TASCAM

HS-2

2 Channel Audio Recorder

OWNER'S MANUAL
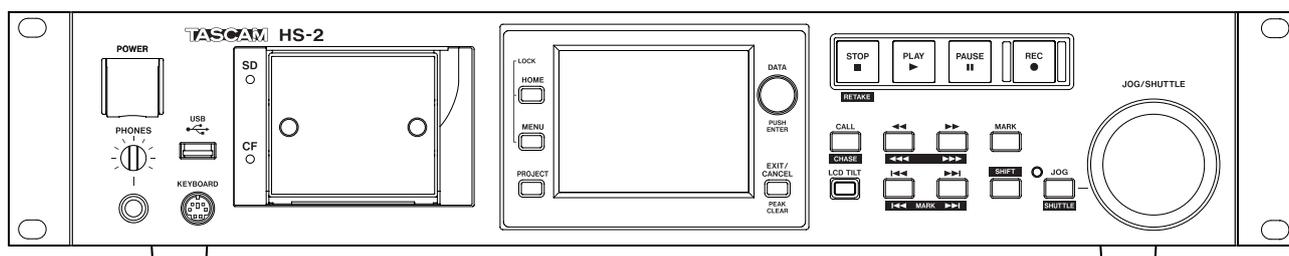
IMPORTANT SAFETY PRECAUTIONS

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

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

The lightning flash with arrowhead symbol, within 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.

- The apparatus draws nominal non-operating power from the AC outlet with its POWER or STANDBY/ON switch not in the ON position.
- The mains plug is used as the disconnect device, the disconnect device shall remain readily operable.
- 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.
- If you are experiencing problems with this product, contact TEAC for a service eferral. Do not use the product until it has been repaired.

CAUTION

- 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 should be located close enough to the AC outlet so that you can easily grasp the power cord plug at any time.
- 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.

WARNING

- 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.

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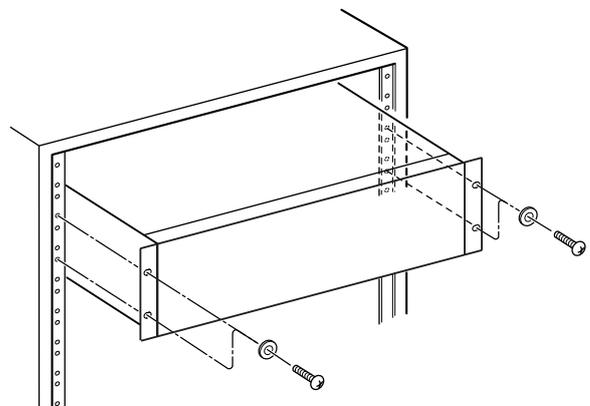
CAUTION
- Leave 1U of space above the unit for ventilation.
- Allow at least 10 cm (4 in) at the rear of the unit for ventilation.

■ **For China**

产品有毒有害物质或元素的名称及含量

机种：HS-2		有毒有害物质或元素					
	品名	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
1	CHASSIS部份	○	○	○	○	○	○
2	PCB Assy部份	×	○	○	○	○	○
3	线材部份	○	○	○	○	○	○
4	附属品部份	○	○	○	○	○	○
5	LABEL部份	○	○	○	○	○	○
6	包装部份	○	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。
×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。
（针对现在代替技术困难的电子部品及合金中的铅 ）

Contents

Contents

Contents

1—Introduction

Thank you very much for purchasing a TASCAM HS-2 2 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

- SD cards and CF cards (Ultra DMA compatible) are used as recording media
- Dual slots allow two cards to be loaded and recorded simultaneously in mirror recording mode
- 2-track simultaneous recording is possible at up to 192 kHz, 24-bit sample rates
- 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
- File format: Broadcast Wave Format (BWF) file

    Waveform Audio Format (WAV) file

- Flash start is possible using a TASCAM RC-HS20PD, 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
- Supports loading and writing AES31 editing information in timeline mode.
- Playlist mode (supports JPPA flash start playlist file loading and writing)
- JOG/SHUTTLE function
- Intuitive operation is possible using graphical interface on TFT color touchscreen
- XLR analog balanced inputs and outputs
- RCA analog unbalanced inputs and outputs
- XLR AES/EBU digital inputs and outputs
- COAXIAL S/PDIF digital inputs and outputs
- Headphone output
- BNC time code input and output using Option SY-2
- BNC video reference (NTSC/PAL black burst signals, and HDTV Tri-level signals) and word clock input and output/thru
- Copying files to connected USB memory is possible
- LAN (Gigabit Ethernet) functions allow file transmission, remote control over a network
- Parallel remote control is possible
- RS-232C serial remote control is possible
- Supports RS-422 (9-pin serial protocol) serial remote control using Option SY-2
- 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-2).. 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.
- SDHC logo is a trademark of SD-3C, LLC.

- Other company names, product names and logos in this document are trademarks or registered trademarks of their respective owners.

Any DATA, including, but not limited to information, described herein are intended only as illustrations of such DATA and/or information and not as the specifications for such DATA and/or information. TEAC Corporation disclaims any warranty that any use of such DATA and/or information shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such DATA and/or information.

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 5º - 35º C (41º- 95º 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
  - Dusty places
- 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 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 thinner, manicure remover, alcohol or similar substances.

1−Introduction

About USB memory devices, SD cards, and CF cards

This unit uses SD cards and CF cards for recording and playback.

It uses USB memory devices for backing up DATA on SD cards/ CF cards and for saving files to SD cards/ CF cards.

A list of USB memory devices/SD cards/CF cards that we have confirmed to work with this unit is provided on our website (**http://tascam.com/**).

Precautions for use

USB memory devices, SD cards and CF cards are precision devices. To prevent damage to the memory devices or card, please observe the following cautions:

- Do not leave memory devices or cards in extremely hot or cold locations.
- Do not leave memory devices or cards in extremely damp locations.
- Do not allow memory devices or cards to become wet.
- Do not place any objects on top of memory devices or cards, or twist or bend them.
- Do not subject memory devices or cards to strong impacts.
- Do not insert or remove a USB memory device, SD card or CF card during recording, playback, DATA transfer or other operations which access them
- Be sure to use cases to protect the connectors of memory devices and cards when carrying them.

Media that has been confirmed for use with this unit

This unit not only uses SD cards and CF cards for recording and playback, but also uses USB memory devices for backing up DATA on SD cards/ CF cards and for saving files to SD cards/ CF cards.

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-2 will vary based on the speed and capability of the SD cards and CF cards used. Older and some cheaper SD cards and CF cards use slower memory components and little internal buffering which may result in poor recording performance.

Older and some cheaper USB memory devices use slower memory components and little internal buffering which may result in requiring more time to read and write DATA.

A list of USB memory devices/SD cards/CF cards that we have confirmed to work with this unit is provided on our website. Otherwise please consult TASCAM Customer Support Section. (**http://tascam.com/**).

Write Protect for SD cards

This unit writes track information onto the media to improve operational performance. Because you cannot write track information to SD cards with write protection, operations such as reading media will require more time.

Format

When formatting media storage device, perform formatting on this unit. Media formatted on this unit is optimized to improve recording performance on recording. If media is formatted on other device or PC, etc. are used, this unit may not work optimally.

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 memory, for example, you can back up DATA from SD cards/CF cards and save files to the SD cards/CF cards.

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 102.)

NOTE

Do not disconnect USB memory when using it to copy files. You can connect and disconnect USB 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 **SD card/CF card indicators**

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

CAUTION

Do not remove a card from the slot when its indicator (SD card or CF card) is blinking rapidly.

④ **SD card/ CF card SLOT**

Insert or remove an SD card or CF card from or into this slot, (See "Inserting and removing SD cards/ CF cards" on page 24.)

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 27.)

Turn the **DATA** dial when 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**), and **SD** and **CF** 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 27.)

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).

While displaying the Home Screen in take mode, if the numbers are not selected on the NEXT TAKE NAME screen or using Flash Page number and knob, the take is selected by turning.

When a pop-up window is open, this works as an OK or CLOSE button.

Turn the **DATA** dial when 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**), and **SD** and **CF** 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.

Both the **PLAY** and **REC** keys light during 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 card is installed and the unit is stopped, 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 **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.

⑭ **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 102.)

⑮ **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 34.)

⑯ **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.

⑰ **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.

⑱ **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.

⑲ **◄◄ [◄◄◄] 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.

⑳ **I◄◄/►►I [MARK I◄◄/►►I] 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).

㉑ **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 timeline/take is 99. (See "Mark functions" on page 109.)

