**MON** buttons appear blue), touch those **MON** buttons to turn them off (turning them gray).

Setting the online function

Refer to "Online functions" on page 89 for details about making settings for the online outputs.

Playback control

Press the **PLAY** key to start playback.

Press the **PAUSE** key to pause playback.

Press the **PLAY** key again to resume playback.

Press the **STOP (RETAKE)** key to stop playback.

Press the **MARK** key or **MARK** key to switch takes.

Press and hold the **SEARCH** key or **SEARCH** key to search backward or forward.

Press the **◀◀ [MARK◀◀]** or **▶▶ [MARK▶▶]** key while pressing and holding the **SHIFT** key to move between marks. Press and hold the **◀◀ [◀◀◀◀]** key or **▶▶ [▶▶▶▶]** key while pressing and holding the **SHIFT** key to search at high-speed.

NOTE

- On the **PLAY SETUP** screen, you can set whether only the currently selected take is played or whether all the takes within the current session are played. You can also enable and disable repeat playback. (See "Playback settings (PLAY SETUP)" on page 73.)
- Playback functions can also be used through parallel control.

Using the call function

Press the **CALL (CHASE)** key to locate to the point where playback was last started from playback standby (call point) and put the unit in playback standby mode.

BWF–J cue point

When the Follow BWF–J item is set to ON, during playback if a BWF–J cue point is detected, the following corresponding operation will occur. In addition, if the BWF–J Tally Out item is set to ON, in response to each BWF–J cue point, the CUE signal and tally signal will be output from the parallel remote connector.

BC\$STANDBY	When a take is loaded, the transport locates to this point as the playback start point. During playback, playback pauses when this point is reached. In either case, a BC\$STANDBY tally is output.
BC\$CM	During playback, when this point is reached, a BC\$CM CUE signal is output.
BC\$END	During playback, when this point is reached, a BC\$END CUE signal is output.
BC\$STOP	During playback, when this point is reached, a BC\$STOP CUE signal is output, and playback stops.
BC\$FILE	During playback, when this point is reached, a BC\$END CUE signal is output. If the beginning of a following take (BC\$STANDBY CUE point) exists, that CUE will be followed.
BC\$PAUSE	During playback, when this point is reached, a BC\$PAUSE tally is output, and playback pauses.

Using the flash start function in take mode

Using a TASCAM RC–HS32PD (sold separately) or other remote controller, flash start playback is possible. For details, see "Flash start function" on page 90.

8 – Take mode

Take operations

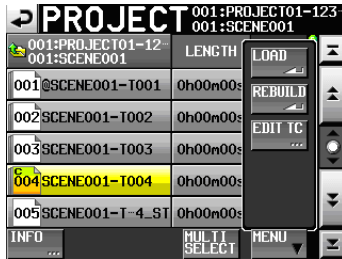
Changing the start time of a take

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➔** button for the project that contains the take for which you want to edit the start time to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
3. Touch the **➔** button for the session that contains the take for which you want to edit the start time to open the take selection screen. If it is not the current session, a pop-up window appears confirming that you want to load it. Touch the **OK** button.

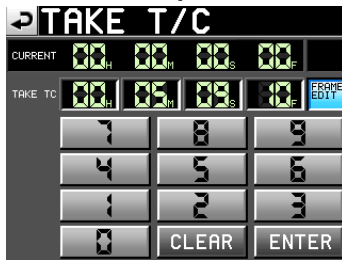
NOTE

To load a take from the current session, instead of steps 2–3, touch the session name button at the top right of the project screen or touch the take name button on the Home Screen, and touch the **TAKE List** button in the pull-down menu to open the take selection screen for the current session.

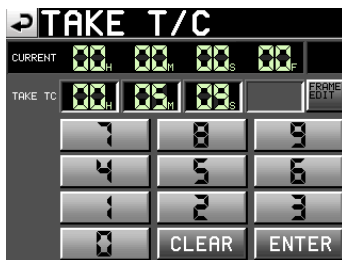
4. Select the take that you want to edit the start time.
5. Touch the **MENU** button on the take selection screen to open a pull-up menu.



6. Press the **EDIT TC** button in the pull-up menu to open the **TAKE TC** screen.
7. On the **TAKE T/C** screen, use the **FRAME EDIT** button to set whether or not to input the frame value.



Frame edit on



Frame edit off

8. Use the number buttons to input the take start time.
 - If you begin input without selecting a digit, input will start from the smallest one.
 - To input a specific digit, touch it to make its background yellow, and then use the number buttons or the **DATA** dial to enter two digits at a time.
 - Touch the **CLEAR** button to erase all entered values.
9. Touch the **ENTER** button to confirm the setting.
 - TIP**
 - This can also be edited using an externally connected keyboard.
 - Press the keyboard's **ESC** key to clear all the values.
10. When the confirmation pop-up window appears, touch the **OK** button or press the **DATA** dial.

Using @ with take names

Select a take and touch the **CIRCLE TAKE** button to add an "@" to the beginning of that take's name. If that take already has "@" at its beginning, touch this to remove it.

You can also touch a take name button on the Home Screen, and touch the **CIRCLE TAKE** button in the pull-down menu that opens to add "@" to or remove "@" from the beginning of that take name.

NOTE

This function is not available in versions 1.00–1.05. It is available with a version upgrade.

TIP

Use this function to add "@" to good takes, for example.

CAUTION

Take names cannot be edited.

9 – Playlist mode

In this chapter, we explain how to use the playlist mode. To use this unit in playlist mode, set the unit's operation mode to PLAYLIST MODE. (See "Selecting the operation mode" on page 41.)

Please refer to "4 – Basic operation" on page 26 when reading this chapter.

Playlist operations

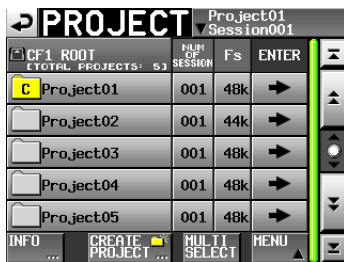
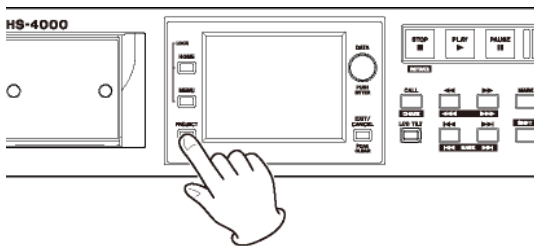
Loading project/sessions

Takes/files can only be added to the playlist from the currently loaded session.

When takes/files that are in other sessions are added to a playlist they are copied to the current session.

Load the session first.

1. Press the PROJECT key on the front panel to open the PROJECT screen.



2. Touch the → button for the project that you want to select to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the OK button.
3. Touch the name of the session to select it. Its background appears yellow.
4. Touch the MENU button on the session selection screen to open a pull-up menu.



5. Press the LOAD button in the pull-up menu.

NOTE

You can also load a session by pressing its → button. In this case, if it is not the current session, a pop-up window appears confirming that you want to load it. Touch the OK button.

6. Touch the OK button or press the DATA dial when a confirmation pop-up message appears.



NOTE

If you touch a → button to load a session, this pop-up window will not open.

When loading a session completes, the last loaded playlist is automatically loaded (or a default playlist is created for a new session) and the Home Screen reopens.

Creating a new playlist

1. Press the PROJECT key on the front panel to open the PROJECT screen.
2. Touch the → button for the project in which you want to create a new playlist to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the OK button.
3. Touch the → button for a session where you want to create a new playlist to open the playlist selection screen. If it is not the current session, a pop-up window appears confirming that you want to load it. Touch the OK button.



NOTE

When you create a session, three playlists are created automatically—for single mode and for A and B in dual mode.

4. Touch the NEW/IMPORT button to open a pull-up menu.



5. Touch the NEW button in the pull-up menu to open the PLAYLIST NAME screen where you can input the playlist name.



To enter the playlist name, follow the procedures in “Editing the project name” on page 35.

6. Touch the **Enter** button or press the **DATA** dial.
7. When the confirmation message pop-up appears, in single mode, touch the **OK** button or press the **DATA** dial to confirm the session name. In dual mode, touch the **LOAD to A** button to load the playlist to player A after it is created, or touch the **LOAD to B** button to load the playlist to player B.



Single mode



Dual mode

While the playlist is being created, a progress status pop-up appears.

When playlist creation completes, the pop-up disappears.

NOTE

In single mode, “**C**” (current) appears inside the icon of the currently loaded playlist. In dual mode, “**A**” appears inside the icon of the playlist loaded for player A and “**B**” appears inside the icon of the playlist loaded for player B.

Creating a playlist from a JPPA PPL file

You can create a playlist by loading a JPPA PPL format file. Playlist files must be placed inside “_playlists” folders (directories), which are in session folders, on the CF card in advance. When viewed on a computer, the directory of the CF card should be as follows.

{CF drive name}\{project name}\{session name}_playlists\{JPPA PPL file name}

CAUTION

After importing, a playlist is created in this session.

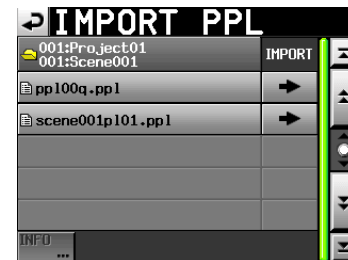
1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➡** button for the project that contains the session in which you want to load a PPL file to open the session selection screen.
If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
3. Touch the **➡** button for the current session to open the playlist selection screen.

If it is not the current session, a pop-up window appears confirming that you want to load it. Touch the **OK** button.

4. Touch the **NEW/IMPORT** button to open a pull-up menu.



5. Touch the **IMPORT** button in the pull-up menu to open the **IMPORT PPL** screen.



A list will be shown of all the JPPA PPL files found within the “_playlists” folder under the session folder.

6. Touch the **➡** button for the PPL file that you want to load.

NOTE

Touch a name in the list to select a file, and then touch the **Info** button to show file information.

7. Touch the **OK** button or press the **DATA** dial when the confirmation pop-up message appears.



While the playlist is being created, a progress status pop-up appears.

When playlist creation completes, the pop-up disappears.

NOTE

- If the PPL file contains multiple output ports, a playlist will be created for each output port.
- After a playlist is created it becomes the currently loaded playlist.

CAUTION

When a JPPA PPL format file is loaded, playlists are created for both player A and player B.

9 – Playlist mode

Changing a playlist name later

You can change playlist names later.

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➔** button for the project that contains the playlist for which you want to change the name to open the session selection screen.
If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
3. Touch the **➔** button for the session that contains the playlist for which you want to change the name to open the playlist selection screen.
If it is not the current session, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
4. Select the playlist that you want to change. The background of the selected playlist name appears yellow.
5. Touch the **MENU** button to open a pull-up menu.



6. Touch the **EDIT NAME** button in the pull-up menu to open the **PLAYLIST NAME** screen.



NOTE

The **EDIT NAME** button in the pull-up menu cannot be selected if the loaded playlist is selected, if multiple playlists are selected or if the selected playlist is not visible (scrolled off screen).

7. Input the playlist name. Follow the procedures in "Editing the project name" on page 35.
8. Touch the **Enter** button on the **PLAYLIST NAME** screen or press the **DATA** dial to confirm the playlist name and return to the playlist selection screen.

Loading playlists

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➔** button for the project that contains the playlist you want to load to open the session selection screen.
If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
3. Touch the **➔** button for the session that contains the playlist you want to load to open the playlist selection screen.
If it is not the current session, a pop-up window appears

confirming that you want to load it. Touch the **OK** button.

4. Select the playlist that you want to load.
5. Touch the **MENU** button on the Playlist selection screen to open a pull-up menu.

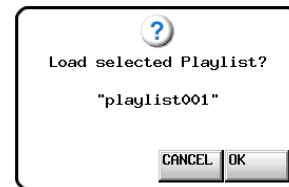


Single mode

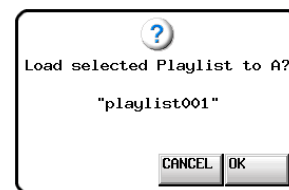


Dual mode

6. In single mode, touch the **LOAD** button in the pull-up menu. When in dual mode, press the **LOAD to A** or **LOAD to B** button to load it to the desired player.
7. When a confirmation message pop-up appears, touch the **OK** button or press the **DATA** dial.



Single mode



Dual mode

After loading completes, the Home Screen opens.

NOTE

On the playlist selection screen, instead of touching the **MENU** button followed by the **LOAD** button (or **LOAD to A/B** button) in the pull-up menu item, you can also press the **➔** button for the playlist that you want to play back to load it.

When in single mode, the same pop-up message as above appears. Touch the **OK** button or press the **DATA** dial.

When in dual mode, the pop-up window has **LOAD to A** and **LOAD to B** buttons. Touch the one for the desired player.



Sorting contents in a playlist

You can sort items in a playlist in order of start time. (This function is planned for a future firmware version upgrade.)

Deleting a playlist

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.
2. Touch the **➔** button for the project that contains the playlist you want to delete to open the session selection screen.
If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
3. Touch the **➔** button for the session that contains the playlist you want to delete to open the playlist selection screen.
If it is not the current session, a pop-up window appears confirming that you want to load it. Touch the **OK** button.
4. Select the playlist that you want to delete.
Touch the **MULTI SELECT** button to enable the selection of multiple playlists.
5. Touch the **MENU** button on the Playlist selection screen to open a pull-up menu.



6. Touch the **DELETE** button in the pull-up menu.
7. Touch the **OK** button or press the **DATA** dial when a confirmation pop-up message appears.



During erasing, a progress status pop-up appears. When erasing completes, the pop-up disappears.

NOTE

You cannot delete the currently loaded playlist.

9 – Playlist mode

Editing a playlist (adding, clearing and editing entries)

A playback unit in a playlist is called an “entry”.

A maximum of 100 entries can be added to a playlist.

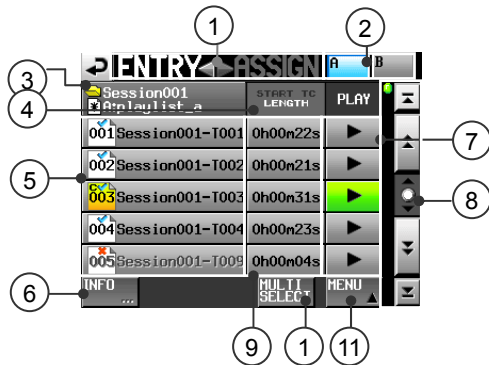
Only takes (files) in the session in which the playlist was created can be added as entries. When a take (file) that is in another session in the same project is added to a playlist, it is copied to the session where the playlist was made.

Even during playback of a playlist, entries can be added to or removed from it and their names can be changed. The entry that is currently playing, however, cannot be changed.

Use the Entry list and Assign file screens to edit playlists.

Entry list screen

To open this screen, touch a take or entry name button on the Home Screen to open a pull-down menu and touch the **ENTRY LIST** button, or touch the **ENTRY** ◀ part of the **ENTRY** ◀ ▶ **ASSIGN** button on the ASSIGN screen.



1 ENTRY ◀ ▶ ASSIGN button

Switches between the entry list and ASSIGN file screens. Touch the ▶ **ASSIGN** part to open the ASSIGN file screen.

2 A/B buttons/indicators (dual mode only)

These show which player's playlist is currently selected. The selected player's button appears light blue. Touch the **A** button to open the playlist entry list for Player A or the **B** button to open the playlist entry list for Player B.

3 Playlist name display

The current playlist name is shown.

4 START TC/LENGTH button

Touch this area to switch between showing the starting time (**START TC**) and the length (**LENGTH**) in the **START TC/LENGTH** column. The one shown in white is currently displayed.

5 Entry name button

Touch to select the corresponding entry. The entry number appears inside the 001 icon. The entry verification status also appears inside the 001 icon. If the format of the file is found to be incorrect, its name appears in gray.

	Currently loaded entry
	Entry that is okay
	Entry is a format that cannot be played back
	No entry

6 INFO button

When an entry is selected, press this button to open an

information pop-up for that entry.

When an entry is not selected, press this button to show information about the current playlist.

7 PLAY buttons

Touch to play the corresponding entry. These turn green during playback of the corresponding entries. Touch one during playback to stop playback of the corresponding entry.

8 Scroll buttons

Use these buttons to scroll to the beginning or end of the take list or session list, or to scroll one page (five lines) forward or backward. You can also scroll through the entry list one line at a time using the **DATA** dial.

9 START TC/LENGTH display

The entry starting time or entry length (time) is shown. The **START TC/LENGTH** button item shown in white is currently displayed.

10 MULTI SELECT button

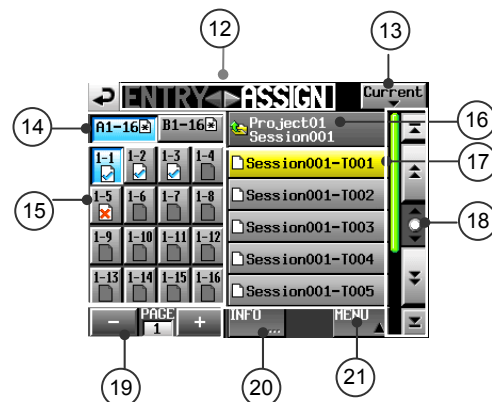
Touch to enable the selection of multiple entries.

11 MENU button

Touch to open a pull-up menu where you can select **CLEAR**, **ADJUST**, **SAVE** (in dual mode, **SAVE A+B**), **SAVE AS** (in dual mode, **SAVE AS(X)**: where X is the current player mode shown by the A/B buttons) and **EXPORT PPL**.

Assign File screen

To open this screen, touch a take or entry name button on the Home Screen to open a pull-down menu and touch the **ASSIGN FILE** button, or touch the ▶ **ASSIGN** part of the **ENTRY** ◀ ▶ **ASSIGN** button on the ENTRY list screen.



12 ENTRY ◀ ▶ ASSIGN button

Switches between the entry list and ASSIGN file screens. Touch the **ENTRY** ◀ part to open the ENTRY list screen.

13 Current button


Touch this button to open the take name list of the current session.





14 Key set selection button

Use the key assign buttons to select whether the left key set or the right key set is shown. When entries have been edited but not saved, appears. The layout of these buttons differs according to the player mode and **RC-H532PD Flash start key mode** setting on the **GENERAL** page of the **REMOTE SETUP** screen.

Player mode	Key mode	Left button	Right button
Single mode	16x2	1–16	17–32
Dual mode	16x2	A 1–16	B 1–16
	12x2	A 1–12	B 1–12

15 **Key assign list / button**

These buttons are entry assignments. The flash page number and flash key number are shown separated by a “-”. The playlist verification status also appears inside the icon. The icon for the currently playing entry is  and its button is highlighted in green.

	Entry currently being played back
	Entry that is okay
	Entry has a file format that cannot be played back
	No entry

After touching one of these buttons, touch a take name button to assign that take to that button.

16 **Current folder name display/button**

This shows the name of the folder, which is selected in the current list display area. Touch this button to show the session list in the take list display area.

17 **Take name list / buttons**

This is a list of the takes in the current session. After touching a key assign button, touch a take name button to assign that take to that key assign button. When only the project name is shown in the current folder name display/button, if you touch it, a list of the sessions in the current project will be shown. Touch the button of the session that you want to load to open the list of takes in that session.

18 **Scroll buttons**

Use these buttons to scroll to the beginning or end of the take list or session list, or to scroll one page (five lines) forward or backward. You can also scroll through the take list one line at a time using the **DATA** dial.

19 **Page display and selection buttons**

The current key assign button page is shown. Touch the **+** or **-** button to change the page. The number of pages differs according to the player mode and **RC-HS32PD Flash start key mode** setting on the **GENERAL** page of the **REMOTE SETUP** screen.

20 **INFO button**

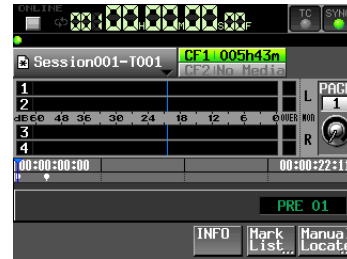
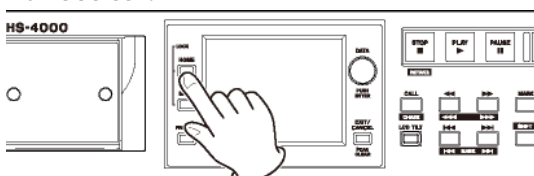
When a key assign button is selected, press this button to open an information pop-up for that key assign button. When a take is selected, press this button to open an information pop-up for that take. When nothing is selected, press this button to show information about the current playlist.

21 **MENU button**

Touch to open a pull-up menu where you can select **REBUILD**, **CLEAR**, **ADJUST**, **SAVE** (in dual mode, **SAVE A+B**), **SAVE AS** (in dual mode, **SAVE AS(x)**: where X is the current player mode shown by key set selection buttons) and **EXPORT PPL**.

Assigning a take to an entry

1. Press the **HOME** key on the front panel to open the Home Screen.



Single mode



Dual mode

2. Touch the file name or title name display button to open a pull-down menu, and touch the **ASSIGN FILE** button to open the **ASSIGN** file screen where you can assign entries.



Single mode



Dual mode

On the left side are the buttons that can receive assignments, and on the right side is the list of takes that can be assigned.

NOTE

You can also touch the **▶ ASSIGN** button on the Entry List screen to open the Assign File screen.



3. First, select the key assign button of the take that you want to assign.

9 – Playlist mode

NOTE

The display of the buttons differs somewhat according to whether the player mode is set to single or dual mode and whether the RC-HS32PD Flash Start Key Mode item is set to 16x2 or 12x2. (For more about the RC-HS32PD Flash Start Key Mode item, see "Setting the flash key function" on page 90.)

- Use the "+" and "-" buttons to open the page where you want to assign a file.
- In single mode, select 1-16 or 17-32 to show the flash start key to which you want to assign a file.



Single mode 1-16



Single mode 17-32

When in dual mode touch the **A: 1-16** button to make an assignment for player A, or touch the **B: 1-16** button to make an assignment for player B.



Dual mode player A



Dual mode player B

- In the key assign button list on the left, select the one that you want to assign to. The selected button appears light blue.

NOTE

If you select a button that already has an entry assigned to it, the corresponding take appears like yellow in the take list.

- Touch a take name in the take list to assign that take to that button.

When a take is assigned to a button, the button's icon changes from  (no assignment) to .

NOTE

- Only takes in the project where the playlist is can be added to the playlist.
- If the take that you want to add does not appear, use the scroll buttons or **DATA** dial to scroll through the list until the take appears and then touch its name.

TIP

If the take that you want to add is in a different session in the same project, touch the current session name button to open the session list. Then, touch the name of the session that contains the take that you want to add to open that session's take name list.

- Repeat steps 3-7 as necessary.
- After you have completed making assignments, save the playlist as necessary.

To save a playlist, touch the **MENU** button on the ASSIGN file or ENTRY list screen to open a pull-up menu, and touch the **SAVE** button (in dual mode, **SAVE A+B** button). From the Home Screen, you can touch a file name or title name button to open a pull-down menu with the **SAVE** button (in dual mode, **SAVE A+B** button). For details about saving, see "Saving a playlist" on page 67.

CAUTION

If you do not save the playlist, all changes will be lost when another playlist is loaded, the CF card is removed or the unit's power is turned off, for example.

Entry number page allocation

Playlist entry numbers are displayed according to the player mode and key mode settings.

Mode		Single mode		Dual mode			
		16x2		16x2		12x2	
RC-HS32PD Flash Start Key Mode setting							
Key set selection button		1-16	17-32	A1-16	B1-16	A1-12	B1-12
Page number	1	001 - 016	017 - 032	A: 001 - 016	B: 001 - 016	A: 001 - 012	B: 001 - 012
	2	033 - 048	049 - 064	A: 017 - 032	B: 017 - 032	A: 013 - 024	B: 013 - 024
	3	065 - 080	081 - 096	A: 033 - 048	B: 033 - 048	A: 025 - 036	B: 025 - 036
	4	—	—	A: 049 - 064	B: 049 - 064	A: 037 - 048	B: 037 - 048
	5	—	—	A: 065 - 080	B: 065 - 080	A: 049 - 060	B: 049 - 060
	6	—	—	A: 081 - 096	B: 081 - 096	A: 061 - 072	B: 061 - 072
	7	—	—	—	—	A: 073 - 084	B: 073 - 084
	8	—	—	—	—	A: 085 - 096	B: 085 - 096

Note: "—" means there is no corresponding page.

"A:" indicates entry numbers for the Player A playlist, and "B:" for the Player B playlist.

Clearing entry assignments

1. Press the HOME key on the front panel to open the Home screen.
2. Touch the file name or title name display button and then touch the ENTRY LIST button in the pull-down menu to open the ENTRY list screen where you can work with entries.



3. Select the entry for which you want to clear the entry assignment. Its background appears yellow.
4. Touch the MENU button on the Entry List screen to open a pull-up menu.



5. Touch the CLEAR button in the pull-up menu to clear the entry.

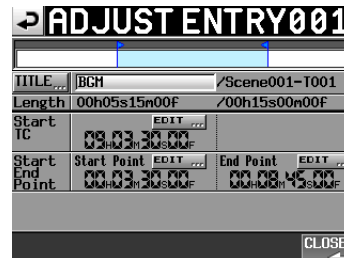
NOTE

On the Assign File screen, when a button on the left is selected, you can clear its entry by touching the take name that appears yellow in the take list on the right side or by touching the MENU button and then touching the CLEAR button on the pull-up menu.



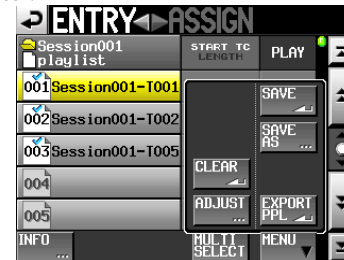
Editing entry titles

1. Press the HOME key on the front panel to open the Home screen.
2. Touch a file name or title name button display and then touch the ADJUST ENTRY button in the pull-down menu to open the ADJUST ENTRY XXX screen. ("XXX" is the entry number.)



NOTE

You can also open this screen by touching the MENU button and then touching the ADJUST button in the pull-up menu when a take is selected on the ENTRY list screen or one of the key assign buttons on the left is selected on the ASSIGN file screen.



Entry List Screen



Assign File Screen

3. The characters shown next to the TITLE button is the title of the selected entry. Touch the TITLE button to open the EDIT TITLE screen where you can change the title of the entry.



Input the title name. Follow the procedures in "Editing the project name" on page 35.

4. Touch the Enter button on the EDIT TITLE screen or press the DATA dial to change the entry title.

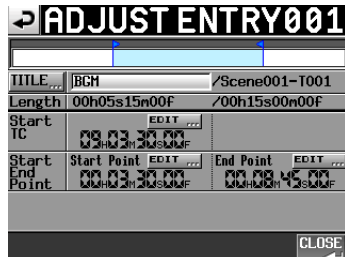
NOTE

If the entry that you are trying to edit is currently playing, when you touch the Enter button, a "Cannot change now. Currently Playing" message appears, and you will not be able to edit the title. Stop playback before touching the Enter button.

9 – Playlist mode

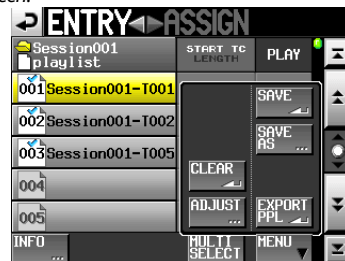
Edit the playback starting time

1. Press the HOME key on the front panel to open the Home screen.
2. Touch a file name or title name button display and then touch the ADJUST ENTRY button in the pull-down menu to open the ADJUST ENTRY XXX screen. ("XXX" is the entry number.)



NOTE

You can also open this screen by touching the MENU button and then touching the ADJUST button in the pull-up menu when a take is selected on the ENTRY list screen or one of the key assign buttons on the left is selected on the ASSIGN file screen.



Entry List Screen



Assign File Screen

3. The value shown next to the Start TC item is the playback starting time for the selected entry. Press the EDIT button for the START TC item to open the EDIT START T/C screen where you can change the playback starting time.



Use the FRAME EDIT button on the EDIT START T/C screen to set whether or not you will edit the frame value.

4. Use the number buttons to input the playback starting time for the entry.
 - If you begin input without selecting a digit, input will start from the smallest one.
 - To input a specific digit, touch it to make its background yellow, and then use the number buttons or the DATA dial to enter two digits at a time.
 - Touch the CURRENT ▼ button to copy the current time code time to the input value.
 - Touch the CLEAR button to erase all entered values.

5. Touch the ENTER button to confirm the setting.

NOTE

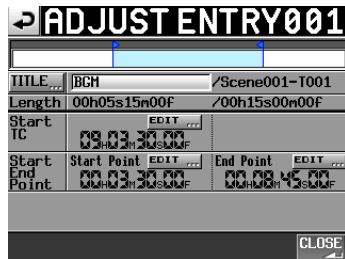
If the entry that you are trying to edit is currently playing, when you touch the Enter button, a "Cannot change now. Currently Playing" message appears, and you will not be able to change the playback starting time. Stop playback before touching the Enter button.

TIP

- You can also use the PLAY key and other transport keys while listening to the audio to find the location, and then press the CURRENT ▼ button to input that value here.
- This can also be edited using an externally connected keyboard.
- Press the keyboard's ESC key to clear all the values.

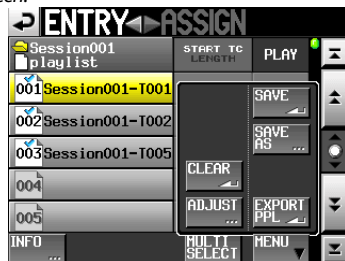
Editing the playback starting point

1. Press the HOME key on the front panel to open the Home screen.
2. Touch a file name or title name button display and then touch the ADJUST ENTRY button in the pull-down menu to open the ADJUST ENTRY XXX screen. (“XXX” is the entry number.)



NOTE

You can also open this screen by touching the MENU button and then touching the ADJUST button in the pull-up menu when a take is selected on the ENTRY list screen or one of the key assign buttons on the left is selected on the ASSIGN file screen.

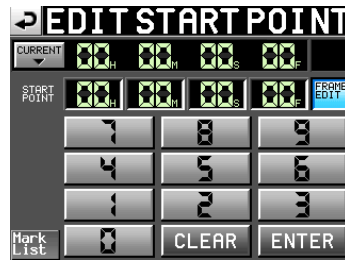


Entry List Screen



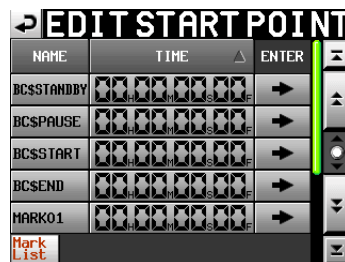
Assign File Screen

3. The Start Point value shown for the Start End Point item is the playback start point for the selected entry. Press the EDIT button for the Start Point to open the EDIT START POINT screen where you can change the playback start point.



Use the FRAME EDIT button on the EDIT START POINT screen to set whether or not you will edit the frame value.

4. Use the number buttons to input the playback start point for the entry.
 - If you begin input without selecting a digit, input will start from the smallest one.
 - To input a specific digit, touch it to make its background yellow, and then use the number buttons or the DATA dial to enter two digits at a time.
 - Touch the CURRENT ▼ button to copy the current playback position to the input value.
 - Touch the CLEAR button to erase all entered values.
 - Touch the Mark List button to open the mark list screen where you can copy the time from a designated mark.



On this screen, press the ➡ button of a mark to copy its time to the playback start point and return to the ADJUST ENTRY XXX screen.

NOTE

If the entry that you are trying to edit is currently playing, when you touch the ➡ button, a “Cannot change now. Currently Playing” message appears, and you will not be able to change the playback start point. Stop playback before touching the ➡ button.

5. Touch the ENTER button to confirm the setting.

NOTE

If the entry that you are trying to edit is currently playing, when you touch the Enter button, a “Cannot change now. Currently Playing” message appears, and you will not be able to change the playback start point. Stop playback before touching the Enter button.

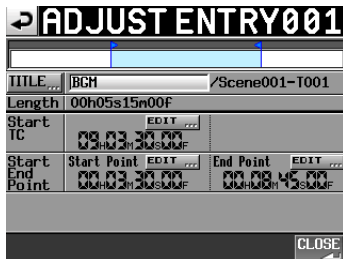
TIP

- You can also use the PLAY key and other transport keys while listening to the audio to find the location, and then press the CURRENT ▼ button to input that value here.
- This can also be edited using an externally connected keyboard.
- Press the keyboard’s ESC key to clear all the values.

9 – Playlist mode

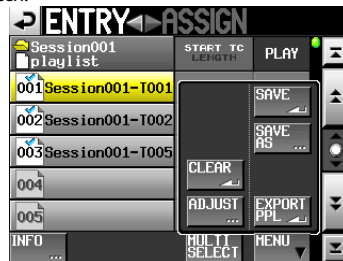
Editing the playback end point

1. Press the HOME key on the front panel to open the Home screen.
2. Touch a file name or title name button display and then touch the ADJUST ENTRY button in the pull-down menu to open the ADJUST ENTRY XXX screen. (“XXX” is the entry number.)



NOTE

You can also open this screen by touching the MENU button and then touching the ADJUST button in the pull-up menu when a take is selected on the ENTRY list screen or one of the key assign buttons on the left is selected on the ASSIGN file screen.



Entry List Screen



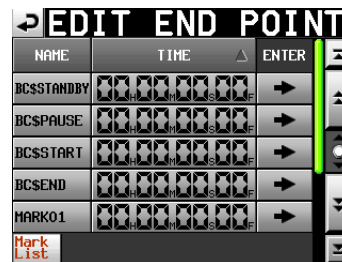
Assign File Screen

3. The End Point value shown for the Start End Point item is the playback end point for the selected entry. Press the EDIT button for the End Point to open the EDIT END POINT screen where you can change the playback end point.



Use the FRAME EDIT button on the EDIT END POINT screen to set whether or not you will edit the frame value.

4. Use the number buttons to input the playback end point for the entry.
 - If you begin input without selecting a digit, input will start from the smallest one.
 - To input a specific digit, touch it to make its background yellow, and then use the number buttons or the DATA dial to enter two digits at a time.
 - Touch the CURRENT ▼ button to copy the current playback position to the input value. Touch the SET MAX button to set the input value to the end of the take.
 - Touch the CLEAR button to erase all entered values.
 - Touch the Mark List button to open the mark list screen where you can copy the time from a designated mark.



On this screen, press the → button of a mark to copy its time to the playback end point and return to the ADJUST ENTRYXXX screen.

NOTE

If the entry that you are trying to edit is currently playing, when you touch the → button, a “Cannot change now. Currently Playing” message appears, and you will not be able to change the playback end point. Stop playback before touching the → button.

5. Touch the ENTER button to confirm the setting.

NOTE

If the entry that you are trying to edit is currently playing, when you touch the Enter button, a “Cannot change now. Currently Playing” message appears, and you will not be able to change the playback end point. Stop playback before touching the Enter button.

TIP

- You can also use the PLAY key and other transport keys while listening to the audio to find the location, and then press the CURRENT ▼ button to input that value here.
- This can also be edited using an externally connected keyboard.
- Press the keyboard’s ESC key to clear all the values.

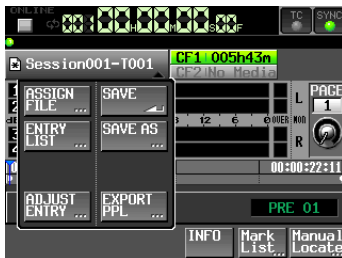
Saving a playlist

NOTE

After editing a playlist, save it as necessary. If you do not save a playlist after editing it, all changes will be cleared when you load another playlist, remove a CF card or turn off the unit's power, for example.

An "*" appears in the file name or title name button when editing has occurred but it has not been saved yet. When an "*" is shown, a pop-up message asking if you want to save the playlist will appear when you try to do something that would clear the edits, including when loading another playlist, creating a new playlist and changing the operation mode. (When in dual mode if an "*" appears for both A and B this message will appear twice, once for the Player A playlist and once for the Player B playlist.)

1. Press the HOME key on the front panel to open the Home screen.
2. Touch a file name or title name button to open a pull-down menu and touch the SAVE button to start saving the playlist. (In dual mode, this button becomes SAVE A+B and saves playlists for both Players A and B.)



While saving, a progress status pop-up appears. When saving completes, the pop-up disappears.

NOTE

You can also save a playlist by touching the MENU button on the ASSIGN file or ENTRY list screen to open a pull-up menu and touching the SAVE button



Entry List Screen



Assign File Screen

Naming a playlist and saving it

On the Entry List or Assign File screen, after touching the MENU button to open the pull-up, if you press the SAVE AS button instead of the SAVE button, you can name the playlist before saving it.

1. Press the HOME key on the front panel to open the Home screen.

2. Touch a file name or title name button to open a pull-down menu and touch the SAVE AS button. (In dual mode, there are SAVE AS (A) and SAVE AS (B) buttons that save the current playlist of the selected Player A or B.)



The PLAYLIST NAME screen where you can input new playlist names opens.



3. Input the playlist name. Follow the procedures in "Editing the project name" on page 35.
4. Touch the Enter button on the PLAYLIST NAME screen or press the DATA dial to save the playlist with this name.

While the file is being created, a progress status pop-up appears.

When file creation completes, the pop-up disappears.

TIP

You can also name and save a playlist by touching the MENU button on the ASSIGN file or ENTRY list screen to open a pull-up menu, and touch the SAVE AS button (in dual mode, SAVE AS (A) or SAVE AS (B)).