㉒ **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 ►►I 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** (**CHASE**) key while pressing and holding this key to turn synchronization with timecode ON/OFF.

㉓ **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.

㉔ **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.
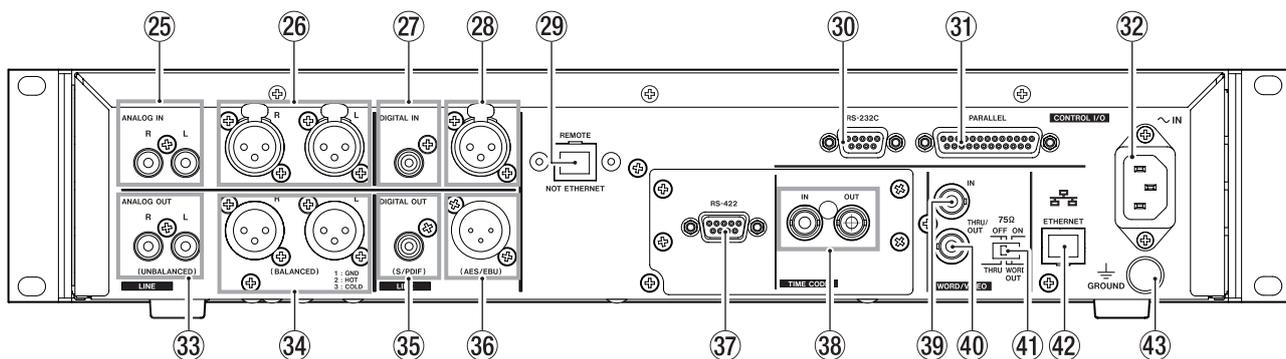
Rear panel

㉕ ANALOG INPUTS L/R (UNBALANCED) connectors
These connectors are analog unbalanced inputs L-R (RCA pin jack)   The rated input level is -10dBV.

㉖ ANALOG INPUTS L/R (BALANCED) connectors
These connectors analog are balanced inputs L-R (XLR balance)   The rated input level is +4dBu. (1: GND, 2: HOT, 3: COLD)

㉗ DIGITAL IN (S/PDIF) connector
This connector is an unbalanced input for digital audio in IEC60958-3(S/PDIF) and AES3-2003 / IEC60958-4 (AES/EBU) format.
Sampling frequencies of 88.2 kHz and 96 kHz are transmitted at double speed, and 176.4 kHz and 192 kHz are at quad speed.
This unit is equipped with a sampling rate converter which supports 32 kHz to 192 kHz.

㉘ DIGITAL IN (AES/EBU) connector
This connector is an XLR balanced input for digital audio in AES3-2003 / IEC60958-4 (AES/EBU) and IEC60958-3 (S/PDIF) format.
Sampling frequencies of 88.2 kHz and 96 kHz are transmitted at double speed, and 176.4 kHz and 192 kHz are at quad speed.
This unit is equipped with a sampling rate converter which supports 32 kHz to 192 kHz.

㉙ REMOTE connector
Connect a TASCAM RC-HS20PD remote control (sold separately) here.

NOTE

A Protective cover is attached to this connector when shipped from the factory. Remove the cover before connecting the remote control.

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.

㉚ RS-232C connector
Connect an external controller, for example, to this 9-pin D-sub connector for RS-232C serial control.

NOTE

• It cannot be used at the same time as the **RS-422** connector. (See "RS–232C page" on page 96.)

㉛ PARALLEL connector
Connect an external controller (such as the TASCAM RC-SS20), for example, to this 25-pin D-sub parallel control connector.

㉜ AC IN connector
Connect the included power cord here.

㉝ ANALOG OUTPUTS L/R (UNBALANCED) connectors
These connectors are analog unbalanced outputs L-R (RCA pin jack). The rated output level is -10dBV.

㉞ ANALOG OUTPUTS L/R (BALANCED) connectors
These connectors analog are balanced outputs L-R (XLR balance). The rated output level is +6dBu when setting Digital Ref. Level to – 9dBu and +4dBu for other cases. (1:GND, 2:HOT, 3:COLD)

㉟ DIGITAL OUT (S/PDIF) connector
This connector is an unbalanced output for digital audio in IEC60958-3(S/PDIF) format.
Sampling frequencies of 88.2 kHz and 96 kHz are transmitted at double speed, and 176.4kHz and 192 kHz are at quad speed.

㊱ DIGITAL OUT (AES/EBU) connectors
This connector is an XLR balanced output for digital audio in AES3-2003 / IEC60958-4 (AES/EBU) format.
Sampling frequencies of 88.2 kHz and 96 kHz are transmitted at double speed, and 176.4 kHz and 192 kHz are at quad speed.

㊲ RS-422 connectors (Attached to Option SY-2 Board)
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 96.)

㊳ TIME CODE IN/OUT connectors (Attached to Option SY-2 Board)
This connector is a balanced input/ output for SMPTE timecode input/output of BNC type.

� **WORD/VIDEO IN connectors**

③⑨ **WORD/VIDEO IN connectors**
This BNC-type connector is for input of a word clock signal (44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 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 75Ω.

④⓪ **WORD/VIDEO THRU/WORD OUT connectors**
This BNC-type connector is for output of a word clock signal (thru, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz) or a video reference signal (IN connector signal thru only).
Use the **THRU/WORD OUT** switch to set the signal output.

④① **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 a terminator (75Ω)
. The **WORD/VIDEO** output **THRU/OUT** setting (**OUT** is only for **WORD**)

④② **ETHERNET connector**
Use this Ethernet connector to connect to a network for file transfer and to control this unit from an external source.

④③ **GROUND terminal**
When using a TASCAM RC-HS20PD 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.)

PARALLEL connector

The **PARALLEL** connector on the rear panel allows external control of this unit. (TASCAM RC-SS20 can be connected.) The pin assignments are as follows.

Pin No.	Normal	RC-SS20 PonMode	I/O
1	GND	GND	
2	PLAY	FLASH 1	I
3	STOP	FLASH 2	I
4	RECORD	FLASH 3	I
5	SKIP FWD	FLASH 4	I
6	SKIP BWD	FLASH 5	I
7	(Reserved)	STOP	I
8	FADER_START	FADER_START	I
9	(Reserved)	(Reserved)	O
10	TALLY_PAUSE	TALLY_PAUSE	O
11	TALLY_RECORD	RESERVED	O
12	TALLY_STOP	TALLY_STOP	O
13	TALLY_PLAY	TALLY_PLAY	O
14	REMOTE_SELECT, H or Open	REMOTE_SELECT, L	I
15	PAUSE	FLASH 6	I
16	(Reserved)	FLASH 7	I
17	AUX1, FF	FLASH 8	I
18	AUX2, REW	FLASH 9	I
19	AUX3, MARK	FLASH 10	I
20	(Reserved)	FLASH_PAGE	I
21	(Reserved)	(Reserved)	O
22	TALLY_SD	TALLY_SD*1	O
23	(Reserved)	(Reserved)	O
24	TALLY_CF	TALLY_CF*2	O
25	+5V*3	+5V*3	

I: Command input for transport control
Internal circuit, +5V pull-up
Triggers from a low input level of 50 msec or more

O: Command output, for tally output
The internal circuit is open collector (10Ω output impedance)
Output level low when asserted
20 V dielectric strength, 35 mA maximum current

*1 Assigned to **CF** indicators when connected RC-SS20
*2 Assigned to **CD** indicators when connected RC-SS20
*3 +5V: 50 mA maximum supplied current

When REMOTE Select (pin 14) is set to high, it 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

The following example is of a connection that uses a fader to start and stop playback of this device.
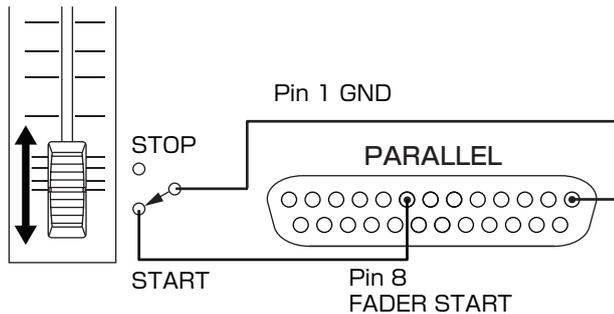
For information about the assignment of AUX 1–3 (pins 17–19) functions, see "PARALLEL page" on page 96.

NOTE

When controlling this unit with an external device that is connected to the **PARALLEL** connector, by simultaneously asserting the PLAY and RECORD signals while this unit is stopped, you can start recording immediately. In addition, by simultaneously asserting the 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 96.)

NOTE

Please contact TASCAM customer support for information about this unit's RS-232C command protocol.

RS-422 connector (Attached to Option SY-2 Board)

The Option SY-2 Board is equipped with the RS-422 connector.

You can control this unit remotely by installing the SY-2 Board to this unit and connecting the RS-422 connector on its rear panel to a controller or editor compatible with the SONY P2 protocol (RS-422).

Make settings related to operation on the `REMOTE SETUP` screen `RS-422` page. (See "RS−422 page" on page 96.)

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
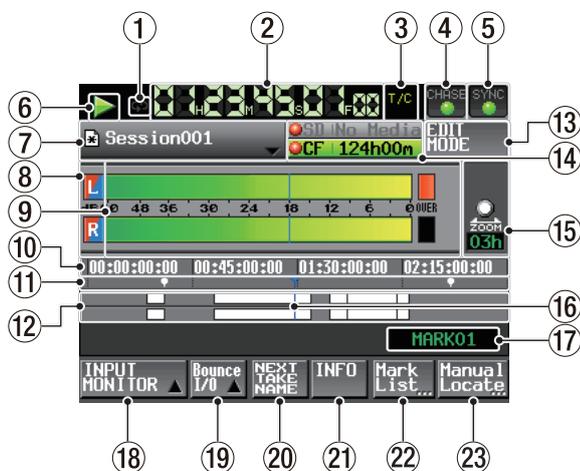
① **Repeat status indication**

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

② **Time counter (button)**
The time displayed is the elapsed time or the time code time.
Touch this area to change the time display mode.

③ **Time mode indicator (button)**
This shows the current time display mode. Touch this area to change the time display mode.

ABS	The time elapsed from the beginning of the timeline is shown.
T/C	The time code for the timeline is shown.

④ **Time code status button/indicator**

TC	When accurate time code is input and recognized correctly, the TC indicator appears green.
TC	When time code is not recognized correctly, the TC indicator does not appear.

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

⑤ (CHASE indicator descriptions)

CHASE	The CHASE indicator appears green only when playback or recording is synchronized with external timecode or the built-in timecode generator (selectable).
CHASE ⇌ CHASE	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 "" on page 92.)

⑤ **Audio synchronization status button/indicator**

SYNC	When synchronized to a Master clock, the SYNC indicator appears green.
SYNC ⇌ SYNC	The SYNC indicator blinks when not synchronized to a Master clock.

Touch this area to open the SYNC T/C screen. (See "" on page 92.)

⑥ **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)
◀◀×32	The number shown when searching backward (shuttle operation) changes with the current speed: x2, x4, x8, x16, x32.
×32▶▶	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.

⑦ **AES31 File name (button)**

This shows the current active AES31 File name (file of AES31 editing information).

A ＊ appears when the timeline 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.

REBUILD button

This performs a REBUILD (file rescan) when files may have been deleted or modified from outside the HS-2 (e.g. via FTP).

This can only be selected when stopped.

SAVE button

Save the contents of the timeline.

This can only be selected when stopped.

SAVE AS button

This attaches a name to and saves the content of the timeline.

This can only be selected when stopped.

(See "Saving AES31 editing information" on page 49.)

CREATE AES31 button

This displays the `AES31 NAME` screen to create a new AES31 file.

This can only be selected when stopped.

(See "Creating new AES31 editing information" on page 50.)

IMPORT ALL TAKES button

This imports all takes into the current session.

This can only be selected when stopped.

(See "Importing all the takes" on page 51.)

⑧ **Input monitoring indicators**

The indicators at the left end of the level meters show the status of input monitoring.

The background colors of the indicators stands for the following depending on the input monitoring.

	Playlist Mode	Timeline Mode/ Take Mode
MON OFF	L	L
MON ON		L

⑨ **Level meters**

The input signal level is shown when the input monitor is on, on recording standby, or recording.

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

During playback, the playback level of the 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.

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

`D-IN NO SIGNAL` 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

⑩ **Time display area**

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

This area scrolls horizontally to correspond with the time counter.

⑪ **Mark display area**

Timeline marks appear here.

This area scrolls horizontally to correspond with the time counter.

[▶] : IN mark

[◀] : OUT mark

[⌖] : Other types of marks

⑫ **Track display area**

The regions of tracks L/R (from top to bottom) are shown here.

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

Normal areas: white [ ]

Being recorded: red [ ]

Fade-in, fade-out, cross-fade regions: light blue [ ]

Selected region: Dark light blue [ ]

Selected silent part: Blue [ ]

This area scrolls horizontally to correspond with the time counter.

⑬ **EDIT MODE button**

Touch this to turn ON/OFF the edit mode, which allows you to divide, erase, and cut parts of regions and so on. (See "Editing the timeline" on page 53.)

⑭ **Recording media display (button)**

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

The background color is green while playback, it is red while recording.

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

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

When a card is inserted in the 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 20,000, recording becomes impossible and `Rec Limit` is shown. For details, see "Recording operation limitations" on page 33.

Press this area to open the `MEDIA SELECT` screen. (See "Card selection" on page 29.)

Media status indicators

These indicators show whether media recording is possible, impossible, or not selected for recording. The status can be displayed when in timeline mode or take mode.

(It will not be displayed when in playlist mode.)

. Indicators

🔴 /Recording is possible　　✖ /Recording is impossible　　⚫ /Not selected for recording

. Examples of the remaining media indicators

① **When** `REC MODE: Single` **is set.**

When recording　　When not recording　　When recording is impossible (*1)

② **When** `REC MODE: Mirror` **is set.**

When recording　　When not recording

③ **When** `REC MODE: Mirror` **is set. /** `Mirror` **invalid (*2)**

When recording　　When not recording　　When recording is impossible (*1)

*1, *2　See "Button Display" on page 88 when recording is impossible or `Mirror` is invalid.

⑮ **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 to zoom out (increase the displayed area).

⑯ **Timeline cursor**

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

⑰ **Mark name**

This is the name of the mark at the current time or the nearest preceding mark.

Touch this part while a mark name other than the auto mark is shown to open the mark name editing screen.

⑱ **INPUT MONITOR button**

Touch this button to open the button to turn the input monitor ON/ OFF.

When ON, sound input through the assigned input connector is always output from this unit.

⑲ **BOUNCE I/O button**

Touch this button to open a pull-up menu for 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 63.)

⑳ **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.

  Touch 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.
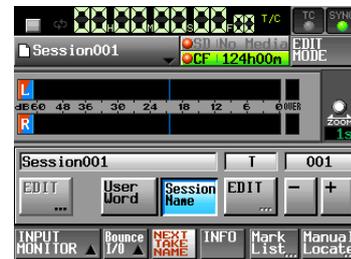
- **Second half of take names**

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

  Touch 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 card is unavailable
  - When the numerical part of the file name of the current take is 999

CAUTION

- The Next Take Name setting is saved with each project. If you change projects, the setting from 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.)

NOTE

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.

㉑ **INFO button**

Touch this button to open an information display that shows the file name on the region below the timeline cursor and the current settings of this unit beneath the track display area.

The upper section shows the file name on the region below the timeline cursor.

The lower section show the currently selected Fs, recording bit length and frame type.

㉒ **Mark List button**

Touch this button to open the mark list.

(See "Mark list screen" on page 109.)

㉓ **Manual Locate button**

Touch this button to open the MANUAL LOCATE screen. (See "" on page 111.)

In take mode or playlist mode

In take mode

<div style="border:1px solid black; padding:5px;">
NOTE

When in playlist mode, the INPUT MONITOR, EDIT and NEXT TAKE NAME buttons are not shown.
</div>

㉔ **Take/entry number**

The number of the currently selected take or entry is shown.

During Record Standby, the file name of the take to record next will be displayed.

Take numbers are assigned in the order that they are recorded within a session.

㉕ **Time mode (button)**

This shows the current time display mode with an icon.

Touch this area to change the time display mode.

During Record Standby, the file name of the take to record next will be displayed.

Mode	Meaning
	The elapsed time from the beginning of the take is shown.
REMAIN	The time remaining until the end of the take as well as the time remaining until the maximum file size when recording are shown.
TOTAL	The elapsed time from the beginning of the session is shown.
TOTAL REMAIN	The time remaining until the end of the session as well as the time remaining that can be recorded on the currently selected card under the current recording settings when recording are shown.
T/C	The time code time of the recording / playing file is shown.

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. (The white vertical line appears on the boundaries of the take or entry).	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

NOTE

A red progress bar that extends from the left end to the right end with a frequency of approximately five seconds is shown during recording.

㉗ **Take/entry name (button)**

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

During Record Standby, this shows the file name that will be used for the next recorded take.