Single Mode



Dual Mode

9 – Playlist mode

Creating a JPPA PPL file from the loaded playlist

1. Press the HOME key on the front panel to open the Home screen.
2. Touch the File or Title Name button on the Home screen to open a pull-down menu.



3. Touch the EXPORT PPL button in the pull-down menu to open the PPL EXPORT screen where you can edit the name of the JPPA PPL file that will be created.



Input the file name. Follow the procedures in "Editing the project name" on page 35.

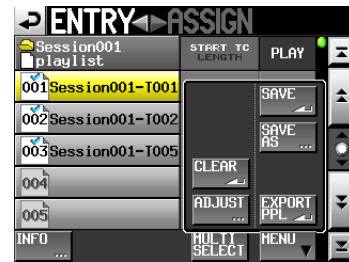
NOTE

- If you have previously created the current playlist from a JPPA PPL file (imported) or created a JPPA PPL file (exported) from the current playlist, a pop-up window will appear to confirm that you want to overwrite that JPPA PPL file.



Touch the OK button to overwrite that file or the RENAME button to open the PPL EXPORT screen.

- You can also touch the MENU button on the ENTRY list or ASSIGN file screen to open a pull-up menu, and touch the EXPORT PPL button to create a JPPA PPL file.

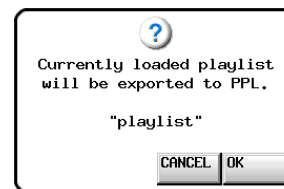


Entry List Screen



Assign File Screen

4. Touch the Enter button on the PPL EXPORT screen or press the DATA dial.
5. Touch the OK button or press the DATA dial when a confirmation pop-up message appears.



The selected playlist is converted into JPPA PPL file. The file is created inside the _playlists folder, which is in the session folder that contains the selected playlist.

While the file is being created, a progress status pop-up appears.

When file creation completes, the pop-up disappears.

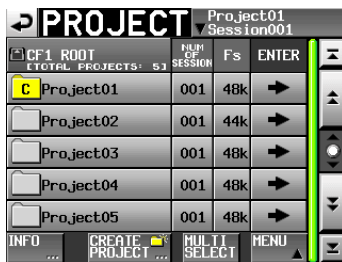
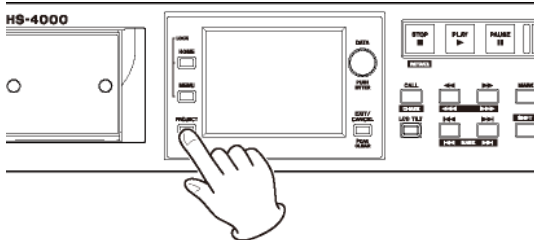
NOTE

- When a JPPA PPL format file is created, playlist information for both player A and player B is output into a single file.
- If a file with the same name already exists, a pop-up window opens to confirm whether you want to overwrite that file or not. Touch the OK button to overwrite that file, or touch the CANCEL button to return to the ASSIGN NAME screen.

Playback

Project/session/playlist selection

1. Press the **PROJECT** key on the front panel to open the **PROJECT** screen.



2. Touch the **→** button next to the project that contains the playlist that you want to play to open the session selection screen.

If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the **OK** button.



3. Touch the **→** button for the session that contains the playlist that you want to play to open the playlist selection screen.

If it is not the current session, a pop-up window appears confirming that you want to load it. Touch the **OK** button.



TIP

You can also touch the current project/session name button at the top right of the **PROJECT** screen to open the playlist selection screen for the current session.

4. Touch the name of the playlist that you want to play to select it. Its background becomes yellow.
5. Touch the **MENU** button on the Playlist selection screen to open a pull-up menu.

The items in the menu differ between single and dual mode.



Playlist selection screen pull-up in single mode

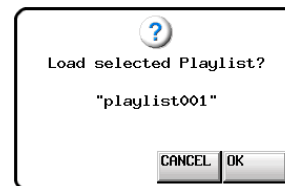


Playlist selection screen pull-up in dual mode

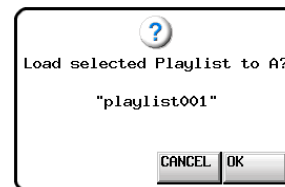
6. In single mode, touch the **LOAD** button in the pull-up menu to load the playlist.

In dual mode, touch the **LOAD to A** or **LOAD to B** button in the pull-up menu to load the playlist to player A or player B, respectively.

A confirmation pop-up appears.



Single mode



[Dual mode, LOAD to A selected]

7. Touch the **OK** button or press the **DATA** dial.

When loading completes, the Home Screen opens.

NOTE

On the playlist selection screen, instead of touching the **MENU** button followed by the **LOAD** button (or **LOAD to A/B** button) in the pull-up menu item, you can also press the **→** button for the playlist that you want to play to load it.

When in single mode, the same pop-up message as above appears. Touch the **OK** button or press the **DATA** dial.

When in dual mode, the pop-up window has **LOAD to A** and **LOAD to B** buttons. Touch the one for the desired player.

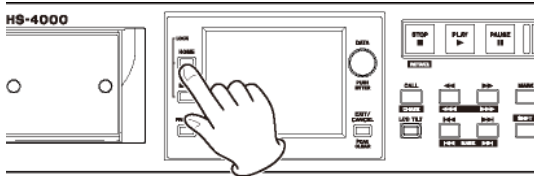


9 – Playlist mode

Selecting the current player

When in dual player mode, set which player the controls on the front panel affect.

1. Press the **HOME** key on the front panel to open the Home Screen.



Dual player Home Screen

2. Touch the **SELECT** button for the player that you want to select.

The background of the selected player becomes yellow.



Dual player Home Screen with player B selected

Setting the online function

When a player is selected, press the **ONLINE** key on the front panel to set whether or not the sound from that player is output through the output connectors.

Refer to “Online functions” on page 89 for details about making settings for the online outputs.

NOTE

You cannot turn this function on or off for a player that is not selected. Select the player first and then press the **ONLINE** key to turn this function on/off for it.

Playback control in playlist mode

Press the **PLAY** key to start playback.

Press the **PAUSE** key to pause playback.

Press the **PLAY** key again to resume playback.

Press the **STOP (RETAKE)** key to stop playback.

Press the **◀◀ [MARK ◀◀]** key or **▶▶ [MARK ▶▶]** key to switch entries.

Press and hold the **◀◀ [◀◀◀◀]** or **▶▶ [▶▶▶▶]** key to search

backward or forward.

Press the **◀◀ [MARK ◀◀]** or **▶▶ [MARK ▶▶]** key while pressing and holding the **SHIFT** key to move between marks.

Press and hold the **◀◀ [◀◀◀◀]** key or **▶▶ [▶▶▶▶]** key while pressing and holding the **SHIFT** key to search at high-speed.

NOTE

- On the **PLAY SETUP** screen, you can set whether only the currently selected entry is played or whether all the entries within the current playlist are played. You can also enable and disable repeat playback. (See “Playback settings (PLAY SETUP)” on page 73.)
- Playback functions can also be used via parallel control.

Using the call function in playlist mode

Press the **CALL (CHASE)** key to locate to the point where playback was last started from playback standby (call point) and put the unit in playback standby mode.

BWF-J cue point

When the Follow BWF-J item is set to ON, during playback if a BWF-J cue point is detected, the following corresponding operation will occur. In addition, if the BWF-J Tally Out item is set to ON and the unit is in single player mode, in response to each BWF-J cue point, the CUE signal and tally signal will be output from the parallel remote connector.

BC\$STANDBY	During entry selection, this point is used as the playback start point. During playback, playback pauses when this point is reached. In either case, a BC\$STANDBY tally is output.
BC\$CM	During playback, when this point is reached, a BC\$CM CUE signal is output.
BC\$END	During playback, when this point is reached, a BC\$END CUE signal is output.
BC\$STOP	During playback, when this point is reached, a BC\$STOP CUE signal is output, and playback stops.
BC\$FILE	During playback, when this point is reached, a BC\$END CUE signal is output. If the beginning of a following take (BC\$STANDBY CUE point) exists, that CUE will be followed.
BC\$PAUSE	During playback, when this point is reached, a BC\$PAUSE tally is output, and playback pauses.

Using the flash start function in playlist mode

Using a TASCAM RC-HS32PD (sold separately) or other remote controller, flash start playback is possible.

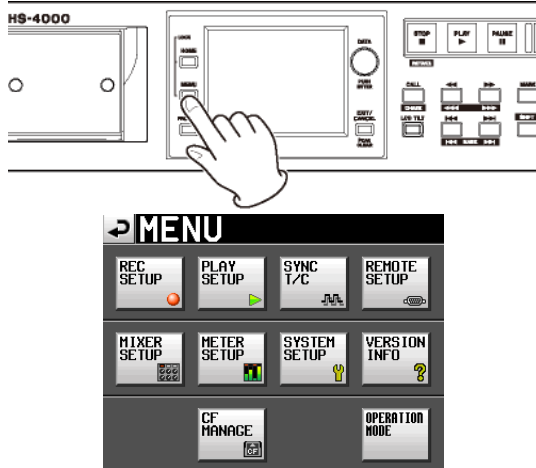
For details, see “Flash start function” on page 90.

10 – Internal settings

In this chapter, we explain the unit's internal settings in detail.

Menu screen

Press the **MENU** key on the front panel to open the following **MENU** screen.



REC SETUP button

Make recording settings.

PLAY SETUP button

Make playback settings.

SYNC T/C button

Make synchronization and time code settings.

REMOTE SETUP button

Make settings for external remote control.

MIXER SETUP button

Make mixer settings.

METER SETUP button

Make level meter settings.

SYSTEM SETUP button

Make system settings.

VERSION INFO button

Show the system version.

CF MANAGE button

Manage CF cards.

OPERATION MODE button

Make operation mode system settings.

Recording settings (REC SETUP)

The **REC SETUP** screen has three tabbed pages: **REC MODE**, **FILE FORMAT** and **OPTIONS**. Touch the tabs at the bottom of the screen to open the corresponding page.

REC MODE page

Make settings related to the recording mode.



Confidence monitoring

Turn the confidence monitoring function, which allows immediate playback of the recorded signal for monitoring, **ON** (default) or **OFF**.

To use the confidence monitoring function, however, the sampling frequency and number of tracks must be set as follows.

Fs (sampling frequency):

44.1k, 48k, 48k -0.1% or 48+0.1k

TIMELINE Rec Tracks(in timeline mode):

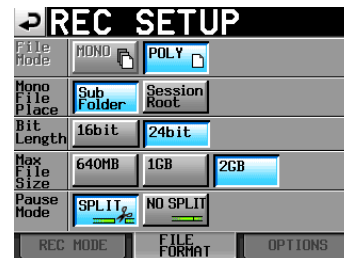
2tr

Number of tracks armed for recording (in take mode):

No more than 2 total

FILE FORMAT page

Make settings related to the file format.



File Mode

Use the following buttons to set the recording file mode.

MONO button:

Each track is treated as a monophonic file. (This option will be selectable in a future firmware version upgrade)

POLY button (default):

Multiple tracks are combined into polyphonic files.

Mono File Place

When the **File Mode** is set to **MONO**, set the folder where audio files are saved with the following buttons.

Sub Folder button (default):

Audio files are saved in subfolders created for each take within the session folder.

Session Root button:

Audio files are saved directly in the session folder.

10 – Internal settings

CAUTION

- In both modes, a subfolder is created for each take inside the folder, and management files are generated in these subfolders.
- When Session Root mode is selected, the maximum number of takes that can be recorded in a single session is greatly reduced from normal. For this reason, when switching to Session Root mode the following pop-up window appears with a warning about the reduced maximum limit to the number of takes.



When switching to Sub Folder mode, the following pop-up window appears explaining the restored maximum limit to the number of takes.



- When Session Root mode is selected, the number of files created is large. For this reason, the maximum number of takes that can be recorded is greatly reduced. (See "Recording operation limitations" on page 30.)
- During recording, you can press the **REC** key to start recording a new take. This function can be used 4 seconds after beginning recording in polyphonic and subfolder modes, but in Session Root mode, you might have to wait more than 4 seconds.

Bit Length

Set the quantization bit rate for recording files using the following buttons.

Setting buttons: **16bit** (default), **24bit**

Max File Size

Set the maximum size for recording files using the following buttons.

Setting buttons: **640MB**, **1GB**, **2GB** (default)

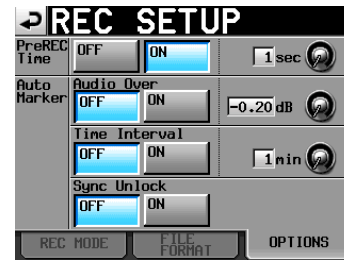
Pause Mode

Set whether or not to divide files when a recording is paused using the following buttons.

Setting buttons: **SPLIT** (default), **NO SPLIT**

OPTIONS page

Make settings related to the pre-recording and auto markers.



PreREC Time

When **PreREC Time** is **ON**, the signal input during recording standby is captured by the built-in memory for the set amount of time, allowing a maximum of 5 seconds to be recorded before recording is started manually.

To set the pre-recording time, touch the knob, and adjust the value using the **DATA** dial.

Setting range: 1–5 seconds (default: **2** seconds)

Auto Marker

Make settings related to auto markers.

Audio Over:

Use this to add markers when the set audio level is exceeded.

Turn this function **ON** or **OFF** and set the detection level. (Default: **OFF**)

To set the detection level, touch the knob, and adjust the value using the **DATA** dial.

Setting options: **-0.20dB** (default), **-0.17dB**, **-0.13dB**, **-0.10dB**, **-0.06dB**, **-0.03dB**

Settings made here are reflected in the **Over Level 1** setting on the **METER SETUP** screen.

Time Interval:

Use this to add marks at fixed time intervals. Turn this function **ON** or **OFF** and set the time interval. (Default: **OFF**)

To set the time, touch the knob, and adjust the value using the **DATA** dial. The range of setting values is 1–10 minutes (default: **5** minutes).

Sync Unlock:

Use this to add a mark when synchronization with the master clock is lost. Turn this function **ON** or **OFF**. (Default: **OFF**)

NOTE

An "audio over" occurs when the level exceeds the maximum level (full scale) minus the value set by the user. (In the example above, this would be when the level exceeds the maximum level minus 0.20 dB.)

Playback settings (PLAY SETUP)

Use this screen to make settings related to playback.

GENERAL page

Make various settings related to the playback mode on this page.



Play Mode

Set how the playback of takes and entries is handled using the following buttons. This setting affects all modes except timeline mode.

One Take button (default):

Only the currently selected take or playback is played back.

All Take button:

All the takes in the currently loaded session or all the entries in the playlist are played back.

Repeat Mode

Turn repeat playback **ON** and **OFF** (default).

Follow BWF-J

Turn the BWF-J cue point function **ON** or **OFF** (default). This setting can be made separately for each mode. When the BWF-J cue point function is **ON**, operation will follow BWF-J cue points set in sessions and takes. For details about operation, see the following pages.

Timeline mode: page 45

Take mode: page 53

Playlist mode: page 70

CONTROL page

Make various settings related to the playback functions on this page.



Auto Cue

Turn the auto cue function **ON** or **OFF** (default). If auto cue is **ON**, whenever a take is changed or loaded, the unit will enter playback standby at the point where sound first starts in the take. When **Play Mode** is set to **One Take** and no sound is detected before the end of the take, the unit stops at the start of the take. When **Play Mode** is set to **All Take** and no sound is detected before the end of the take, the unit continues detection in the next take.

This setting affects all modes except timeline mode.

To set the auto cue start point detection level, touch the knob area and use the **DATA** dial to change the value.

Options: -72dB, -66dB, -60dB, -54dB (default), -48dB, -42dB, -36dB, -30dB, -24dB

Auto Ready

Turn the auto ready function **ON** or **OFF** (default).

If auto ready is **ON**, when playback of a take completes the unit automatically stops at the beginning of the next take.

This setting affects all modes except timeline mode.

Inc. Play

Turn the incremental play function **ON** or **OFF** (default).

When incremental play is **ON**, press the **PLAY** key during playback to move to the beginning of the next take and continue playing, or press the **STOP (RETAKE)** key during playback to move to the beginning of the next take and pause playback.

This setting affects all modes except timeline mode.

PLAY Inhibit Time

This sets a time interval during which playback of the same take (entry) cannot be restarted.

The following keys and commands are disabled (excluding flash start keys/commands for other takes/entries) for the duration of this setting. The **PLAY** key on the front panel of the unit, the **PLAY** key, flash start keys and fader start function of the TASCAM RC-HS32PD remote control (sold separately), and play and flash start commands from external controllers (RS-422, RS-232C, parallel, keyboard).

Setting range: 0–1000 msec (100 msec intervals), Inf (during playback the affected keys are disabled for this amount of time)
Default value: 0 msec

NOTE

When the **PLAY Inhibit Time** item is set to **Inf**, the incremental play function is automatically fixed to **OFF** and cannot be switched to **ON**.

Sync and time code settings (SYNC T/C)

Make various settings related to audio synchronization and time code on this page.

This screen has five pages: **CLOCK**, **SYNC**, **T/C**, **SETUP** and **I/O**. Touch the tabs at the bottom of the screen to open the corresponding page.

CLOCK page

View various clock status information and select the clock used for synchronization.



STATUS

The top section shows the project sampling frequency and clock synchronization status.

The bottom section shows digital input signal status in the format **D-INx** (x shows the channels), as follows.

Digital input signal status	Display
Locked	Locked (xx.xxx kHz)
When sampling rate conversion is ON	Locked (xx.xxx kHz FsOnv)
Unlocked	Unlocked (xx.xxx kHz)
No signal	Unlocked (no signal)
No audio signal present	Not Audio
Other Cbit information differs from the actual operation mode	Unmatched Cbit

10 – Internal settings

MASTER

Use the buttons to select the master clock to use.

INT button (default):

Use this unit's internal clock.

WORD button:

Synchronize with the word clock input through the **WORD/VIDEO IN** connector.

VIDEO button:




Synchronize with the video clock input through the **WORD/VIDEO IN** connector.

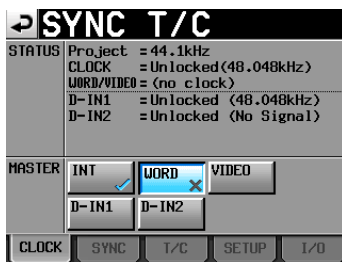
DIN-1, DIN-2 buttons:

Synchronize with the clock of the digital signal selected as the input of **DIGITAL IN 1/2**.

You cannot select an input as the master clock if the sampling rate converter is ON for that input.

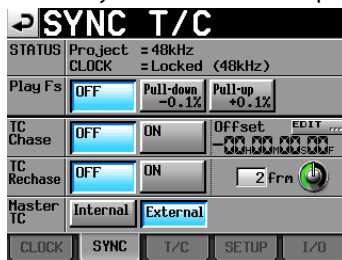
NOTE

- A  mark appears on the button of the currently active master clock.
- If synchronization from an external clock is interrupted, the unit's internal clock becomes active. In this case, the  mark appears on the INT button to show that it has become the active clock, and the  mark appears on the button of the selected external clock that was lost.