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). On the take selection screen displayed by using this button, the SESSION selection screen will not open even if you press the session name display area. (See "PROJECT screen" on page 34.)

CIRCLE @ TAKE button

Touch this to add or remove "@" at the beginning of the current take name. (See "Deleting a take" on page 69.)

REBUILD button

This performs a REBUILD (file rescan) when files may have been deleted or modified from outside the HS-2 (e.g. via FTP).

In playlist mode

ASSIGN FILE button

This shows the ASSIGN screen where you can assign files. (See "Assign File screen" on page 79.)

ENTRY LIST button

This shows the entry list (ENTRY) screen. (See "Entry list screen" on page 78.)

ADJUST ENTRY button

This opens the ADJUST ENTRY *** screen where you can edit an entry. (See "Editing the playback starting time/ending point" on page 82, "Editing the playback starting time" on page 83 and "Editing the length and level of fade-in/ fade-out" on page 84.)

REBUILD button

This performs a REBUILD (file rescan) when files may have been deleted or modified from outside the HS-2 (e.g. via FTP).

SAVE button

This saves the current playlist. This can only be selected when stopped. (See "Saving a playlist" on page 85.)

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 85.)

CREATE PLAYLIST button

This displays PLAYLIST NAME screen to create a new playlist. (See "Creating a new playlist" on page 79.)

㉘ **Level meters**

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

㉙ **Time display area**

The times displayed in each region depend on the time display mode as shown in the following table.

		Left end	Right end
	(blank)	00:00:00:00	Total take or entry length
	REMAIN	Total take or entry length	00:00:00:00
	TOTAL	00:00:00:00	Total session or playlist length
	TOTAL REMAIN	Total session or playlist length	00:00:00:00
	T/C	Starting time of session or playlist	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 **INPUT MONITOR button**

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

㉞ **EDIT button**

Touch this button to open a pull-up menu for take editing.

㉟ **NEXT TAKE NAME button**

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

3–Preparation

Inserting and removing SD cards/ CF cards

Inserting SD cards/ CF cards

Insert an SD card/ CF card into the SD card slot or CF card slot on the front panel of the unit in order to use it for recording and playback.

NOTE

SD cards / CF cards can be inserted whether the power in ON or OFF.

1 Pull the card slot cover forward to open it.
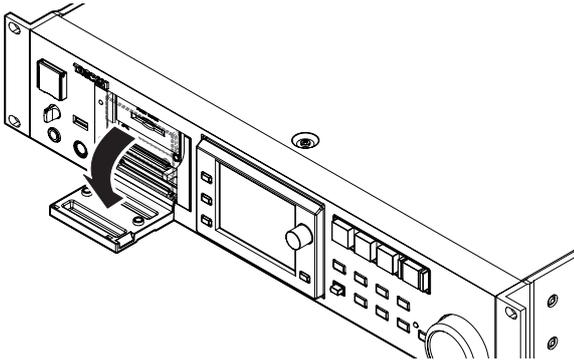
2 Insert the SD card/ CF card with the correct orientation.

With the labeled side up, insert the end with the connector completely.

CF :	With the labeled side up, insert the connector end all the way in until the card is firmly seated
SD :	With the labeled side up, insert the end with the exposed contacts all the way in until the spring latch engages
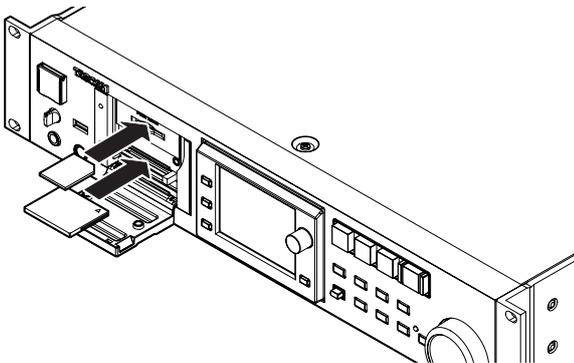
3 Close the cover.
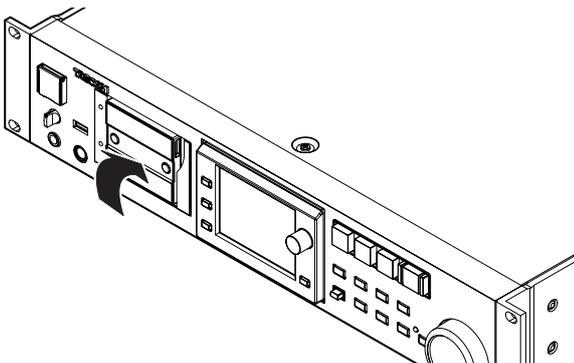
NOTE

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

Removing SD cards/ CF cards

Turn the unit OFF or stop operations before removing an SD card/ CF card.

CAUTION

Never remove an SD card / CF card during recording, playback or any other operation that accesses the SD card/ 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 card slot cover forward to open it.

2 In case of an SD card, press the card into the slot slightly and release to bring the card out. In case of a CF card, press the square button to the right of the CF card slot to bring the button out. Press the square button in again to partially eject the CF card.
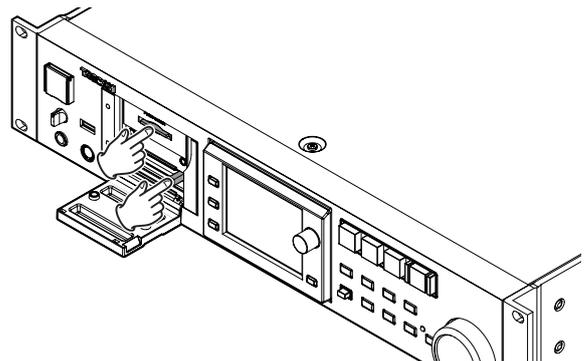
3 Pull the SD card/ CF card out by hand.
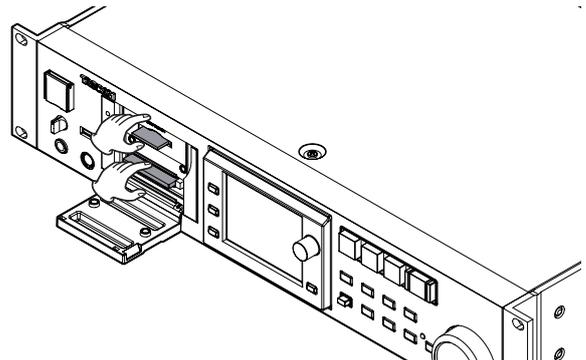
Security screws

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.
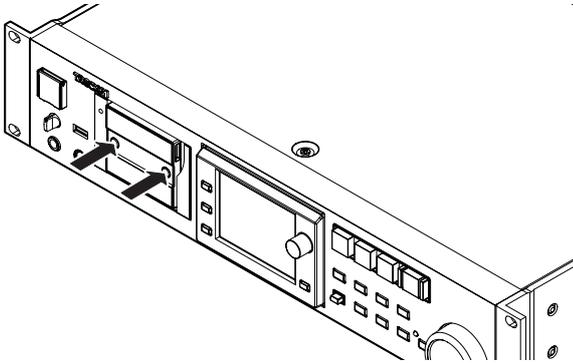
Protect switch for SD cards

SD cards have a protect switch (write prevention).
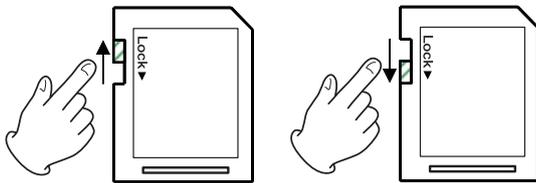
Writable   Not writable

If you slide the protect switch to the "LOCK" position, you cannot record or edit files. When you want to record or delete, unlock the write prevention.

CAUTION

A write protected SD card will check all audio files on the card every time the device is switched off. As a result, it takes longer to switch off the device. Editing the timeline is not possible, either.

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.
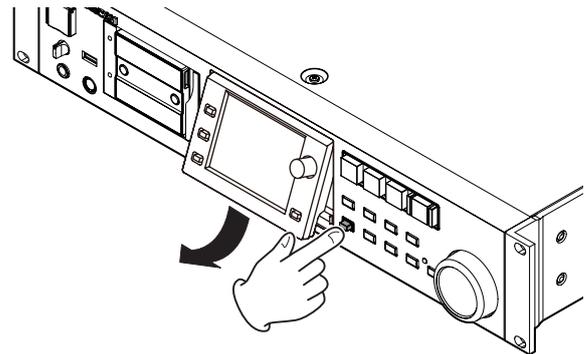
Adjusting display and indicator brightness

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)**, **SD** and **CF** indicators. Push and turn the **DATA** dial while pressing and holding the **HOME** key to adjust only the brightness of the color display.
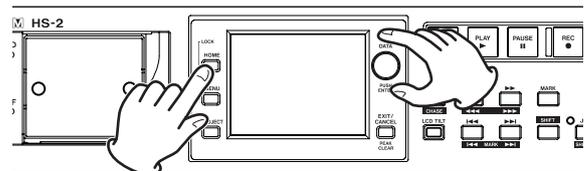
Cautions related to display use

. 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 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.
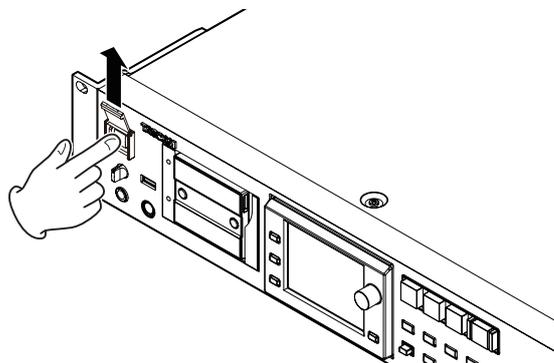
Startup screen

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 SD card/ 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.**
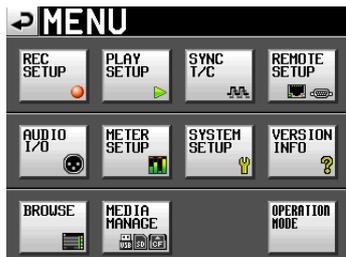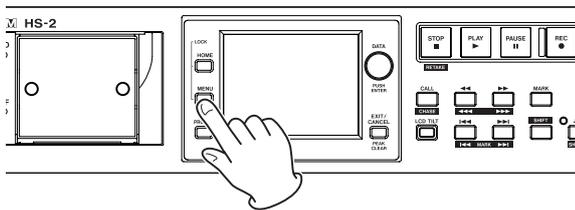
2   **Touch the** `SYSTEM SETUP` **button to open the** `SYSTEM SETUP` **screen.**
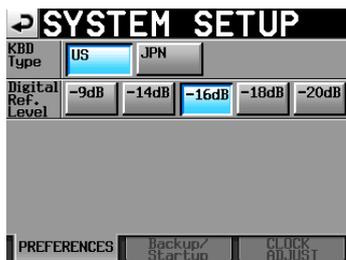
3   **Touch the** `CLOCK ADJUST` **tab to open the** `CLOCK ADJUST` **page where you can set the built-in clock.**

4   **Touch the item that you want to change, and use the DATA dial on the front panel to change the value.**
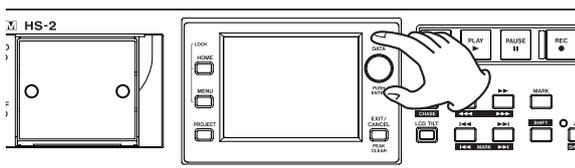
5   **Touch the** `SET` **button or push the DATA dial to confirm the setting.**

| NOTE |

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

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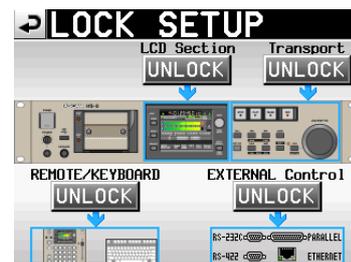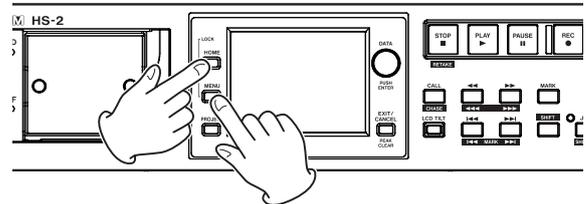
The front panel is divided into two sections, which can be locked and unlocked separately.

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.
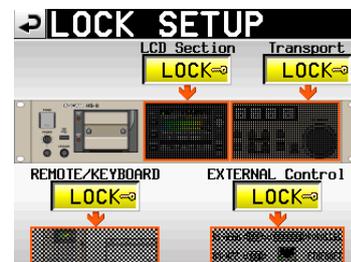
locked on LOCK SETUP

- 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.

Screen Locked

LCD Section Locked
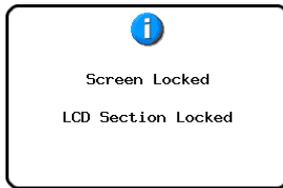
Display (panel) locked

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

Screen Locked

Touch Panel Locked Out
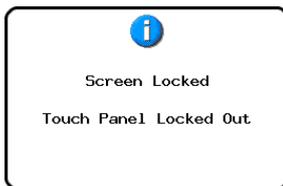
Display (key) locked

- 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.

Transport Locked

Transport Section Locked
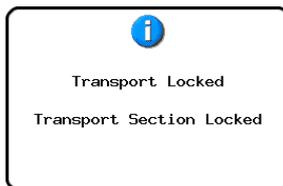
Transport locked

- 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.

REMOTE/KEYBOARD Locked
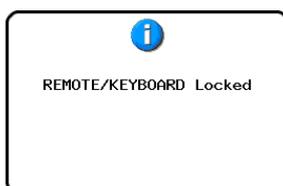
Remote/Keyboard control locked

- 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.

EXTERNAL Control Locked
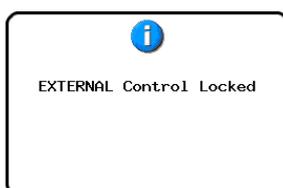
Remote/Keyboard control locked

Recording times

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

File recording format	Card capacity		
	8 GB	16 GB	32 GB
16-bit, 44.1 kHz	12:34	25:10	50:21
16-bit, 48 kHz	11:32	23:07	46:16
24-bit, 44.1 kHz	8:22	16:46	33:34
24-bit, 48 kHz	7:41	15:24	30:50
24-bit, 88.2 kHz	4:11	8:23	16:47
24-bit, 96 kHz	3:50	7:42	15:25
24-bit, 176.4 kHz	2:05	4:11	8:23
24-bit, 192 kHz	1:55	3:51	7:42

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

In this chapter, we explain the basic operation procedures that are the same in each operation mode.

The display on this unit functions as a touchscreen.

Operate the unit using its keys, switches and touchscreen display buttons.

On every screen except the Home Screen, a ↵ button appears at the top left. Touch this button to return to the previous screen.

NOTE

You can also return to the previous screen by pressing the **EXIT/CANCEL (PEAK CLEAR)** key.

SD card/ CF card preparation

Card selection

1   **Press the MENU key on the front panel to open the** MENU **screen.**
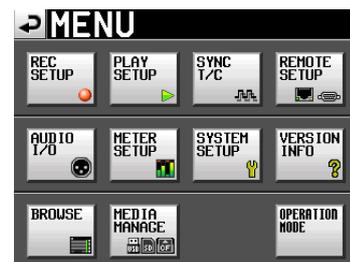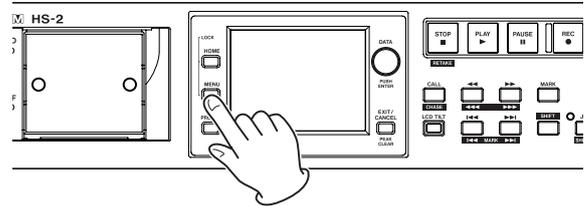
2   **Touch the** MEDIA MANAGE **button to open the** MEDIA MANAGE **screen.**
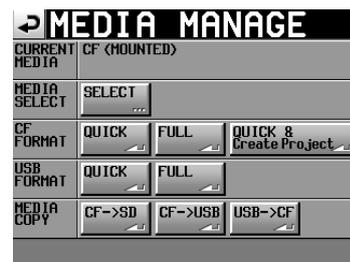
3   **Touch the** SELECT **button from the** MEDIA SELECT **item to open the** MEDIA SELECT **screen.**
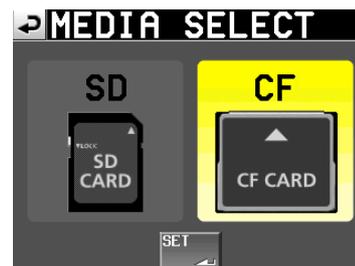
NOTE

You can also open MEDIA SELECT screen by touching recording media display button on the Home screen.