SYNC page

Make settings related to synchronization on this page.



STATUS

Shows the status of the currently loaded project's sampling frequency and clock synchronization.

Play Fs

When playing a take with a sampling frequency of 48 kHz, 48 kHz pull-up or 48 kHz pull-down, the unit can be made to synchronize with an external clock by setting it to play back with pull-up or pull-down.

Depending on the combination of Project sampling frequency and Play Fs settings, the unit will operate with the sampling frequency shown below (default: **OFF**).

Project sampling frequency	Play Fs setting		
	OFF	Pull-down	Pull-up
48 kHz	48 kHz	48 kHz-0.1%	48 kHz+0.1%
48 kHz pull-down	48 kHz - 0.1%	Not possible	48 kHz
48 kHz pull-up	48 kHz+0.1%	48 kHz	Not possible
All others	Project sampling frequency	Not possible	Not possible

NOTE

Set this to **OFF** before recording.

Recording is not possible when set to **Pull-up +0.1%** or **Pull-down -0.1%**. If you try to record when not **OFF**, "Cannot REC" appears in a warning pop-up window.

TC Chase

Use to turn playback synchronized with timecode **ON** or **OFF** (default).

Set it to **ON** when you want to match the timing of this unit's audio with a timecode master device (audio recorder, video or built-in time code generator).

You can also set timecode offset (TC Offset) with the timecode master device. Touch the **EDIT** button to open the **CHASE Offset** screen where you can set the offset value in a range between -23:59:59.29 and +23:59:59.29 (default: 00:00:00.00).

NOTE

TC Chase can also be turned ON and OFF by pressing the **SHIFT** and **CALL** keys at the same time.

TC Rechase

Turn this function, which re-synchronizes when synchronization with timecode becomes inaccurate, **ON** or **OFF** (default).

When set to **OFF**, after synchronizing once, input time code is ignored and the unit operates in free run mode.

When set to **ON**, set the amount of inaccuracy that triggers rechasing.

To set the amount of inaccuracy that triggers rechase, touch the knob and turn the **DATA** dial to select a value in frames of **1/3**, **1**, **2** (default), **5** or **10**.

Master TC

Set whether the unit synchronizes with the built-in timecode generator or with timecode input from another device.

Internal button:

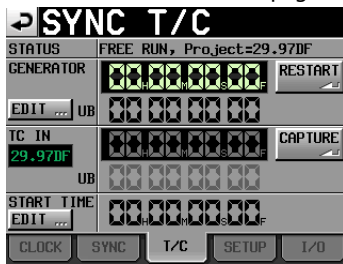
Synchronize with the built-in generator.

External button (default):

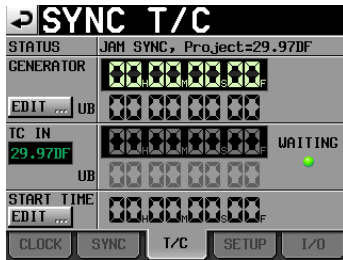
Synchronize with timecode input from another device.

T/C page

Make settings related to time code on this page.



Set to free run



Set to jam sync (and free once)

STATUS

This shows the time code generator mode of the unit and the time code frame type of the currently loaded project.

GENERATOR

The top line shows the current time code generator.

The bottom line shows the user bits (**UB**).

Touch the **GENERATOR** item **EDIT** button or the user bits (**UB**) display area to open the **T/C USER BITS** screen.

When the time code generator is in free run mode, touch the **RESTART** button to reset the time code of the time code generator to the start time.

TC IN

The top line shows the time of the input time code and the frame type. The bottom line shows the user bits (**UB**) of the input time code.

In Free Run mode, touch the **CAPTURE** button to capture the current time code and set it as the time code of the time code generator.

If the time code generator mode is Free Once or Jam Sync, the capture status (**WAITING**) indicator lights green when waiting for time code, and it turns off after time code is captured.

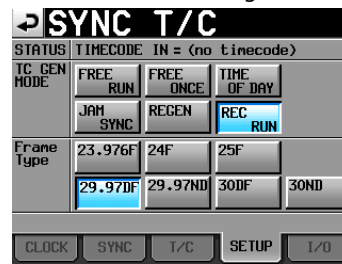
START TIME

When you touch the **GENERATOR** item **RESTART** button, the time when the time code restarts is shown.

Touch the **START TIME** item **EDIT** button or the **START TIME** display area to open the **START TIME** screen.

SETUP page

Make settings related to the time code generator on this page.



STATUS

This area shows the currently loaded project's time code frame type.

TC GEN MODE

Use the buttons to set the time code generator mode.

FREE RUN button:

The time code generator runs on its own.

FREE ONCE button:

After the input time code is captured once, the unit starts free run mode.

TIME OF DAY button:

If you conduct any of the following operations, the time will be captured from the internal clock and free run mode will start.

- Turn the power on
- Set **TC GEN MODE** to this mode
- Reset the internal clock

JAM SYNC button:

When time code is input, the unit synchronizes to it. If time code input is interrupted, the unit enters free run mode.

REGEN button:

The unit synchronizes to the input time code.

REC RUN button (default):

The time code generator only functions during recording. At all other times, the time code generator stops.

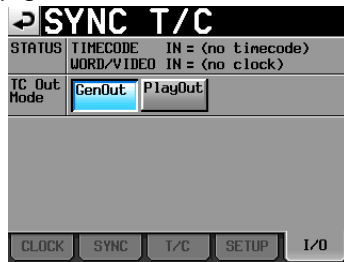
Frame Type

Set the time code frame type of the currently loaded project. Setting buttons: **23.976F**, **24F**, **25F**, **29.97DF** (default), **29.97ND**, **30DF**, **30ND**

10 – Internal settings

I/O page

Set the synchronization signal status display and time code output on this page.



STATUS

This shows the status of synchronization signals.

TIMECODE IN:

When time code is input, the time code frame rate is shown.

WORD/VIDEO IN:

When a synchronization signal is detected at this connector, **WORD**, **VIDEO** or **TriLevel** is shown.

TC Out Mode

Use the buttons to set the time code output mode.

GenOut button:

Time code is output from the internal time code generator.

PlayOut button (default):

In timeline mode, the time code time for playback and recording is output. In take and playlist modes during playback, the time code recorded in the file is output.

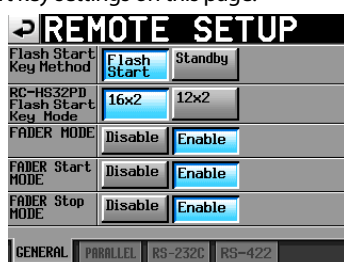
Remote settings (REMOTE SETUP)

Make settings for the **PARALLEL**, **RS-232C** and **RS-422** connectors.

The **REMOTE SETUP** screen has 4 pages: **GENERAL**, **PARALLEL**, **RS-232C** and **RS-422**. Touch the tabs at the bottom of the screen to open the corresponding page.

GENERAL page

Make flash start key settings on this page.



Flash Start Key Method

Set how the flash start key operates.

This function is planned for a future firmware version upgrade. Currently, the setting cannot be changed from **Flash Start**.

Flash Start button (default):

Touch a flash start key to start flash playback.

Standby button:

When stopped, touch a flash start key to start playback standby. Then, press the **PLAY** key to start playback.

During playback, touching another flash start key will cause the corresponding take or entry to become lined up for playback. Press the **PLAY** key to start playback of that entry. If the **Play Mode** is set to **All Take**, when the currently playing entry completes playback, the entry that is lined up will start playing. If the **Play Mode** is set to **One Take**, when the currently playing entry completes playback, the

entry that is lined up will start playback standby.

RC-HS32PD Flash Start Key Mode

This sets the number of flash start keys for a TASCAM RC-HS32PD remote controller (sold separately) in dual playlist mode.

16x2 keys button:

16 keys can be used by both A and B for a total of 32 keys.

12x2 keys button:

12 keys can be used by both A and B for a total of 24 keys.

NOTE

In take mode and single playlist mode, 32 keys are always used.

FADER MODE

Set whether faders on an external TASCAM RC-HS32PD remote controller (sold separately), for example, are enabled or not.

When set to **Disable**, the internal fader is fixed at 0 dB.

Setting buttons: **Disable**, **Enable** (default)

FADER Start MODE

When the fader start function of an external TASCAM RC-HS32PD remote controller (sold separately), for example, is on, set whether fader start, which allows you to start playback by raising the fader from ∞ when in playback standby, is enabled or not.

Setting buttons: **Disable**, **Enable** (default)

FADER Stop MODE

When the fader stop function of an external TASCAM RC-HS32PD remote controller (sold separately), for example, is on, set whether fader stop, which allows you to put playback into standby by lowering the fader to ∞ during playback, is enabled or not.

Setting buttons: **Disable**, **Enable** (default)

NOTE

If both the **FADER Start MODE** and **FADER Stop MODE** items are set to **Disable** the fader start function of the external TASCAM RC-HS32PD remote controller (sold separately) will be turned off automatically, and the **FADER START** indicator will turn off. In this state, if you press the Fader Start key on the TASCAM RC-HS32PD remote controller, a "Cannot Change Now. Fixed in current mode" warning appears in a pop-up window.

PARALLEL page

Set the AUX 1-3 functions of the **PARALLEL** connector.



AUX Assign

Touch a knob to select it, making the background yellow, and turn the **DATA** dial to set the parameter.

The parameters that can be selected include **F**, **FWD**, **REW**, **MARK**, **MARK SKIP-**, **MARK SKIP+**, **ONLINE**, **CALL** and **FADER START B**.

• AUX1 Function:

Set the function of PARALLEL connector pin 17 (AUX1) (default: **MARK SKIP+**).

• AUX2 Function:

Set the function of PARALLEL connector pin 18 (AUX2) (default: **MARK SKIP-**).

• AUX3 Function:

Set the function of PARALLEL connector pin 19 (AUX3) (default: **MARK**).

BWF-J Tally

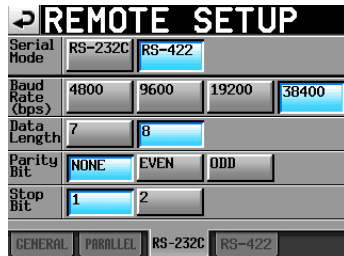
When not operating in BWF-J mode (when the Follow BWF-J item is OFF), set whether a BWF-J tally is output. Setting buttons: **OFF** (default), **ON**

NOTE

BWF-J tallies are always output when BWF-J mode is on.

RS-232C page

Make RS-232C serial control transmission settings on this page.



Serial Mode

Set the serial connection mode with the following buttons. RS-232C support is planned for a future firmware version upgrade.

Setting buttons: **RS-232C**, **RS-422** (default)

NOTE

- *The RS-232C and RS-422 connectors cannot both be used at the same time. Only the connector selected with this setting is operable.*
- *This setting is synchronized with the Serial Mode item on the RS-422 page.*

Baud Rate (bps)

Set the transmission speed (baud rate) with these buttons.

Setting buttons (bps): **4800**, **9600**, **19200** and **38400** (default)

Data Length

Set the data length in bits with these buttons.

Setting buttons (bits): **7** or **8** (default)

Parity Bit

Set whether or not there is a parity bit with these buttons.

Setting buttons: **NONE** (default), **EVEN** and **ODD**.

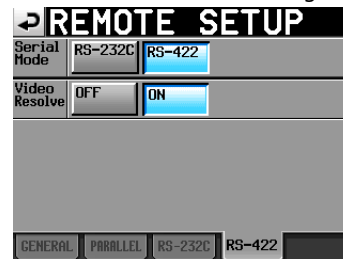
Stop Bit

Set the stop bit with these buttons. The options are 1 (default setting) and 2.

Setting (bit): **1** (default) or **2**

RS-422 page

Make RS-422 serial control transmission settings on this page.



Serial Mode

Set the serial connection mode with the following buttons. RS-232C support is planned for a future firmware version upgrade.

Setting buttons: **RS-232C**, **RS-422** (default)

NOTE

- *The RS-232C and RS-422 connectors cannot both be used at the same time. Only the connector selected with this setting is operable.*
- *This setting is synchronized with the Serial Mode item on the RS-232C page.*

Video Resolve

When slaving this unit to a VCR, video sync signals might be used instead of word sync signals for the common standard clock. In the same way as with word sync signals, you can select whether the video clock is followed (synchronizing the beginning of time code frames with video signal frame edges) or it is independent from the frame clock.

This must be turned ON to accurately control this unit from a video editor.

ON (default): Time code frame edges synchronized with video signal frame edges

OFF: Independent from video frame clock

10 – Internal settings

Mixer settings (MIXER SETUP)

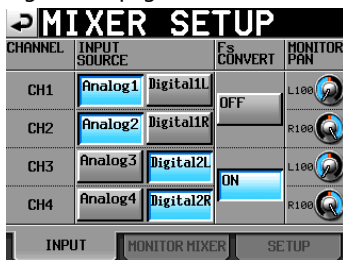
Make mixer settings on this screen.

The **MIXER SETUP** screen has 3 pages: **INPUT**, **MONITOR MIXER** and **SETUP**.

Touch the tabs at the bottom of the screen to open the corresponding page.

INPUT page

Make input settings on this page.



INPUT SOURCE

Set the input source for each channel. Select an analog input (AnalogX) or digital input (DigitalX). ("X" is the channel.) Analog and digital cannot be selected at the same time.

Analog 1–4 buttons (default):

Analog Inputs 1–4

Digital 1L, 1R, 2L, 2R buttons:

Left and right channels for digital inputs 1 and 2

Fs CONVERT

Turn the sampling rate converter ON or OFF (default) for each pair of inputs. Channels 1–2 and 3–4 must be set in pairs, so different settings cannot be used for the channels in each pair (1–2 and 3–4).

MONITOR PAN

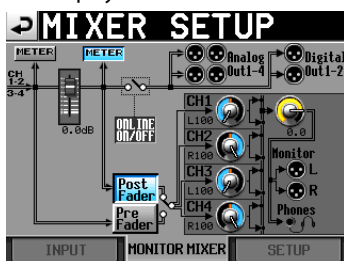
Use these to adjust the stereo position used for monitoring each channel. Touch a knob, making its background yellow, and use the **DATA** dial to set its stereo position.

Range: **L100** – **C** – **R100**

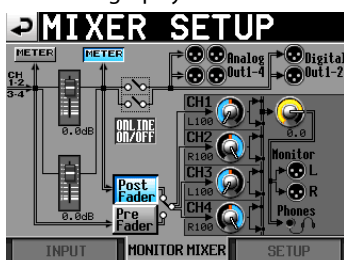
Default: **L100** for CH1 and CH3 and **R100** for CH2 and CH4

MONITOR MIXER page

Make monitoring mixer settings on this page. This page differs in single player and dual player modes.



Single player mode



Dual player mode

METER buttons

Use these buttons to set whether the meter shows the position before or after the online fader.

Touch the button on the left to show the level before the fader or touch the button on the right to show the level after the fader on the meter.

Post/Pre Fader buttons

Use these buttons to set whether the monitoring output is from before or after the online fader.

Pre Fader button:

Signals from before the online fader are output for monitoring.

Post Fader button (default):

Signals from after the online fader are output for monitoring.

Pan knobs

Use these to adjust the stereo position used for monitoring each channel. Touch a knob, making its background yellow, and use the **DATA** dial to set its stereo position.

Range: **L100** – **C** – **R100**

Default: **L100** for CH1 and CH3 and **R100** for CH2 and CH4

Level knob

Use this to adjust the level of the monitoring output. Touch this knob, making its background yellow, and use the **DATA** dial to adjust the level.

Range (dB): $-\infty$ to +10 (default: 0)

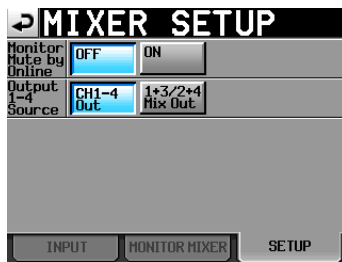
NOTE

If the monitoring mixer overload indicator appears on the Home Screen, use the level knob to lower the level.

Monitoring mixer overload indicators

If the left or right monitoring mixer channel overloads, the background of the corresponding L or R becomes red.

SETUP page



Monitor Mute by Online

Set whether monitoring is automatically muted or not during online playback (default: **OFF**).

Output 1-4 Source

Select the output signals for Outputs 1-4.

CH1-4 OUT button (default):

Output the signals of CH1-4 as is to the **ANALOG LINE OUT 1-4** connectors.

ANALOG LINE OUT connector	DIGITAL LINE OUT connector	Timeline, take, single playlist mode	Dual playlist mode
1	1 (CH1)	CH1	Player A-L
2	1 (CH2)	CH2	Player A-R
3	2 (CH1)	CH3	Player B-L
4	2 (CH2)	CH4	Player B-R

1+3/2+4 Mix Out button:

The signals of CH1 and CH3 are mixed and output through the **ANALOG LINE OUT 1** and **3** connectors and the left channels of the **DIGITAL LINE OUT 1** and **2** connectors, and the signals of CH2 and CH4 are mixed and output through the **ANALOG LINE OUT 2** and **4** connectors and the right channels of the **DIGITAL LINE OUT 1** and **2** connectors.

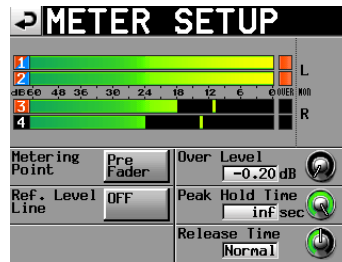
ANALOG LINE OUT connector	DIGITAL LINE OUT connector	Timeline, take, single playlist mode	Dual playlist mode
1	1 (CH1)	CH1+CH3	A-L + B-L
2	1 (CH2)	CH2+CH4	A-R + B-R
3	2 (CH1)	CH1+CH3	A-L + B-L
4	2 (CH2)	CH2+CH4	A-R + B-R

NOTE

A and B indicate Players A and B, and + indicates that the signals are mixed.

Level meters settings (METER SETUP)

Make level meter settings on this screen.



Metering Point

Set whether the meters show the signal before or after the online faders.



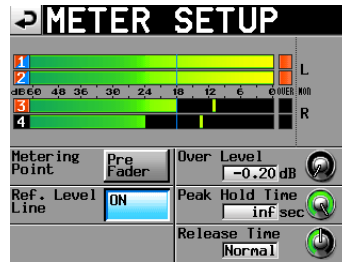
Meters show the signal before the faders (default).



Meters show the signal after the faders. In this case, the button appears light blue.

Ref. Level Line

Touch to turn the reference level line that appears on the level meter **ON** (default) or **OFF**.



Reference level line display ON

Over Level

Use this to set the level at which the overload indicator lights. The peak indication level is this amount below the maximum level (full scale).

Touch this knob and use the **DATA** dial to adjust the level. Options: **-0.20 dB** (default), **-0.17 dB**, **-0.13 dB**, **-0.10 dB**, **-0.06 dB**, **-0.03 dB**.

This setting is reflected in the Audio Over setting of the Auto Marker item on the **OPTIONS** page of the **REC SETUP** screen.

Peak Hold Time

Use this to set the peak hold time.

Touch this knob and use the **DATA** dial to adjust the time.

Options: **0 sec**, **1 sec**, **2 sec** (default) and **inf** (hold forever).

Release Time

Use this to set the release time.

Touch this knob and use the **DATA** dial to adjust the time.

Options: **Slow**, **Normal** (default) and **Fast**.

NOTE

If you press the **EXIT/CANCEL (PEAK CLEAR)** key when the Home Screen is open, the peak hold display resets.

10 – Internal settings

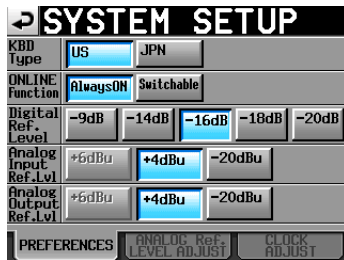
System settings (SYSTEM SETUP)

Make system settings on this screen.

The **SYSTEM SETUP** screen has 3 pages: **PREFERENCES**, **ANALOG Ref. LEVEL ADJUST** and **CLOCK ADJUST**. Touch the tabs at the bottom of the screen to open the corresponding page.

PREFERENCES page

Set system preferences on this page.



KBD Type

Set the connected keyboard type to either **US** for English-language keyboards or **JPN** for Japanese keyboards. Setting buttons: **US**, **JPN** (default)

ONLINE Function

Set whether or not to enable the online function (default: **Switchable**).

Set to "Switchable" to allow online playback mode to be enabled from the parallel connector, serial connector (RS-232C) or a TASCAM RC-HS32PD remote controller (sold separately).

Set to **AlwaysON** to not allow online playback to be used and always output the sound from all connectors. For details, see "Online functions" on page 89.

Digital Ref. Level

Set the reference level for digital inputs and outputs to a number of decibels below the maximum level (full scale).

Setting buttons: **-9dB**, **-14dB**, **-16dB**, **-18dB**, **-20dB** (default)

Analog Input Ref. Lvl

Set the reference level for analog inputs.

The options differ according to the **Digital Ref. Level** setting.

Digital Ref. Level setting	Analog Input Ref. Lvl
-9dB	Fixed at +6dB
Not -9dB	+4dB or -20dB

Analog Output Ref. Lvl

Set the reference level for analog outputs.

The options differ according to the **Digital Ref. Level** setting.

Digital Ref. Level setting	Analog Output Ref. Lvl
-9dB	Fixed at +6dB
Not -9dB	+4dB or -20dB

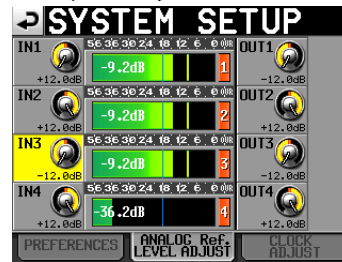
NOTE

Sound input through the analog audio inputs according to the analog input reference level becomes sound in the digital domain according to the digital reference level.

The analog audio outputs output digital sound according to the digital reference level as analog sound according to the analog output reference level.

ANALOG Ref. LEVEL ADJUST page

You can make fine adjustments to the analog input and output reference levels independently for each channel.



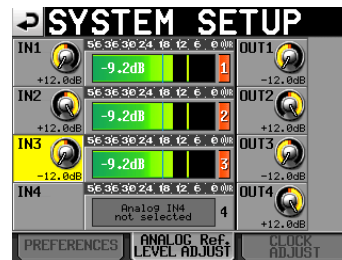
Use an **INX** knob to adjust the analog input level of the corresponding channel, and use an **OUTX** knob to adjust the analog output level of the corresponding channel. ("X" is the channel number.)

Touch a knob to select it, highlighting its area in yellow, and use the **DATA** dial to adjust the level.

Turn the dial to adjust it in 0.1-dB intervals, and press and turn the dial to adjust it in 1-dB intervals. The value is shown beneath each knob.

Setting range: -6dB to +6dB (default: 0dB)

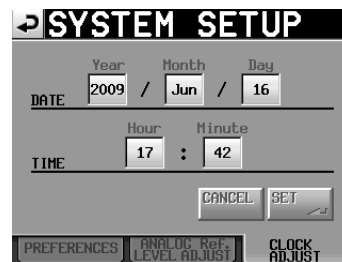
If an analog input for a channel is not set, the corresponding knob will not be shown and "Analog INX not selected" will appear in the menu area.



CH4 has no analog input

CLOCK ADJUST page

Set the time of the built-in clock.



Touch the item that you want to set, and use the **DATA** dial to adjust the item. (See "Setting the time of the built-in clock" on page 23.)

Touch the **SET** button on the **CLOCK ADJUST** page or press the **DATA** dial to confirm the setting.

NOTE

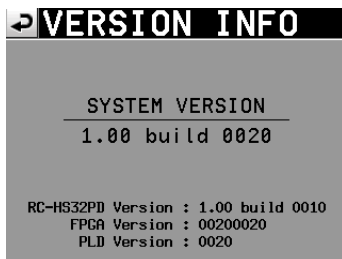
While setting the time, the clock stops and the ":" does not blink. When you touch the **SET** button, the clock starts again and the ":" blinks.

Version display (VERSION INFO)

This page shows the unit's SYSTEM version.



Touch the bottom center of the screen to show the version of the internal device data and the version of any TASCAM RC-HS32PD remote controller (sold separately) connected to the unit.

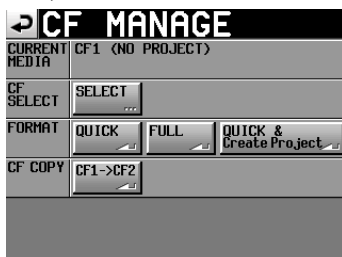


Managing CF cards (CF MANAGE)

Use this screen to manage CF cards.

NOTE

If you execute any of the *FORMAT* item commands or *CF COPY*, all the data on the CF card will be erased. Execute these commands only if you are absolutely certain that you want to erase the card.



CURRENT MEDIA

This shows the currently selected card slot name and its status.

CF SELECT

Touch this to open the **CF SELECT** screen where you can choose the CF card for recording and playback.

FORMAT

Format the CF card.

QUICK button:

This only formats CF card management information.

FULL button:

This formats the entire CF card.

QUICK & Create Project button:

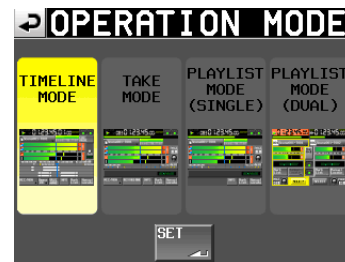
After formatting only the CF card management information, a new project is automatically created with the same settings as the current project.

CF COPY

This copies the entire CF card in the current CF slot to the other CF slot.

Operation mode selection (OPERATION MODE)

Set the unit's operation mode on this page.



After selecting an operation mode, touch the SET button to switch to it and return to the Home Screen.

TIMELINE MODE

The timeline mode becomes active and the Home Screen reopens.

TAKE MODE

The take mode becomes active and the Home Screen reopens.

PLAYLIST MODE (SINGLE)

The playlist mode (single mode) becomes active and the Home Screen reopens.

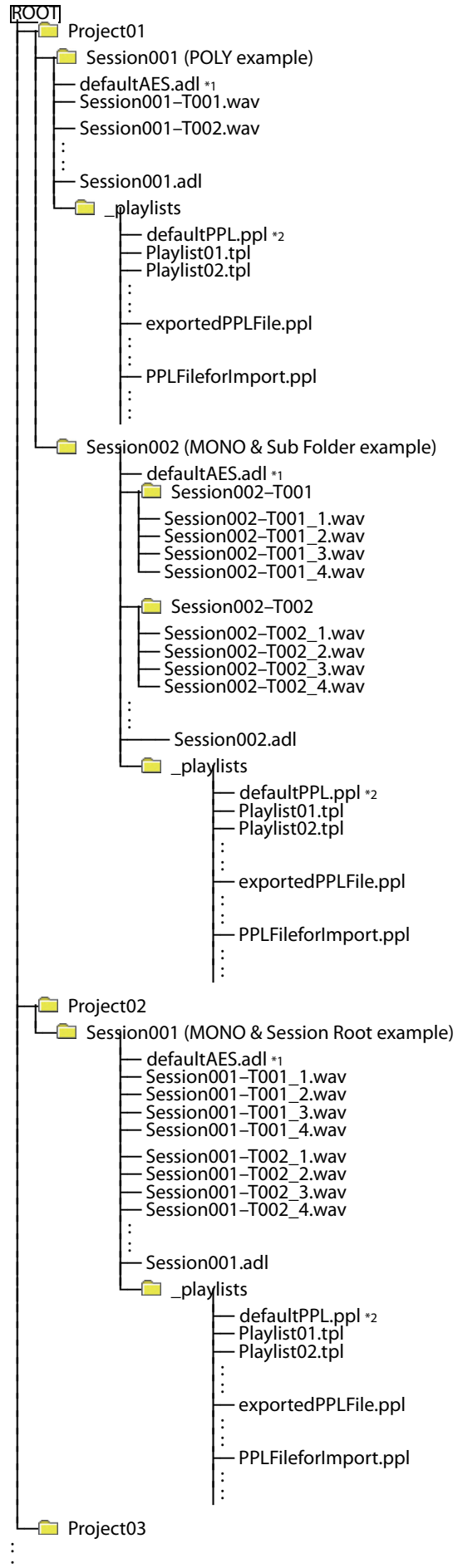
PLAYLIST MODE (DUAL)

The playlist mode (dual mode) becomes active and the Home Screen reopens.

10 – Internal settings

Folder structure

The folder structure is as shown below. You can check the CF card folder and file structure by accessing it from a computer using a card reader, for example. Be aware, however, if you change or erase files inside a project, or change any names, the HS-4000 might not be able to play that project.



*1: This AES31 file is automatically created

*2: This PPL file is automatically created

These files are created automatically when you save a session or playlist, but they are not shown when the file structure is viewed on the unit.

NOTE

- Poly files are created directly in the session folder.
- With mono files, subfolders are created inside the session folder for each take. When the **Mono File Place** setting is **SubFolder**, files are created in the take subfolders. When the setting is **Session Root**, files are created directly in the session folder.

CAUTION

- Even when **Mono File Place** is set to **Session Root**, subfolders are created and management files are stored in them. Do not erase these subfolders.
- Other management files and folders are created in addition to these.

File names

The format used in naming files is as follows.

1–4 track poly files

[Take name first half]-[letter][take number].wav

1–4 track mono files (planned for a future firmware version upgrade)

[Take name first half]-[letter][take number]_[track number].wav

11 – Mark and locate functions

Mark functions

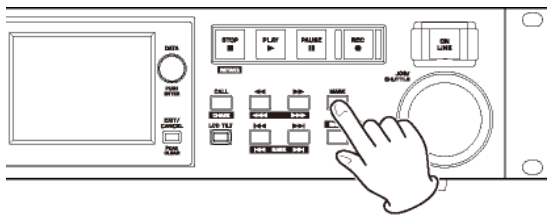
Adding marks

Use the following methods to create marks. One session in timeline mode or one file (take) in take mode can have a maximum of 99 marks, including automatically-created marks.

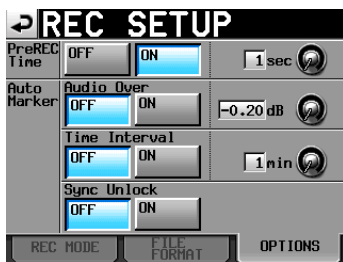
• Push the MARK key on the front panel.

Press the **MARK** key to add a mark at that playback/recording time. In timeline mode, marks are added to the timeline and file itself.

Mark names are in the format "MARK XX".



• Use the auto marker function



When the auto marker function is ON, marks can be automatically added when audio overs occur, at regular time intervals and when synchronization errors occur (see "OPTIONS page" on page 72).

In timeline mode, marks are added to the timeline and file itself. Marks are named according to how they were made.

When auto marks are made	Mark name
When audio over occurs	OVER xx
At every time interval	TIME xx
When a synchronization error occurs	UNLK xx

CAUTION

The following auto marks can be turned on/off. These are only added to the file (take), and will not appear in the timeline in timeline mode.

When auto marks are made	Mark name
Recording start point	REC xx
Recording end point	END xx
Pre-recording start point	PRE xx

NOTE

- An "audio over" occurs when the level exceeds the maximum level (full scale) minus the value set by the user. (In the example above, this would be when the level exceeds the maximum level minus 0.20 dB.)
- If a mark is triggered using parallel control, a mark is added in the same manner as if the MARK key had been pushed.

Using keys to locate to marks

While pressing and holding the **SHIFT** key, press the **◀◀ [MARK ◀◀]** or **▶▶ [MARK ▶▶]** key while pressing and holding the **SHIFT** key to locate to the previous or next mark.

NOTE

If MARK SKIP +/- is input using parallel control, the unit will locate to the next or previous mark.

Mark list screen

Touch the **Mark List** button on the Home Screen to open the **MARK LIST** screen.



NAME buttons

Touch to sort by mark name in descending or ascending order. When the mark names are sorted in ascending order, a **△** icon appears inside the **NAME** button. When in descending order, a **▽** icon appears inside this button.

TIME buttons

Touch to sort marks by time in descending or ascending order. When they are sorted by time in ascending order, a **△** icon appears inside the **TIME** button. When in descending order, a **▽** icon appears inside this button.

Mark name buttons

Touch to select a mark.

LOCATE (👉) buttons

Touch one of these to locate to the corresponding mark.

LIST INFO button

Touch this to see a list of the number of marks by type in the currently selected take.

EDIT NAME button

Touch this button to open the **MARK NAME** screen where you can edit the name of the selected mark.

EDIT TIME button

Touch this button to open the **MARK EDIT** screen where you can edit the position of the selected mark.

MULTI SELECT button

Use this to enable the selection of multiple marks.

DELETE button

Touch this button to erase the selected mark.

Scroll buttons

Use these buttons to scroll to the beginning or end of the mark list or scroll one page (five lines) forward or backward. You can also scroll through the mark list one line at a time using the **DATA** dial.

Locating to marks

Touch a  button to locate to the corresponding mark.

Viewing mark information

Touch the **LIST INFO** button on the **MARK LIST** screen to open the LIST INFO page. This screen shows a list of the number of marks by type in the currently loaded take.

Touch the **LIST INFO** button again to return to the **MARK LIST** screen.



MARK LIST TOTAL#18	
TYPE	COUNT
TOTAL	18
MANUAL MARK	2
TIME	5
OVER	10
UNLK	1

Mark list information screen

NOTE

After recording, the **MARK LIST** screen might show a **TOTAL** number of marks that is 2 or 3 greater than the sum of the **MANUAL MARK**, **TIME**, **OVER** and **UNLK** marks. This is because the total includes **REC**, **END** and **PRE** (when using prerecording) marks that are always created during recording.

NOTE

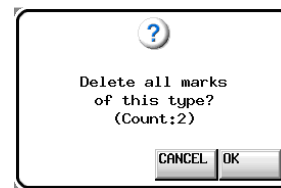
On the **mark list information** screen, you can select the mark or type of mark that you want to delete and press the **DELETE** button to erase all the marks of the same type.

When you do this, a "Delete all marks of this type?" confirmation pop-up appears. Touch the **OK** button or press the **DATA** dial to erase all the marks of the same type.



MARK LIST TOTAL#18	
TYPE	COUNT
TOTAL	18
MANUAL MARK	2
TIME	5
OVER	10
UNLK	1

Mark list information screen



Erasing marks using the mark list information screen

Erasing marks

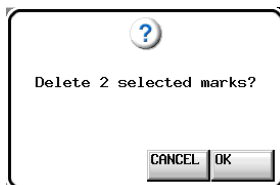
1. Select the mark that you want to erase on the **MARK LIST** screen.



MARK LIST TOTAL#18			
NAME	TIME	LOCATE	
BCSTANDBY	00:00:00		
BCSPAUSE	00:00:00		
BCSTART	00:00:00		
BCSEND	00:00:00		
MARK01	00:00:00		

MARK LIST screen

2. Touch the **DELETE** button on the **MARK LIST** screen. When a confirmation pop-up message appears, press the **OK** button or the **DATA** dial to erase the mark.



Erasing a mark using the MARK LIST screen

11 – Mark and locate functions

Editing mark positions

You can change the position (time) of marks added using the **MARK** list (marks named "MARKXX").

NOTE

Automatically placed marks cannot be edited.

1. Select the mark that you want to edit on the **MARK LIST** screen.



2. Touch the **EDIT TIME** button to open the **MARK EDIT** screen.

Touch the **FRAME EDIT** button to set whether or not the frame value can be edited.



FRAME EDIT on



FRAME EDIT off

3. Touch a number button to edit a mark. Use the **DATA** dial to change the time for the selected number.

Press the **ENTER** button to confirm the setting and return to the **MARK LIST** screen.

Touch the **CLEAR** button to reset the input value.

- If you begin input without selecting a digit, input will start from the smallest one.
- To input a specific digit, touch it to make its background yellow, then use the number buttons or the **DATA** dial to enter two digits at a time.
- Touch the **CURRENT** ▼ button to copy the current playback position to the input value.

TIP

- This can also be edited using an externally connected keyboard.
- Press the keyboard's Enter key to confirm a setting and its ESC key to clear all the values.

Editing mark names

1. Select the mark that you want to edit on the **MARK LIST** screen.



2. Touch the **EDIT NAME** button to open the **MARK NAME** screen.

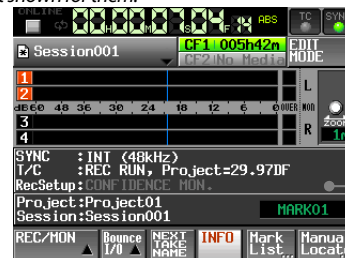


Follow the procedures in "Editing the project name" on page 35.

✕

You can also open the **MARK NAME** screen by touching the mark name area on the Home Screen (in timeline mode, when the **INFO** display is open).

However, since the names of automatic marks cannot be edited, the **MARK NAME** screen is not shown for them.



Mark name

If you want to input a BWF-J cue, touch the **BC\$** button at the upper right and select a cue name from the pull-down.



Manual locate function

You can directly input a time and locate to it.

Touch the Manual Locate button on the Home Screen to open the **MANUAL LOCATE** screen.

Touch the **FRAME EDIT** button to set whether or not the frame value can be edited.



FRAME EDIT on



FRAME EDIT off

There are three locate modes as follows.

ABS: Input an actual time and locate to it.

+: Input an amount of time to go forward from the current time.

-: Input an amount of time to go backward from the current time.

Input the time using the number buttons.

You can also select a number field in the **LOCATE** area and use the **DATA** dial to adjust the time.

Press the **LOCATE** button to locate to that new time and return to the Home Screen.