4   **Touch the button for the card that you want to use to select it. The background of the selected card appears yellow.**

5   **Touch the** SET **button to return to the** MEDIA MANAGE **screen.**

6   **If you also want to format the card now, follow the procedure starting with step 3 in "Formatting an SD card/ CF card" next.**

Formatting SD cards/ CF cards

CAUTION

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

1 Press the MENU key on the front panel to open the MENU screen.
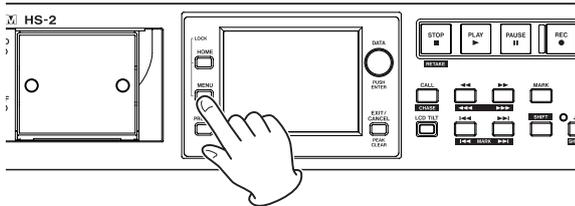
2 Touch the MEDIA MANAGE button to open the MEDIA MANAGE screen.
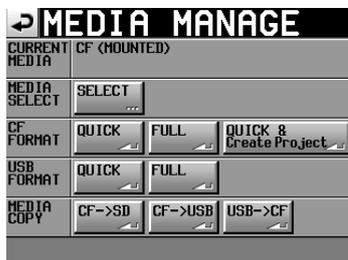
3 Touch the QUICK button next to the SD FORMAT or CF FORMAT item, the following message appears on the pop-up window.
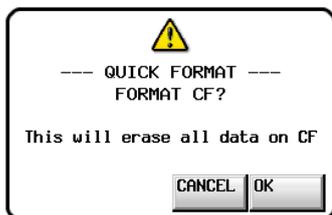
NOTE

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

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

5 Touch the OK button on the pop-up message.
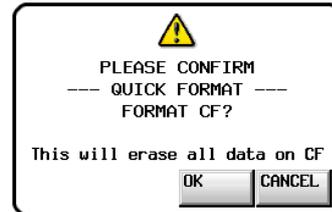
During formatting, the following pop-up message appears.
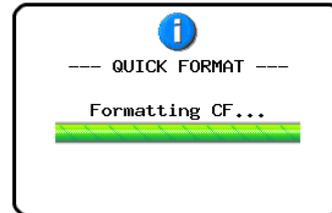
When formatting completes, the following pop-up message appears.

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

7 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 touch the `QUICK & Create Project` button instead of the `QUICK` button next to the `FORMAT` item, a new project will be created after the 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** `MEDIA MANAGE` **button on the** `MENU` **screen to open the** `MEDIA MANAGE` **screen.**
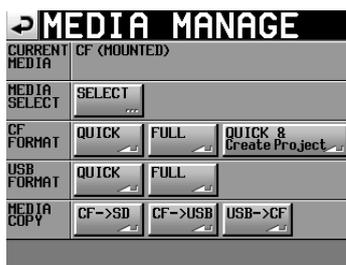
2 **Touch the** `Quick & Create Project` **button next to the** `FORMAT` **item. The following pop-up window message appears.**
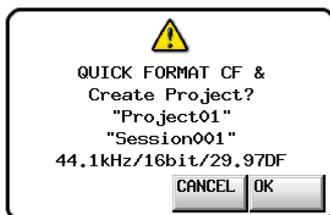
This window shows the project name, session name, sampling frequency, bit rate and frame type in the project to be created.

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 `MEDIA MANAGE` screen.

Creating a new project

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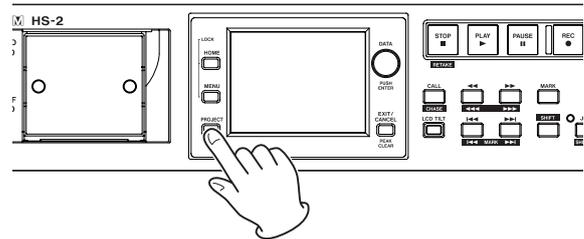
2 **Touch the** `CREATE PROJECT` **button to open the** `CREATE PROJECT` **screen.**

The `CREATE PROJECT` screen has 3 pages.

On the first page, you can set the project name, the name of the first created session, and the sampling frequency.

For details about each item, see "Creating new projects" on page 37.

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

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

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 6.

4 **Touch the** `NEXT` **button again to open the third page where you can set the starting time in timeline mode, for example.**

For details about each item, see "Creating new projects" on page 37.

5 **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.

6 **Check the settings on the confirmation pop-up message that appears. Touch 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.**
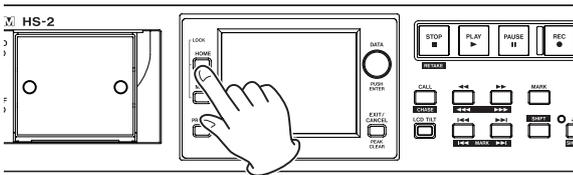
2 **Touch the** `SYNC` **button to open the** `SYNC T/C` **screen.**
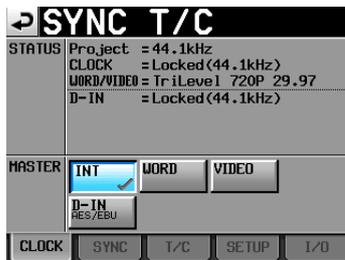
NOTE

You can also open `SYNC T/C` screen by touching `SYNC T/C` button on `MENU` screen.

3 **Select the master clock that you want to use from the** `MASTER` **item.** (See "" on page 92.)

Setting inputs and outputs

Setting the inputs

1 **Press the MENU key on the front panel to open the** `MENU` **screen.**
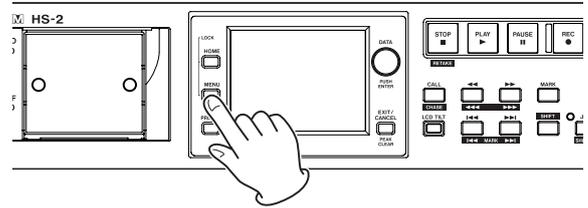
2 **Touch the** `AUDIO I/O` **button to open the** `AUDIO I/O` **screen.**

On the `INPUT` page, make settings for input source. For details, see "INPUT page" on page 100.

Setting reference levels

1. **Press the MENU key on the front panel to open the** `MENU` **screen.**
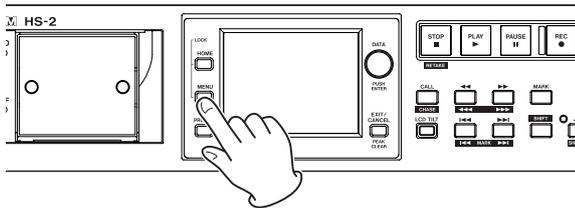
2. **Touch the** `SYSTEM SETUP` **button to open the** `SYSTEM SETUP` **screen.**
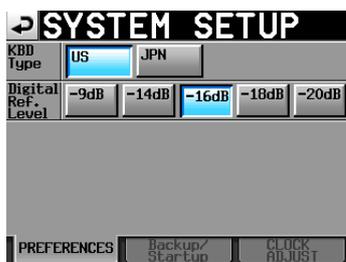
On the `PREFERENCES` page, set the digital reference level (`Digital Ref. Level`). (You can also select the type of keyboard.)

For details, see "PREFERENCES page" on page 102.

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.
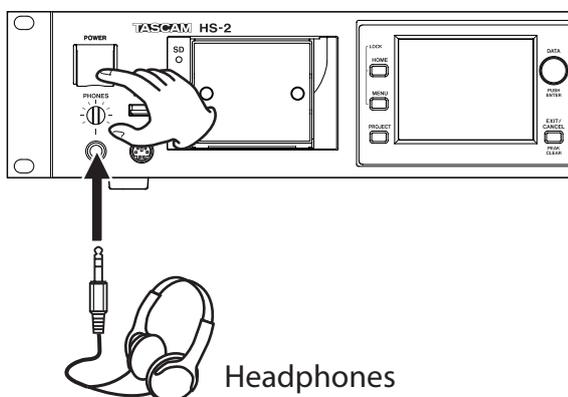
Headphones

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.

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.

- **When recording/editing is repeated in timeline mode and the available memory runs short**

  Repeating recording/editing may greatly consume memory to manage regions or editing history. In this case, recording cannot be performed, and the following pop-up message appears:
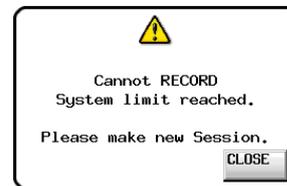
In this case, the remaining recording time indicator for the currently selected card on the Home Screen shows `Rec Limit.`
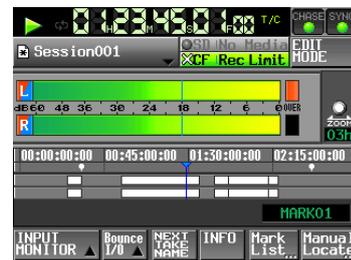
CAUTION

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.

5–Projects

Project organization

This unit manages audio files in projects. An SD card/ CF card 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

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 / WAV*1

Sampling frequencies

44.1 / 48 / 88.2 / 96 / 176.4 / 192 kHz

Bit-length

16/24-bit

Number of tracks

2 tracks

> *1 Recording of WAV file is not available on this unit. (Only playback is available.)

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.
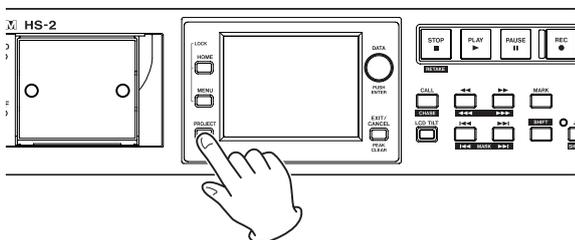
Project selection screen

- **Directory display**

  The current directory level and number of projects is shown. (In the example above, the root directory of the CF card contains five 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)*1	`48k -`
48.048 kHz (48 kHz +0.1% pull-up)*2	`48k +`
88.2 kHz	`88k`
176.4 kHz	`176k`

> *1, *2 Not compatible with the projects in 47.952kHz/ 48.048kHz. When loaded, "`Unsupported Fs.`" is displayed and recording / playback is disabled.

- **ENTER button**

  Touch the ➡ button for the current project (the letter "`C`" appears in the `C` icon, which is also highlighted yellow), 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 button**

  Touch to select that project. The letter "`C`" appears in the `C` icon, which is also highlighted yellow, for the currently loaded project.

- **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 card.

- **CREATE PROJECT button**

  Touch to open the `CREATE PROJECT` screen where you create a new project.

- **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**

Touch the ➡ button for the current project (the letter "C" appears in the icon, which is also highlighted yellow), to view the contents of that project.
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 letter "C" appears in the icon, which is also highlighted yellow, for the currently loaded session.

• **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`, `EXPORT` 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.

● **LOAD column**

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 button**

Touch this button when an AES31 file is selected to open a pop-up window with information about the selected file.
Press this button when no AES31 file is selected to show information about the current session.

● **CREATE AES31 button**

This shows the screen for creating a new AES31 file.

● **MENU button**

This shows a pull-up menu for selecting LOAD, EDIT NAME and DELETE.

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 column**

This shows the take length (time).

● **ENTER column**

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

● **Take name buttons**

Touch to select a take.
The letter "C" appears in the 🔢 icon, which is also highlighted yellow, for the currently loaded take.

● **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**

This shows a pull-up menu for selecting LOAD, REBUILD, EDIT TC, EXPORT, DELETE, SORT, MOVE and EDIT NAME.

● **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.

● **LOAD column**

Touch the ➡ button to open a pop-up to confirm that you want to load that playlist.

● **Playlist name buttons**

Touch to select a playlist.
The letter "C" appears in the 🔢 icon, which is also highlighted yellow, for the currently loaded playlist.

● **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.

● **CREATE PLAYLIST button**

This shows the screen for creating a new playlist.

● **MENU button**

Touch to open a pull-up menu where you can select `LOAD`,`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.
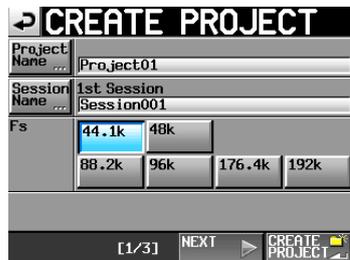
CREATE PROJECT screen 1

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.

■ **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, touch the** `NEXT` **button.**
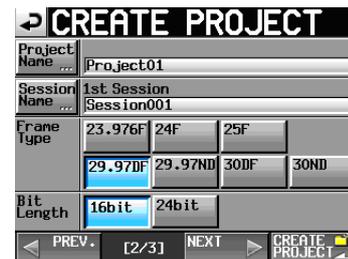
CREATE PROJECT screen 2

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, touch 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. Touch the `EDIT` button to open a screen where you can change the starting time.

■ **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.

5   **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, touch the `PREV` button to return to the previous screen.

6 When the confirmation message appears in a pop-up, touch the OK button.

Create new project?
"Project01"
"Session001"

44.1kHz/16bit/29.97DF

CANCEL OK

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

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

PROJECT NAME

CAUTION

Name input screens such as the PROJECT NAME screen cannot display any characters other than alphanumeric characters and symbols.

If any characters other than alphanumeric characters and symbols are contained in the name, such a character will be deleted when a name input screen such as the PROJECT NAME screen is displayed.

■ **Date button**

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

If the same project name or session name already exists, an underscore (_) followed by a number that has not been used is added.

NOTE

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.

2 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

1 Select the project that you want to change on the PROJECT screen. The background of the selected project name appears yellow.

2 Touch the MENU button on the PROJECT screen to open a pull-up menu.
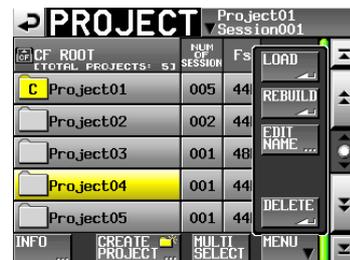
PROJECT

3 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.

4 Input the project name using the procedures described above.

5 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 38 to change the name.

NOTE

Session names cannot be changed later.

Loading projects

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

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 (file rescan) should be performed whenever there is an inconsistency between the unit's file lists and the actual directory contents that may occur, for example, when an audio file has been deleted via FTP.

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.**
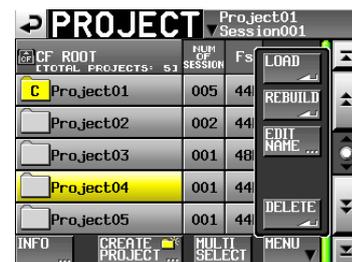
One project selected

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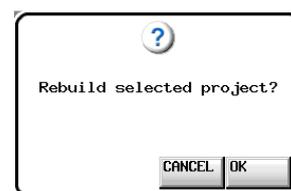
   During rebuilding, a progress status pop-up appears. When rebuilding completes, the pop-up disappears.

NOTE

If you select REBUILD when no project has been selected in the PROJECT screen, the entire content of the selected card is rebuilt.

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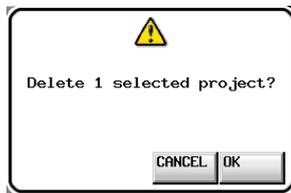
   During erasure, a progress status pop-up appears. When erasure completes, the pop-up disappears.

CAUTION

When you erase a project, all session folders, timelime 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

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

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.**

> **?**
>
> Make new Session?
> "Session006"
>
> TIMELINE Start Time:00h00m00s00f
>
> CANCEL OK

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 ☐ 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. 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 load.

4 Touch the `MENU` **button on the** `SESSION` **screen to open a pull-up menu.**

> **SESSION** Project01-12345
> Session001
> Project01-12345 NUM OF TAKE TOTAL TIME LOAD
> C Session001 005 35
> Session002 000 0 REBUILD
> Session003 000 0
> Session004 000 0 EXPORT
> Session005 000 0 DELETE
> INFO ... MAKE SESSION ... MULTI SELECT 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.**

> **?**
>
> Load selected Session?
>
> "Session004"
>
> CANCEL OK

After loading completes the Home Screen opens.

NOTE

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

Rebuilding sessions

Rebuilding (file rescan) should be performed whenever there is an inconsistency between the unit's file lists and the actual directory contents that may occur, for example, when an audio file has been deleted via FTP.

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.**

> **SESSION** Project01-12345
> Session001
> Project01-12345 NUM OF TAKE TOTAL TIME LOAD
> C Session001 005 35
> Session002 000 0 REBUILD
> Session003 000 0
> Session004 000 0 EXPORT
> Session005 000 0 DELETE
> INFO ... MAKE SESSION ... MULTI SELECT MENU ▼

One session selected

> **SESSION** Project01
> Session001
> Project01 NUM OF TAKE TOTAL TIME LOAD
> C Session001 004 3
> Session002 000 0 REBUILD
> Session003 000 0
> Session004 000 0 EXPORT
> Session005 003 1 DELETE
> INFO ... MAKE SESSION ... MULTI SELECT MENU ▼

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.**

> **?**
>
> Rebuild selected Session?
>
> CANCEL OK
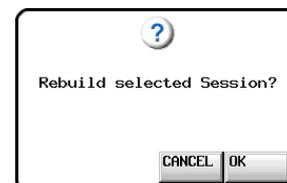
During rebuilding, a progress status pop-up appears.