Touch the **CLEAR** button to clear all input values.

TIP

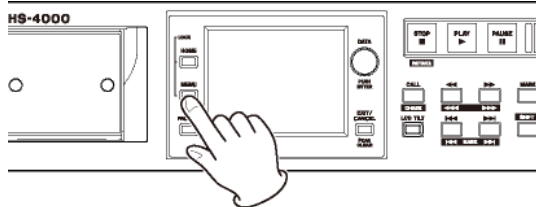
- This can also be input using an externally connected keyboard.
- Press the keyboard's Enter key to confirm a setting and its ESC key to clear all the values.

12 – Other functions

Confidence monitoring

During recording, the recorded audio can be read back right away from the media and output for monitoring.

1. Press the MENU key on the front panel to open the MENU screen.



2. Touch the REC SETUP button to open the REC SETUP screen.



3. Touch the Confidence Monitor ON button to enable the confidence monitoring function (default: ON).

Confidence monitoring operation conditions

To use the confidence monitoring function, the following settings are necessary.

- Fs (sampling frequency): 44.1k, 48k, 48k-0.1% or 48+0.1k
- TIMELINE Rec Tracks: 2tr (in timeline mode)
- Number of tracks armed for recording (in take mode):
No more than 2 total

NOTE

- Set the Fs item when creating a project, and set the TIMELINE Rec Tracks item when creating a session (or when creating a project for the first session). These cannot be changed after the creation of a project or session.
- When using confidence monitoring, the playback sound is delayed about 2.4 seconds before output.
- When a region (take) is divided or the recording region (take) reaches the maximum size, the confidence monitoring playback sound will be interrupted for a few seconds.

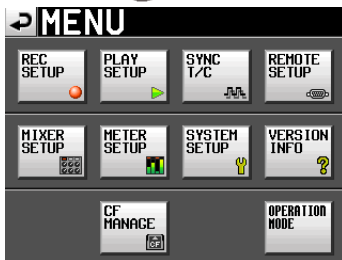
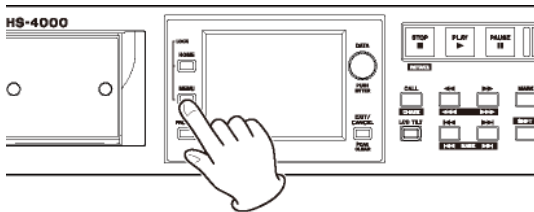
Online functions

Use the **ONLINE** key to turn this function on/off.

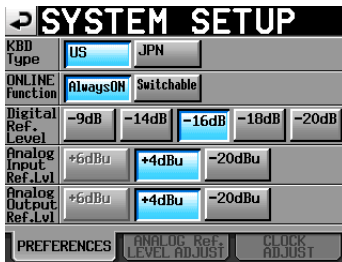
Enabling the online function

In order to use online function, the online function must be set to Switchable.

1. Press the **MENU** key on the front panel to open the **MENU** screen.



2. Press the **SYSTEM SETUP** button to open the **SYSTEM SETUP** screen.



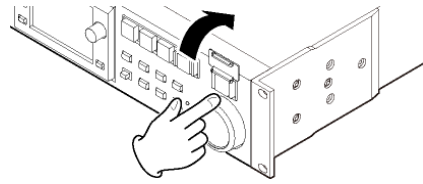
3. Touch the **Switchable** button of the **ONLINE Function** item to change the online function setting (default value: **AlwaysON**).

When the online function setting is **AlwaysON**, the online playback mode is always enabled and the **ONLINE** key stays lit to indicate this status.

Switching the online playback mode

When the online function can be changed (**ONLINE Function** item is set to **Switchable**), the following operations can be used to turn the online playback mode on/off.

- HS-4000 front panel: Press the **ONLINE** key



- When connected to a parallel control: **ONLINE** event
- When connected to an RS-232C serial control: **ONLINE** command
- TASCAM RC-HS32PD remote controller (sold separately): press the **ONLINE** key

In dual mode, only online playback mode for the selected player can be turned ON/OFF on screen. When using a TASCAM RC-HS32PD remote controller (sold separately), however, regardless of which player is selected, you can press the player **A** or **B** **ONLINE** key to turn online playback mode ON/OFF for the corresponding player.

When online playback mode is turned ON/OFF, the following occurs depending on the mode.

Timeline, take and single playlist modes

- When online playback mode is turned ON, the Home Screen opens automatically, and the **ONLINE** icon appears red at the top of the screen.
- When online playback mode is turned OFF, the **ONLINE** icon does not appear at the top of the screen.

Dual playlist mode

When online playback mode is turned ON, the Home Screen opens automatically, and the **ONLINE** icon appears partially red at the top of the screen.

When online playback mode is turned OFF, the **ONLINE** icon at the top of the screen becomes **MCN**.

Outputs during online playback

The relationship between online playback mode and sound outputs are as follows.

Online playback mode	OFF	ON
Analog line outputs (1–4)	–	○
Digital line outputs (1–2, AES/EBU)	–	○
Analog monitoring outputs (L, R)	○*	○*
Headphones	○*	○*
RC-HS32PD (headphones, speakers)	○*	○*

*The monitoring signal is always output.

CAUTION

When the **ONLINE Function** item is set to **AlwaysON** sound is always output from all connectors.

CAUTION

By turning the **Monitor Mute by Online** item (**MIXER SETUP** screen **SETUP** page) ON, you can enable monitoring output to automatically be turned off when online playback mode is on. (For details about the **Monitor Mute by Online** item, see "SETUP page" of "Mixer settings (MIXER SETUP)" in 10 – Internal settings.)

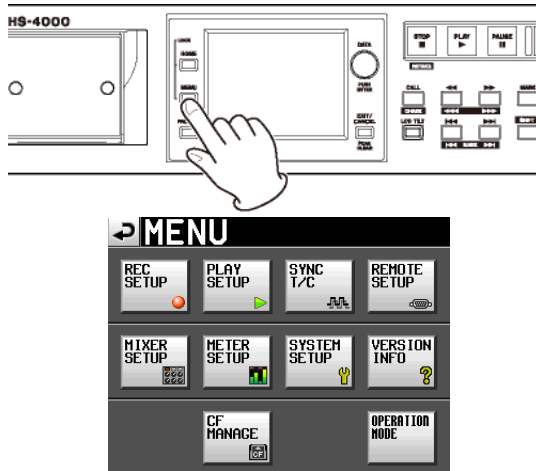
12 – Other functions

Flash start function

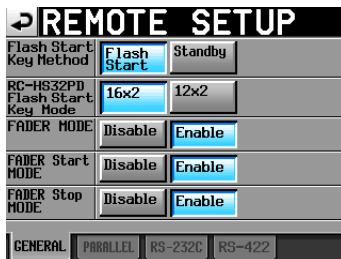
Use the flash start function to instantly start playback of takes that you have designated in advance. A maximum of 96 takes (2x96 takes in dual player mode) can be started instantly using a keyboard or devices connected to this the unit's remote connectors (REMOTE and PARALLEL).

Setting the flash key function

1. Press the **MENU** key on the front panel to open the **MENU** screen.



2. Touch the **REMOTE SETUP** button to open the **REMOTE SETUP** screen.



On the **GENERAL** page, set what happens when a flash start key is pressed, and set whether the two banks of flash start keys have 12 or 16 buttons each when using the TASCAM RC-HS32PD remote controller (sold separately) in dual playlist mode.

For details, see the "GENERAL page" of the "REMOTE SETUP screen" on page 76.

Selecting the flash page

1. In **take mode**, select the session that you want to play **back in**. (See "Loading sessions" on page 37)

When in playlist mode, select a playlist. (See "Loading playlists" on page 58.)

2. Use the **DATA** dial to select the page that contains the takes or files that you want to play.

When in dual playlist mode, use the **SELECT** button to select the current player first.

The first 96 numbered takes or files in the selected session or playlist can be played back using flash start. The pages depend on the **RC-HS32PD Flash Start Key Mode** and player mode.

	Take or single playlist mode	Dual playlist mode	
Page	16x2	16x2	12x2
1	1–32	1–16	1–12
2	33–64	17–32	13–24
3	65–96	33–48	25–36
4	—	49–64	37–48
5	—	65–80	49–60
6	—	81–96	61–72
7	—	—	73–84
8	—	—	85–96

NOTE

When using a TASCAM RC-HS32PD remote controller (sold separately), file names (or the first parts of long file names) appear on the keys, making it easy to check the files.

Flash start playback

When the **Flash Start Key Method** item is set to **Flash Start**, touching a flash start key causes the corresponding take or file to start playback instantly.

Standby playback

When the **Flash Start Key Method** item is set to **Standby**, if you press a flash start key when stopped, the take or file that corresponds to that key is put in playback standby and that key blinks yellow. Following this, pressing the **PLAY** key will cause playback to start and the key to become green. During playback, touching another flash start key will cause the corresponding take or file to become lined up for playback, and that key will become yellow. When a take or entry is lined up for playback, pressing the **PLAY** key will cause that take to start playing. To cancel standby, touch the key for the lined up take (yellow key) again.

Operation using a computer keyboard

You can control this unit by connecting an IBM-PC-compatible keyboard with a PS/2 or USB interface to the unit. Connect PS/2 keyboards to the **KEYBOARD** connector on the front panel of this unit. Connect USB keyboards to the **USB** connector on the front panel of this unit.

A variety of operations are possible, but using the keyboard is especially efficient for inputting names.

Setting the keyboard type

Set the type of keyboard connected on the **PREFERENCES** page of the **SYSTEM SETUP** screen. (See "PREFERENCES page" on page 80.)

Use the keyboard to input names

You can edit and input characters for the following items in the same manner as inputting characters on a computer.

- **Project name** (See "Editing the project name" on page 35.)
- **Session name** (See "Editing the name of the first session" on page 35 and "Creating new session" on page 37.)
- **First half of the next take name**
- **Letter in the second half of the next take name**
You can also use it to enter numbers for the following items.
- **Editing the T/C USER BITS**
- **Editing the START TIME**
- **Editing marks**
(See "Editing mark positions" on page 86 and "Editing mark names" on page 86.)
- **Inputting manual locate points**
(See "Manual locate function" on page 87.)
- **Editing time code offset**
(See "SYNC page" on page 74.)
- **Playlist name**
(See "Creating a new playlist" on page 56 and "Saving a playlist" on page 67.)
- **Names of exported PPL files**
(See "Creating a JPPA PPL file from the loaded playlist" on page 68.)
- **Names of exported AES31 files**
(See "Exporting AES31 editing information" on page 46.)
- **Playlist entry titles**
(See "Editing entry titles" on page 63.)
- **Bounce file names**
(See "Bouncing" on page 48.)

Selecting the type of character to input:

In the same manner as with a computer, use the Shift and Caps Lock keys to select the type of character to input.

Inputting characters:

You can use the number, letter and symbol keys to input them directly.

Moving the cursor:

Use the ←/→ keys.

Use the HOME/↑ key to move the cursor to the beginning.

Use the END/↓ key to move the cursor to the end.

Erasing characters:

Use the Delete key to erase the character at the cursor position.

Use the Backspace key to erase the character before the cursor position.

Inserting characters:

Input the character at the desired position.

CAUTION

- The following symbols and punctuation marks cannot be used in names.
\\ : * ? " < > |
- Japanese katakana cannot be input.
- The letter in the second half of the next take name can only be an uppercase letter from the alphabet.

List of keyboard operations

In addition to inputting names, a keyboard can be used to control the transport and conduct various other operations. The following is a summary of keyboard key functions.

Keyboard	Operation
F1 key	Same as ⏪ key
F2 key	Same as ⏩ key
F3 key	Same as CALL key
F4 key	Same as STOP key
F5 key	Same as PLAY key
F6 key	Same as PAUSE key
F7 key	Turn auto cue ON/OFF
F8 key	Same as REC key
F9 key	Turn auto ready ON/OFF
F10 key	Turn repeat mode ON/OFF
F11 key	Change play mode
F12 key	————
CTRL + F1 key	FLASH 1
CTRL + F2 key	FLASH 2
CTRL + F3 key	FLASH 3
CTRL + F4 key	FLASH 4
CTRL + F5 key	FLASH 5
CTRL + F6 key	FLASH 6
CTRL + F7 key	FLASH 7
CTRL + F8 key	FLASH 8
CTRL + F9 key	FLASH 9
CTRL + F10 key	FLASH 10
CTRL + F11 key	FLASH 11
CTRL + F12 key	FLASH 12

13 – Time code synchronization

In this chapter, we explain playback synchronization with timecode.

This unit's playback and recording can be synchronized with SMPTE time code input through the **TIMECODE IN** connector on the rear panel.

For recording and playback, this unit can be synchronized with SMPTE timecode input through the **TIMECODE IN** connector on its rear panel or with its built-in timecode generator ("master timecode" hereafter).

Time code synchronization differs according to the operation mode.

Playback synchronized with timecode

Timeline mode

In timeline mode, playback can be synchronized with master timecode.

When playing back with time code synchronization, when playback starts, it synchronizes with master timecode.

Take mode

(Support is planned in a future firmware version upgrade.)

Playlist mode

(Support is planned in a future firmware version upgrade.)

Recording synchronized with timecode

Timeline mode

In timeline mode, recording can be synchronized with master timecode.

When recording with time code synchronization, master timecode is captured the instant that recording starts, and recording starts from that time (timecode time) on the timeline.

Take mode

Chase and rebase are not possible.

The timecode from the built-in timecode generator is captured at the beginning of recording as the file starting time.

Playlist mode

In playlist mode, recording is not possible regardless of timecode synchronization status.

Basic operation

1. **In timeline or take mode, load the session that you want to record in or play back. In playlist mode, load the session that you want to play back.** (Support for modes in addition to timeline mode is planned for a future firmware version upgrade.)
2. **Either of the following operations will enable synchronized playback.**
 - While pressing and holding the **SHIFT** key, press the **CALL [CHASE]** key on the front panel.
 - On the **SYNC** page of the **SYNC T/C** screen, set **TC Chase** to **ON**.
3. **In timeline mode, when recording or playback starts time code synchronization also starts and the CHASE indicator on the Home Screen appears green.**
4. **Press the STOP key during recording or playback with time code synchronization to stop the transport. The CHASE indicator on the Home Screen blinks when stopped.**
5. **To resume recording and playback with time code synchronization, repeat steps 3 and 4.**
6. **Either of the following operations will turn synchronization off.**
 - While pressing and holding the **SHIFT** key, press the **CALL [CHASE]** key on the front panel.
 - On the **SYNC** page of the **SYNC T/C** screen, set **TC Chase** to **OFF**.After doing this, playback and other unit operations continue. The **CHASE** indicator on the Home Screen is replaced with the **TC** indicator.

Time code offset

You can set an offset for master timecode synchronization. By doing so, you can synchronize to master timecode for playback with a set time difference (see "SYNC page" on page 74).

Rebase

This unit continues to monitor master timecode even after synchronized playback starts. Should the playback time of this unit and the master timecode become unsynchronized for any reason, the unit can "rebase" the timecode. You can set whether or not the unit uses rebase and the degree of the discrepancy before rebasing (see "SYNC page" on page 74).

CAUTION

During synchronized recording, this unit only synchronizes to master time code once at the start of recording. There is no rebase function as there is with synchronized playback.

14 – Importing files recorded by other devices

This unit can import and play BWF format files recorded by other devices.

In addition, files created by other TASCAM HS series units can be played back without rebuilding if they meet the following conditions.

- The number of tracks is 4 or less
- The sampling frequency (Fs) is 96 kHz or less
- The file is a Poly file (file recorded with the **FILE MODE** item set to **POLY** or a 2mix file)

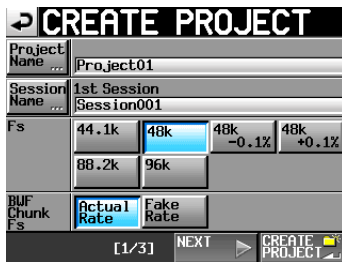
CAUTION

Since the sampling frequency (or sampling rate—the value of the **Fs** item in this unit) that can be played back is fixed by the project, the file sampling frequency must match the project **Fs** value.

Preparation before importing

Check the sampling frequency (sampling rate) of the file that you want to import in advance.

1. Select a project with an **Fs** value that matches the sampling frequency of the file or create a new project with the same sampling frequency as the file using the **Fs** item on **CREATE PROJECT** screen 1/3.



CREATE PROJECT screen 1/3

2. Create a session as necessary.

NOTE

For details about creating projects and sessions, see 34. “Project operations” on page 34 and “Session operations” on page 37.

3. Make a note of the names of the project and session that you want to use for importing the file.

In this example, the name of the project is “Project_i” and the name of the session is “Session_i”.

4. Confirm that the slot indicator where the card is inserted is not blinking rapidly and eject the CF card.

5. Insert that CF card into the CF card slot of the computer, for example.

If this CF card was formatted by this unit, it will be recognized by the computer as a drive named “HS-4000”.

In this example, the drive name **HS-4000** is used.

6. Copy the BWF-format file that you want to import into the “Session_i” session folder inside the “Project_i” project folder, which is in the HS-4000 drive.

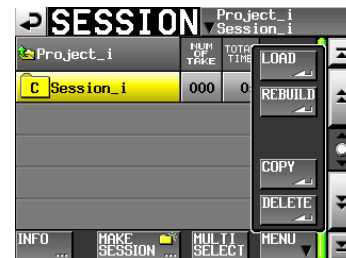
CAUTION

Do not eject the CF card while data is being written to it. Doing so could damage data on the CF card and even make data unreadable. For details, please see the manuals for your computer, card reader or other device being used for this purpose.

7. After writing data completes, remove the CF card from the CF card slot of the computer or other device.

Preparing the imported file to be used by this unit (session rebuilding)

1. Insert the CF card that you copied the file to into this unit’s card slot
2. Press the **PROJECT** key on the front panel to open the **PROJECT** screen, and touch the **→** button to the right of the project that contains the imported file (**Project_i**) to open the session selection screen.
3. Select the session that contains the imported file (**Session_i**), so that it appears yellow.
4. Touch the **MENU** button to open a pull-up menu, and touch the **REBUILD** button.



During rebuilding, the status of progress is shown in a pop-up window. When rebuilding completes, the pop-up window disappears.

The imported file is now recognized as a take.

5. You can play the file in take mode or add it to a playlist in playlist mode and play it back.

See “Playback” in “8 – Take mode” on page 52 for details about take mode playback or in “9 – Playlist mode” for details about playlist mode playback on page 56.

TIP

You can also rebuild an entire project by selecting it on the project selection screen, touching the **MENU** button and touching **REBUILD** in the pull-up menu. Moreover, you can touch **REBUILD** when no project has been selected to rebuild the selected CF card entirely. Note, however, that rebuilding entire projects and, especially, cards takes considerably more time.

15 – Troubleshooting

If the operation of this unit becomes irregular, please check the following things before requesting repair.

If the following measures do not resolve the problem, contact the store where you purchased the device or a TEAC Repair Center.

● Power does not turn on.

↓

- Confirm that the power plug, for example, is connected completely.

● Media is not recognized.

↓

- Confirm that the CF card is securely inserted into the CF slot.
- Pause recording or playback.

● The unit controls do not function.

↓

- Is the panel lock function ON?

● Playback is not possible.

↓

- Confirm that the file is of a compatible sampling frequency (44.1/47.952/48/48.048/88.2/96 kHz, 47.952/48.048: 48 kHz ±0.1% pull-down/pull-up) and bit rate (16/24).

● There is no sound.

↓

- Reconfirm the connections of your monitoring system and check the level of your amplifier.
- On the **MONITOR MIXER** page of the **MIXER SETUP** screen, check that the monitor level settings (level knob settings) are not all the way down.
- When using a TASCAM RC-HS32PD remote controller (sold separately), confirm that the fader is not lowered.
- If you cannot hear the input signal, arm the recording and turn input monitoring ON.
- If you cannot hear the playback sound, turn input monitoring OFF.
- Check the online function and online playback mode settings.
- On the **SETUP** page of the **MIXER SETUP** screen, check that the **Monitor Mute by Online** item is not ON. (If it is ON, the monitoring signal is muted when online.)

● Recording is not possible.

↓

- Reconfirm connections.
- Adjust the recording levels.
- If the CF card does not have enough capacity, erase unneeded data and increase the amount of open space or change the CF card.
- If the maximum number of recordable takes or the maximum take number has been reached, change the recording session.
- If the total number of items in the folder, including files and subfolders/directories, is too large, change the recording session.

● Setting changes are not remembered.

↓

- This unit backs up settings whenever the CF card selection is changed, a project, session or take is loaded, and playback or recording occurs. After startup, if none of these actions is conducted, settings might not be backed up even if they are changed.

● I hear noise.

↓

- Confirm that none of the cables have problems.

● The touch panel does not work properly.

↓

- Do not use commercially-available protective film for LCD screens on the touch panel.
- Confirm that the panel lock function is not engaged and locking the display.

● I cannot create a new project.

↓

- Confirm that a project with the same name does not already exist.
- If the amount of space remaining on the CF card is too small, a new project cannot be created. Erase unnecessary data and then try again.

16 – Messages

The following is a list of messages that the HS-4000 shows in pop-up windows. Refer to this list to learn more about each message as well as how to respond to them.

Message	Details and responses	Remarks
--- error --- INFO WRITING	An error occurred while writing information.	
--- FORMAT --- Completed	Formatting has completed.	
--- FULL FORMAT --- FORMAT CFn? This will erase all DATA on card	Full formatting will be performed.	n = 1 or 2
--- FULL FORMAT --- Formatting CFn...	Full formatting is occurring.	n = 1 or 2
--- ONLINE Function --- Changes Output Routing. Touch OK to make ONLINE *****.	Enabling and disabling the ONLINE function changes the sound output routing.	***** = AlwaysON/switchable
--- QUICK FORMAT --- FORMAT CFn? This will erase all DATA on card	Quick formatting will be performed.	n = 1 or 2
--- QUICK FORMAT --- Formatting CFn...	Quick formatting is occurring.	n = 1 or 2
--- RETAKE --- Ignore last RECORD pass?	A retake will be performed.	
--- Shutdown --- working ...	The unit is shutting down.	
<AES31 ADL Info> "ffffff" Size: **MB yyyy/mm/dd hh: mm	AES31 editing file information	ffffff = editing information file name
Bounce Selected Region to file? "ffffff"	The selected region will be bounced to "ffffff".	ffffff = file name
CHn-n D-In: Fs convert On Cannot select as Master clock.	The sampling rate converter is ON for the digital input that you tried to set as the clock master.	n-n = 1-2, 3-4, 5-6, 7-8
Canceled	The operation was canceled.	
Cannot Change Now Confidence Monitor cannot set to ON while current fs/rec channels.	Confidence monitoring cannot be enabled with the current sampling rate or recording track number setting.	
Cannot Change Now Currently **	This item cannot be changed during playback, online operation, timecode chase or recording.	** = Playing, ONLINE, Chasing TC or Recording
Cannot Change Now Fixed in current mode.	In the current mode, settings are fixed and cannot be changed.	
Cannot Change Now Inc.Play cannot set to ON while Play Inhibit Time is Inf.	Since the "Play Inhibit Time" item is set to "Inf", the "Inc. Play" item cannot be turned ON.	
Cannot Copy Not enough space on CFn	There is not enough available space on the copy destination card.	n = 1 or 2
Cannot Copy. "tttttt" already exist in current session.	When assigning a take from another session to an entry, that take is copied to the current session. In this case, a file with the same name as the copied take already exists in the current session. RENAME button: change the name and copy the file CANCEL button: do not copy	"tttttt" = name of take to copy
Cannot Copy. Session already exists on CFn. Overwrite session?	A session with the same name already exists at the copy destination. Do you want to overwrite that session?	n = 1 or 2
Cannot create more than 100 projects	The maximum number of projects that can be created has already been reached, so a new project cannot be created.	

16 – Messages

Message	Details and responses	Remarks
Cannot create new mark point... Mark point already exists at the same timestamp.	You tried to create a mark at a time where a mark already exists. You cannot create a mark at the same time as another mark.	
Cannot create new project. Media Full.	The CF card does not have enough space, so you cannot create a new project.	
Cannot execute bounce Media Full.	The CF card does not have enough space, so you cannot bounce.	
Cannot execute bounce Bounce file size is over 2GB.	The resulting file size after the bounce would exceed 2 GB, so bouncing is not possible.	
Cannot edit this mark point. Mark point already exists at the same timestamp.	Since a mark already exists at the same time, the mark cannot be edited.	Editing is possible even when time data is the same at the frame level if the value differs at the subframe level, which is not visible on the screen.
Cannot increment Take. Interval is too short. Or Media almost full	The interval was less than 4 seconds or the CF card does not have enough space, so starting recording of the next take is not possible.	
Cannot increment Take. System limit reached, Please make new session.	The total number of items in the folder, including files and folders/directories, is too large, so starting recording of the next take is not possible.	
Cannot load to [AorB]. "IIIIIIII" is already loaded to [BorA].	The playlist that you tried to load is already loaded to B or A, so it cannot be loaded to the other player. Load a different playlist.	IIIIII = name of playlist to be loaded
Cannot make more than 1000 sessions.	The maximum number of sessions has already been reached, so a new session cannot be created.	
Cannot make new Session. Media Full.	The CF card does not have enough space, so you cannot create a new session.	
Cannot RECORD. (Internal state error)	Something is preventing recording.	
Cannot RECORD. ABS time is over 24h	The timeline mode's ABS time exceeds 24 hours so recording cannot be started.	
Cannot RECORD. Media Full.	The CF card does not have enough space, so you cannot start recording.	
Cannot RECORD Play Fs setting is not OFF Please change Play Fs to OFF	Recording is not possible because PlayFs is set to Pull-up or Pull-down. Set PlayFs to Off.	
Cannot RECORD System limit reached. Please make new Session.	The total number of items in the folder, including files and folders/directories, is too large, so starting recording is not possible.	
Cannot RECORD. Take limit reached. Please change to another Session	Since the maximum number of recordable takes or maximum take number has been reached, recording is not possible. Change the session.	
Cannot Retake. No Recent REC history.	You cannot retake until at least one new recording has been made in this session.	
Cannot set Mark point. Mark limit reached.	You cannot create more than 99 marks.	
Cannot turn Fs convert On. CHn–n D–In is already Master Clock.	You tried to turn the sampling rate converter on for the digital input that is already selected as the master clock.	n–n = 1–2, 3–4, 5–6, 7–8
CFn DEVICE ERROR	The CF card cannot be recognized.	n = 1 or 2
CFn Format failed	An error occurred during formatting, and formatting could not be completed.	n = 1 or 2
CFn has no projects. Please create a project.	The CF card does not have even one project.	n = 1 or 2

Message	Details and responses	Remarks
CFn is not available	There is no CF card.	n = 1 or 2
CFn is not usable	You cannot copy.	n = 1 or 2
CFn MEDIUM ERROR	The unit failed to read the card.	n = 1 or 2
CFn not recommended format for Recording/Playing. Format this card?	Since the media was not formatted in this unit, proper recording and playback operations cannot be guaranteed, so it should be formatted.	n = 1 or 2 This appears when the card is formatted with a cluster size that is smaller than the standard of this unit.
CFn not recommended for Recording/Playing. (not UltraDMA)	This CF card does not meet the specifications required by the system, so using it for recording/playback is not recommended.	n = 1 or 2
CFn Read Error	An error occurred when reading the card.	n = 1 or 2
CFn to CFn' Copy failed.	Copying all of CFn to CFn' was not possible.	n = 1 or 2 n' = 2 or 1
CFn unrecognized format Please Format this card.	This CF card has been formatted in a format other than FAT. Format it for use with this unit.	n = 1 or 2
CFn unsupported type	This CF card does not meet the specifications required by the system, so it cannot be used.	n = 1 or 2
CFn Write Error	An error occurred when writing to the card.	n = 1 or 2
CFn(vvvvvvvv) NUM OF PROJECTS: p USED SIZE: u FREE SIZE: f TOTAL SIZE: t	This shows information about the CF card.	n = 1 or 2 vvvvvvvv = volume level p: project number, u: capacity used f: unused capacity, t: total capacity of CF card
Clear Bounce In/Out Point?	This will clear bounce IN and OUT points.	
Completed	The operation has completed.	
CONFIRM QUICK FORMAT CFn & Create Project? "pppppppp" "sssssss" fs/bit/FrameType/NumOfTracks	Reconfirms that you want to conduct both quick-formatting and project creation at once	n = 1 or 2 pppppppp = name of project created sssssss = name of session created
Copy CFn to CFn? This will erase all data on CFn'.	Confirms that you want to copy all of CFn to CFn'	n = 1 or 2 n' = 2 or 1
Copying session(s)...	Copying all sessions in progress	
Copy N selected session(s) to CFn?	Confirm that you want to copy the selected folder(s).	N = number of selected sessions n = 1 or 2
Copying Session...	The session is being copied.	
Create new Playlist? "pppppppp"	Confirm that you want to create a new playlist.	pppppppp = playlist name
Create new project? "pppppppp" "sssssss" Fs: ** kHz, Frame Type: **F	Confirm that you want to create a new project.	pppppppp = name of project to be created sssssss = name of first session to be created
Create Project failed	The creation of the project failed.	
Creating Project ...	The project is being created.	
Currently loaded playlist will be exported to PPL "IIIIIIII"	The currently loaded playlist will be exported in a PPL format.	IIIIIIII = the playlist name created
Currently loaded playlist(s) will be exported to PPL. Overwrite latest PPL file? "pppppppp"	The currently loaded playlist will be exported in PPL format. Do you want to overwrite the last exported PPL file?	"pppppppp" = PPL file name
Currently loaded playlist [A or B] will be exported to PPL "IIIIIIII"	The currently loaded playlist will be exported in a PPL format.	IIIIIIII = the playlist name created
Currently loaded session will be exported to AES31. "aaaaaaa"	The currently loaded session will be exported in an AES31 editing information file.	aaaaaaa = the AES31 editing information file name created

16 – Messages

Message	Details and responses	Remarks
Currently loaded session will be exported to AES31. Overwrite latest AES31 file? "aaaaaaa"	The currently loaded session will be exported in AES31 format. Do you want to overwrite the last exported AES31 file?	"aaaaaaa" = AES31 file name
Delete all marks of this type? (Count: N)	Confirm the deletion of marks of the selected type.	N = number of marks of selected mark type
Delete N selected marks?	Confirm the deletion of the selected marks.	N = number of marks
Delete N selected project?	Confirm the deletion of the selected projects.	N = number selected
Delete N selected playlist?	Confirm the deletion of the selected playlists.	N = number selected
Delete N selected session?	Confirm the deletion of the selected sessions.	N = number selected
Delete N selected take?	Confirm the deletion of the selected takes.	N = number selected
Deleting Project...	The project is being deleted.	
Deleting Playlist...	The playlist is being deleted.	
Deleting Session...	The session is being deleted.	
Deleting Take...	The take is being deleted.	
Digital Input Error CHx-x D-IN (Unlocked) CHx-x D-IN (no signal) CHx-x D-IN (not audio) CHx-x D-IN (unmatched Cbit)	An error occurred with the digital input selected for the input signal.	x=ch name Unlocked: not synchronized with system no signal: no signal being input not audio: Cbit information of input signal is not audio unmatched Cbit: other Cbit information of input signal is different from actual operation mode
Edit Completed	The editing operation has completed.	
External Clock Lost, Switched to Internal	Synchronization with an external clock was disrupted, so the internal clock was activated.	
External Clock Regained Switch to External?	Synchronization with an external clock became possible again.	
EXTERNAL Control Locked	External control connectors are locked to prevent misoperation.	
Initializing ...	The unit is initializing. (starting up after power-on)	
Import selected Playlist "pppppppp"	The selected project will be imported.	pppppppp = imported playlist name
Import selected EDL? "aaaaaaa"	Confirm importing the selected AES31 editing information file into the current session.	aaaaaaa = AES31 editing information file to be imported
Last loaded project has no sessions. Please make new session.	The most recently selected project does not have any sessions. Create a new session.	
Last loaded project cannot be found. Please select a project.	The last selected project cannot be found. Select a different project.	
Last loaded session cannot be found. Please select a session.	The last selected session cannot be found. Select a session.	
Loading File...	The file is loading.	
Load selected project? "pppppppp"	Confirm that you want to load the selected project.	pppppppp = name of project to load

Message	Details and responses	Remarks
Load selected playlist? "pppppppp"	Confirm that you want to load the selected playlist. In dual mode, the "Load to A" button will load the Player A playlist and the "Load to B" button will load the Player B playlist.	pppppppp = name of playlist to load
Load selected session? "sssssss"	Confirm that you want to load the selected session.	sssssss = name of session to load
Load selected take? "ttttttt"	Confirm that you want to load the selected take.	ttttttt = name of take to load
Loading Project ...	The selected project is loading.	
Loading Playlist ...	The selected playlist is loading.	
Loading Session ...	The selected session is loading.	
Loading Take ...	The selected take is loading.	
Make new Session? "sssssss" TIMELINE Start Time: **h**m**s**f TIMELINE Rec Tracks: N tr	Confirm that you want you want to make a new session.	sssssss= session name N = number of tracks
Make Playlist failed	Creation of playlist failed.	
Make session failed	Creation of the session failed.	
Making Playlist ...	A playlist is being created.	
Making session ...	A session is being created.	
Mark Point set	A mark has been created.	
New Session Name must not start with "@"	The session name is not allowed. A session name must not start with the "@" mark.	
nnn: eeeeeee ttttttt fs/bit/FileMode/NumOfTracks Entry LENGTH: *h**m**s**f START T/C: hh: mm: ss.ff	This shows entry information	nnn: entry number eeeeeeee: entry name ttttttt: take name fs: sampling frequency bit: bit rate FileMode: MONO or POLY NumOfTracks: number of tracks Entry LENGTH: length of entry START T/C: entry start time code time
No Call Point	The call point does not exist. (Nothing has been played back since loading this session or take)	
No Mark Point	The mark point does not exist.	You tried to skip marks before the Mark point was recorded. This disappears automatically after 2 seconds.
No Tracks Armed for Record	No tracks have been armed for recording.	
Operation failed.	The operation could not be completed for some reason.	
Operation failed. Internal File/Session limit reached.	The maximum number of sessions that can be created has been reached, so the operation could not be completed.	
Operation failed. Cannot find this ***, Please Rebuild.	The selected project/session/take could not be found, so the operation could not be completed. Rebuild the selected item.	*** = Project or Session or Take
Operation failed. Path Name is too long.	The path name has more characters than allowed, so the operation could not be completed.	This message appears when making a session or recording results in a file path name of more than 255 characters. This can occur if you give projects and sessions long names using a computer.
Operation Failed. Unmatched Fs.	Sampling frequency does not match	
Play Error.	An error occurred during playback.	
Play Error Buffer underrun	Data reading could not keep up during playback.	

16 – Messages

Message	Details and responses	Remarks
<PlayList [AorB] Info> "ppppp" Size: **MB" yyyy/mm/dd hh: mm	This shows playlist information (A/B).	pppppppp = playlist name
<PlayList Info> "ppppp" Size: **MB yyyy/mm/dd hh: mm	This shows playlist information.	
PLEASE CONFIRM --- FULL FORMAT --- FORMAT CFn? This will erase all data on card	Reconfirms that you want to full format the media	n = 1 or 2
PLEASE CONFIRM --- QUICK FORMAT --- FORMAT CFn? This will erase all data on card	Reconfirms that you want to quick format the media	n = 1 or 2
PLEASE CONFIRM Copy CFn to CFn'? This will erase all data on CFn'.	Reconfirms that you want to copy all of CFn to CFn'	n = 1 or 2 n'= 2 or 1
pppppppp SESSION: n Fs: f TIMECODE: t	This shows project information.	pppppppp = project name n: number of sessions f: sampling frequency t: time code frame type
Project Delete failed.	Deletion of the project failed.	
Project Load failed.	Loading of the project failed.	
Project Rename failed	Changing the name of the project failed.	
Project save failed.	An error occurred while saving the project, and saving failed. Use the CLOSE button to close the pop-up window. The FAT file system might be broken. Format the CF card or use a different one. Formatting will erase all data on the card.	
Project Screen is not available while Recording	The project screen cannot be changed during recording.	
Project Screen is not available in Jog Mode	The project screen cannot be changed when in jog mode.	
QUICK FORMAT CFn & Create Project? "pppppppp" "sssssss" fs/bit/FrameType/NumOfTracks	Quick formatting will be executed and a project will be created.	n = 1 or 2 pppppppp = name of the created project sssssss = name of the first created session fs: sampling frequency bit: bit rate Frame Type: frame type NumOfTracks: number of tracks
RECORD stopped. ABS time is over 24h.	The timeline mode's ABS time exceeded 24 hours so recording stopped.	
Reading Media ...	The media is being read.	
Reading DATA...	Data is being read.	
Rebuild all Projects?	Confirm that you want to rebuild all projects.	
Rebuild current Project?	Confirm that you want to rebuild the current project.	
Rebuild current Session?	Confirm that you want to rebuild the current session.	
Rebuild failed	Rebuilding failed.	
Rebuild selected project?	Confirm that you want to rebuild the selected project.	

Message	Details and responses	Remarks
Rebuild selected Session?	Confirm that you want to rebuild the selected session.	
Rebuilding All ...	All projects are being rebuilt.	
Rebuilding project ...	The project is being rebuilt.	
Rebuilding Session ...	The session is being rebuilt.	
RECORD Error	An error occurred during recording.	
RECORD Error Buffer overflow	The recording buffer became full during recording, and writing to the card could not keep up.	
RECORD stopped. Media Full.	The CF card ran out of space, so recording stopped.	
Redo Completed	Redoing an edit has completed.	
REMOTE/KEYBOARD Locked	The remote and keyboard connectors have been locked to prevent misoperation. (Shown when a command is received from the remote or keyboard)	
Renaming Project "pppppp" to "nnnnnn"	The project is being renamed.	pppppp = old project name nnnnnn = new project name
Save changes in Current Playlist* "lllllll"	Confirm that you want to save changes to the current playlist.	Playlist* = Playlist, Playlist A or Playlist B lllllll = playlist name
Save changes in Current Session "sssssss"	Confirm that you want to save changes to the current session.	sssssss = session name
Save Failed.	Saving the file failed.	
Saving File... Do not remove CF	The file is being saved. Do not remove the CF card.	
Screen Locked Touch screen Locked Out	The touch screen has been locked to prevent misoperation.	
Screen Locked LCD Section Locked	LCD section controls have been locked to prevent misoperation. (Shown when the LCD screen or adjacent buttons are pressed)	
Session Copy failed	Copying the session failed.	
Session Delete failed.	Erasing the session failed.	
Session Load failed.	Loading the session failed.	
sssssss TAKES: n Fs: f TOTAL SIZE: u TOTAL TIME: t	This shows session information.	sssssss = session name n: number of takes f: sampling frequency u: space used t: total time of all takes
Starting USB	USB mode is being enabled.	
Take Delete failed.	Deletion of the take failed.	
TAKE limit back to full. Change to Sub Folder?	If Mono File Place is set to SubFolder, the limit to the number of takes is restored to the maximum.	
TAKE limit reduced... Change to Session Root?	If Mono File Place is set to Session Root, the limit to the number of possible takes is reduced.	
Take Load failed.	Loading of the take failed.	
There is no Entry.	The playlist does not have any entries, so playback is not possible. Select a playlist with entries or add entries to the current one.	
There is no project. Please create a project.	There is no project so the recording cannot be made. Make a project.	
There is no Sessions. Please make a Session.	There is no session so the recording cannot be made. Make a session.	

16 – Messages

Message	Details and responses	Remarks
There is no Take.	There is no take, so playback is not possible. Select a session with takes.	
This name already exists.	Another project, session or take already has that name.	
This name already exists. Overwrite this file? "nnnnnnnn"	A project, session, or take with the same name already exists. Do you want to overwrite it?	nnnnnnnn = name of project, session or take
Transport Locked Transport Section Locked	The transport keys have been locked to prevent misoperation.	
ttttttt date fs/bit/FileMode/NumOfTracks SIZE: u LENGTH: *h**m**s**f	Take information is shown.	ttttttt = take name date: year/month/day hour: minutes fs: sampling frequency bit: bit rate FileMode: MONO or POLY NumOfTracks: number of tracks u: space used LENGTH: length of the take
ttttttt START T/C: **h**m**s**f FRAME TYPE: **F	Take information is shown.	ttttttt = take name START T/C: file start time code time FRAME TYPE: frame type
Undo Completed	Undoing an edit has completed.	
Unsupported File	The format of the file that you tried to play or add to a playlist is not supported.	
Unsupported Fs	The sampling frequency of the file that you tried to add to a playlist is not supported.	
Writing System File...	Recording information is being written when recording has stopped.	

17 – Specifications

General

Recording media

CompactFlash (CF) card

File system

FAT32 (4 GB or more)

FAT16 (2 GB or less)

File format

BWF (monophonic, polyphonic)

Number of channels

4 channels (excluding playlist dual mode)

2 stereo mix channels × 2 (dual playlist mode)

Quantization bit rate

16-bit, 24-bit

Sampling frequency

44.1/47.952/48/48.048/88.2/96 kHz

(47.952/48.048 kHz: 48k±0.1% pull-down/pull-up)

Clock reference

INTERNAL, WORD IN, VIDEO IN, DIGITAL IN (1–2)

Time code frame

23.976, 24, 25, 29.97DF, 29.97NDF, 30DF, 30NDF

Inputs and outputs

Analog audio inputs and outputs

The error for nominal and maximum levels is ±1 dB for all input and output jacks except the **PHONES** jack.

ANALOG IN (LINE) jacks (1–4)

Connectors: XLR–3–31 (1: GND, 2: HOT, 3: COLD)

Input impedance: 4.3k Ω

Nominal input level:

+4 dBu (1.23 Vrms) ±1 dB/–20 dBu (0.0775 Vrms) ±1 dB
(+4 dBu/–20 dBu selectable)

(+6 dBu when Digital Ref. Level is set to –9 dB)

Maximum input level (selectable):

+15dBu (4.36Vrms) (D.Ref: -9dBFS, A.Input: +6dBu)

+18dBu (6.16Vrms) (D.Ref: -14dBFS, A.Input: +4dBu)

+20dBu (7.75Vrms) (D.Ref: -16dBFS, A.Input: +4dBu)

+22dBu (9.76Vrms) (D.Ref: -18dBFS, A.Input: +4dBu)

+24dBu (12.3Vrms) (D.Ref: -20dBFS, A.Input: +4dBu)

-6dBu (0.388Vrms) (D.Ref: -14dBFS, A.Input: -20dBu)

-4dBu (0.489Vrms) (D.Ref: -16dBFS, A.Input: -20dBu)

-2dBu (0.616Vrms) (D.Ref: -18dBFS, A.Input: -20dBu)

0dBu (0.775Vrms) (D.Ref: -20dBFS, A.Input: -20dBu)

D.Ref: Digital Ref. Level

A.Input: Analog Input Ref. Lvl

ANALOG OUT (LINE) connectors (1–4)

Connectors: XLR–3–32 (1: GND, 2: HOT, 3: COLD)

Output impedance: 100 Ω or less

Nominal output level:

+4 dBu (1.23 Vrms) ±1 dB/–20 dBu (0.0775 Vrms) ±dB

(+4 dBu/–20 dBu selectable)

(+6 dBu when Digital Ref. Level is set to –9 dB)

Maximum output level (selectable):

+15dBu (4.36Vrms) (D.Ref: -9dBFS, A.Output: +6dBu)

+18dBu (6.16Vrms) (D.Ref: -14dBFS, A.Output: +4dBu)

+20dBu (7.75Vrms) (D.Ref: -16dBFS, A.Output: +4dBu)

+22dBu (9.76Vrms) (D.Ref: -18dBFS, A.Output: +4dBu)

+24dBu (12.3Vrms) (D.Ref: -20dBFS, A.Output: +4dBu)

-6dBu (0.388Vrms) (D.Ref: -14dBFS, A.Output: -20dBu)

-4dBu (0.489Vrms) (D.Ref: -16dBFS, A.Output: -20dBu)

-2dBu (0.616Vrms) (D.Ref: -18dBFS, A.Output: -20dBu)

0dBu (0.775Vrms) (D.Ref: -20dBFS, A.Output: -20dBu)

D.Ref: Digital Ref. Level

A.Output: Analog Out Ref. Level

ANALOG OUT (MONITOR) jacks (L/R)

Connectors: XLR–3–32(1: GND, 2: HOT, 3: COLD)

Output impedance: 100 Ω

Nominal output level:

+6 dBu (1.55 Vrms)

(Digital Ref. Level= when set to –9 dB)

+4 dBu (1.23 Vrms)

(Digital Ref. Level= when not set to –9 dB)

Maximum output level (selectable):

+15dBu (4.36Vrms) (D.Ref: -9dBFS, A.Output: +6dBu)

+18dBu (6.16Vrms) (D.Ref: -14dBFS, A.Output: +4dBu)

+20dBu (7.75Vrms) (D.Ref: -16dBFS, A.Output: +4dBu)

+22dBu (9.76Vrms) (D.Ref: -18dBFS, A.Output: +4dBu)

+24dBu (12.3Vrms) (D.Ref: -20dBFS, A.Output: +4dBu)

D.Ref: Digital Ref. Level

A.Output: Analog Output Ref. Lvl

PHONES jack

Connector: standard 6.3-mm (1/4") stereo jack

Maximum output level: 45 mW + 45 mW or more

(THD+N 0.1% or less, into 32 Ω)

17 – Specifications

Digital audio inputs and outputs

DIGITAL INPUT connector (1/2)

Connector: XLR-3-31
Minimum/maximum input signal voltage range: 200mVp-p to 10 Vp-p/110 Ω
Input impedance 110 Ω ±20%
Format: AES3-2003/IEC60958-4 (AES/EBU)
IEC60958-3(S/PDIF)
Supported sampling frequencies:
44.1/47.952/48/48.048/88.2/96 kHz(single/double)
Note: When SRC is ON, the receivable range is 32–192 kHz.

DIGITAL OUTPUT connector (1/2)

Connector: XLR-3-32
Output voltage: 2–5 Vp-p/110 Ω
Output impedance: 110 Ω ±20%
Format: IEC60958-4 (AES3-2003, AES/EBU)
Supported sampling frequencies:
44.1/47.952/48/48.048/88.2/96 kHz (single/double)

Control inputs and outputs

RS-422

Connector: D-sub 9-pin

RS-232C

Connector: D-sub 9-pin

PARALLEL

Connector: D-sub 25-pin

TIME CODE IN

Connector: XLR-3-31
Signal voltage amplitude: 0.5–10 Vp-p
Input impedance 10 kΩ
FORMAT: SMPTE 12M-1999 compliant

TIME CODE OUT

Connectors: XLR-3-32
Signal voltage amplitude: 2 Vp-p
Output impedance: 100 Ω
Format: SMPTE 12M-1999 compliant

WORD/VIDEO IN

Connector: BNC
Input voltage: 5V TTL equivalent (WORD IN)
Signal voltage amplitude: 1 Vp-p (VIDEO IN)
Input impedance: 75 Ω ±10%
Allowable frequency deviation of external synchronization:
±100 ppm

Includes switch for enabling termination
Input frequency (WORD): 44.1/47.952/48/48.048/88.2/96 kHz
Input signal (VIDEO): 24/25/29.97/30 Frame (NTSC/PAL Black burst, HDTV Tri-Level)

WORD/VIDEO THRU/OUT

Connector: BNC
Signal voltage amplitude: 5V TTL equivalent
Output impedance: 75 Ω or less
Output frequency (WORD):
44.1/47.952/48/48.048/88.2/96 kHz
(47.952/48.048 kHz: 48k±0.1% pull-down/pull-up)
Frequency stability ±10 ppm or less (Ta = 20° C)
OUT/THRU switch included (OUT is only for WORD OUT)

ETHERNET

Connector: RJ45

KEYBOARD

Connector: Mini-DIN (PS/2)

USB

Connector: USB A-type 4-pin
Protocol: USB2.0 HIGH SPEED (480 Mbps) compliant

REMOTE

Connector: ETHERCON (CAT6 compatible)
Power supply voltage: 13 V/41 V
Signal: LVDS serial
Transmission contents:
LCD display data, asynchronous serial transmission control signals, port control signals

Audio performance

Frequency response

ANALOG IN to ANALOG OUT:
20 Hz – 20 kHz: ±0.5 dB (Fs = 44.1/48 kHz, JEITA) (recording and playback)
20 Hz – 40 kHz: +0.5 dB/–2 dB (Fs = 88.2/96 kHz, JEITA) (recording and playback)

Distortion

ANALOG IN to ANALOG OUT: 0.005% or less (JEITA) (recording and playback)

S/N ratio

ANALOG IN to ANALOG OUT: 100 dB or less (JEITA) (recording and playback)

Other specifications

Power

AC 100-240 V, 50-60 Hz

Power consumption

25 W

External dimensions (W x H x D)

482.6 x 94 x 317.1 mm

Weight

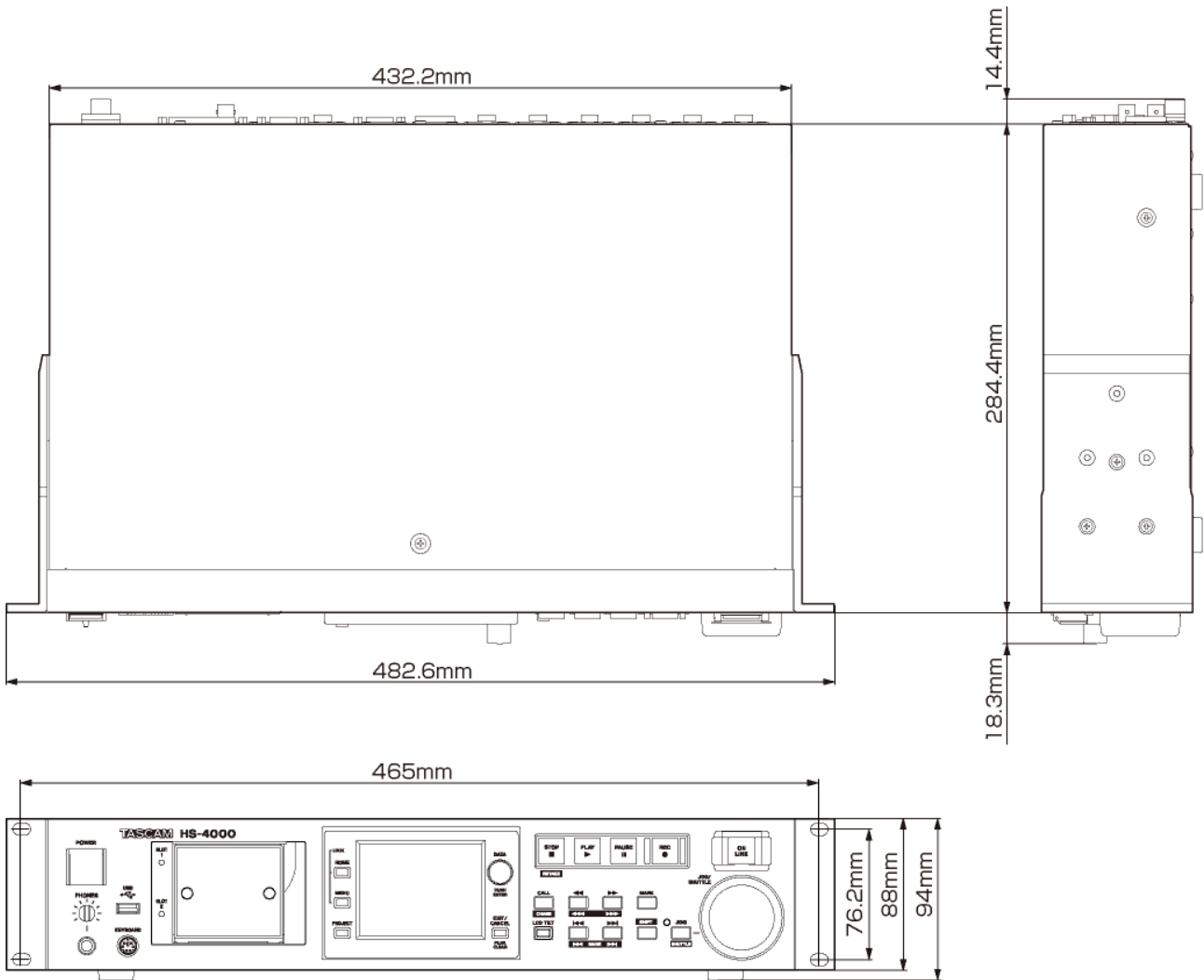
5.1 kg

Operating temperature range

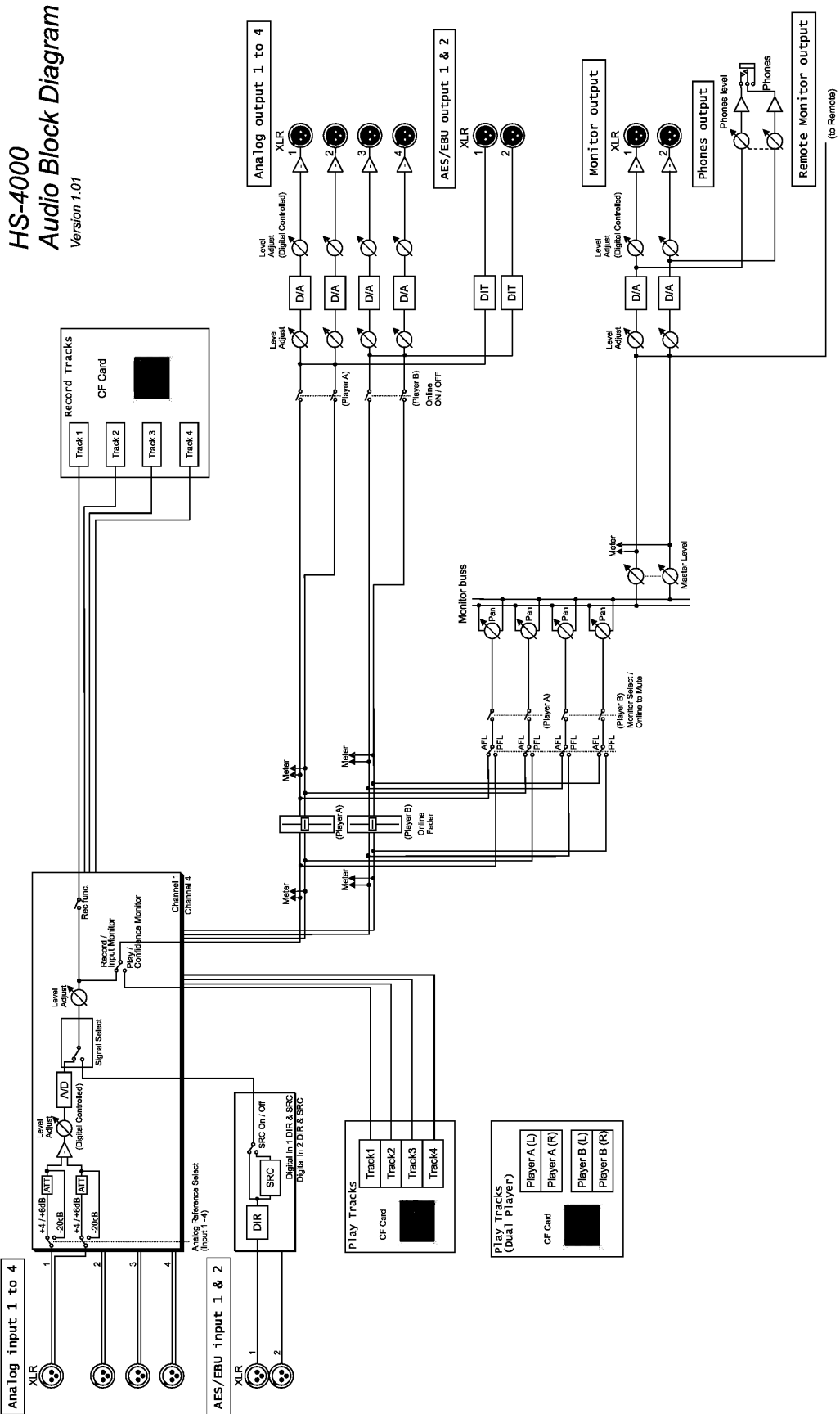
5-35° C

17 – Specifications

Dimensional drawings



Block diagram



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