When rebuilding completes, the pop-up disappears.

NOTE

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

Exporting sessions

You can export session folders from the selected media to an unselected media (two media devices are necessary). When you export a session, the same directory structure is created on the export destination.

CAUTION

If you export 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 export to open the session 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.**

3   **Select the session that you want to export.**

    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** EXPORT **button in the pull-up menu.**

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

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

CAUTION

If a session with the same name already exists on the media storage device to export to, a confirmation message appears on the pop-up window.

Touch the OK button or the **DATA** dial to export the session after the folder on the export destination has been deleted.

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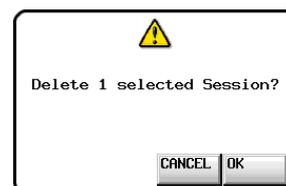
During erasure, a progress status pop-up appears.
When erasure completes, the pop-up disappears.

CAUTION

When you erase a session, all timeline DATA, takes and playlists in the 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.

Project selection screen

Session selection screen

AES31 file selection screen

Timeline mode

Take selection screen

Take mode

Playlist selection screen

Playlist mode
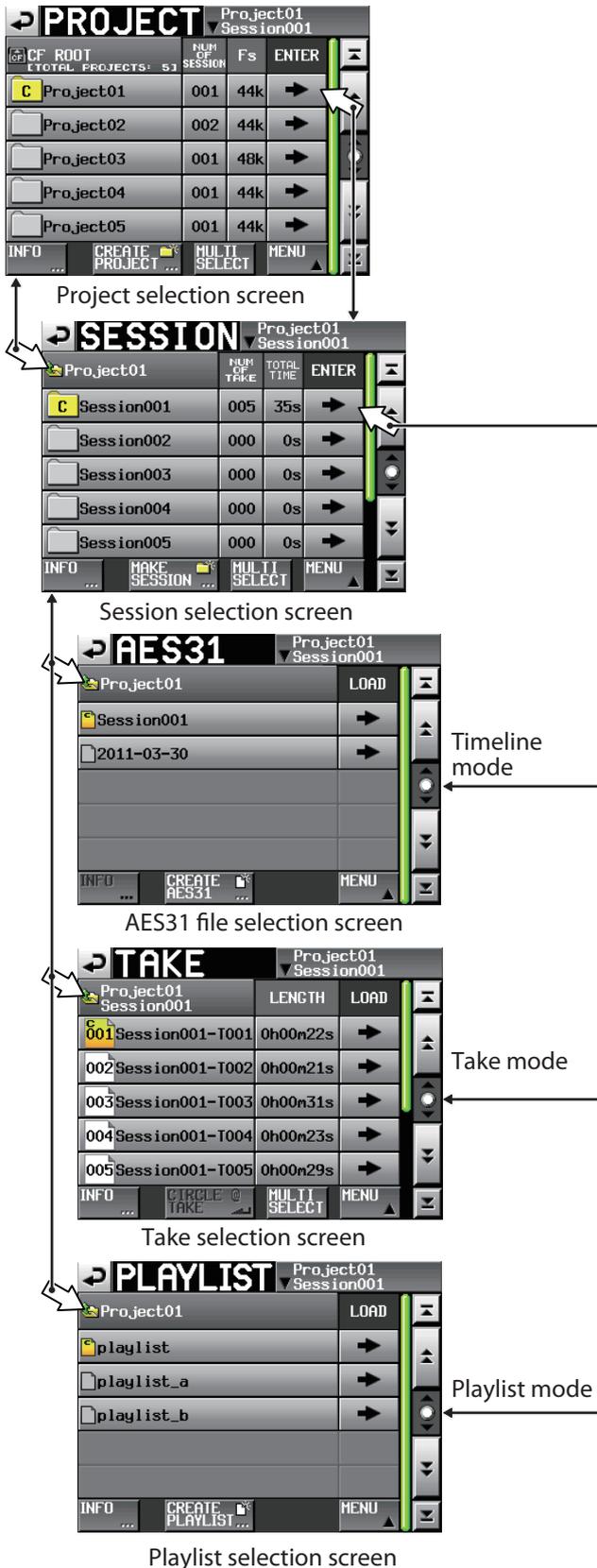
This unit has the following three operation modes.

- Timeline mode provides a working environment (session) based on linear time similar to a tape recorder.

  In timeline mode, up to 2 tracks can be recorded and played back. Marks can also be edited.
- Take mode uses takes (files) as recording and playback units. Up to 2 tracks can be recorded and played back, and marks can also be edited.
- Playlist mode provides a playlist playback function.

  Up to 2 tracks can be played during playlist playback.

Timeline mode functions

The following functions can be used in timeline mode.

- Up to two channels of simultaneous recording and playback is possible at all compatible sampling frequencies (Fs).
- Mirror recording function utilizing dual slot.
- Recording and playback with time code synchronization is possible. (The optional SY-2 board is required.)
- A single file can be created from a designated time interval in a timeline using the bounce function.
- Marks can be set, managed, edited and used for playback.
- Compatibility with the AES31 file standard allows import and exchange of data with other devices.

[NOTE]

Because the AES31 file standard does not contain support for 176.4kHz or 192kHz projects, edit information for those sample rates will be saved and created in an original format based on AES31.

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 two channels of simultaneous recording and playback are possible for all compatible sampling frequencies (Fs).
- Auto cue, auto ready and incremental play functions are available.
- Using a TASCAM RC-HS20PD or other remote controller, flash start playback is possible (five pages of 20 keys each).
- Marks can be set, managed, edited and used for playback

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 the exchange of playlists with other devices.
- Up to two channels playback are possible for all compatible sampling frequencies (Fs).
- Using a TASCAM RC-HS20PD or other remote controller, flash start playback is possible (five pages of 20 keys each).

Selecting the operation mode

1 **Press the MENU key on the front panel to open the** MENU **screen.**
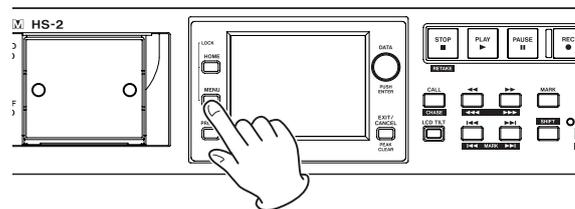
2 **Touch the** OPERATION MODE **button to open the** OPERATION MODE **screen.**

3 **Touch 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

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

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 page 44.)

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

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.**
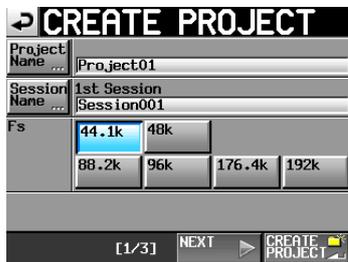
On this screen, set the project name, the name for the first session and the sampling frequency in recorded audio files.

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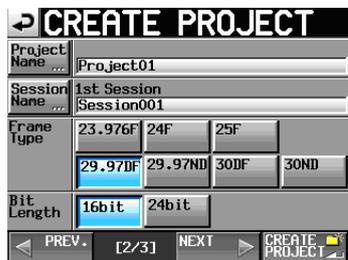
Set the frame type then bit length.

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

Finally, set the starting time 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 37.

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.

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 38.

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.**

7 **When you have finished making settings, touch 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 40.

Recording mode settings

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.**

On the REC MODE **page, you can select the recording mode. The background color for the selected mode is light blue. For more details, see "REC MODE page" 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 90.

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 90.**

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, 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).

CAUTION

• 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.

Playback in timeline mode

Project/session selection

1 **Press the PROJECT key on the front panel to open the** PROJECT **screen.**
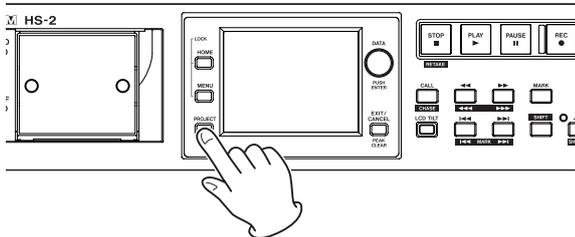
2 **Touch the ➡ button next to the project that you want to play to open the session selection screen.**

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 when you are playing back. If input monitoring is ON, sound from the input connectors will be output through all the output connectors of this unit.

1 **Touch the** INPUT MONITOR **button on the Home Screen to open a pull-up with the input monitoring** ON/OFF **button.**

2 **If input monitoring is on (**ON **button appears blue), touch the** OFF **button to turn it off (**OFF **button appears blue).**

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 and holding the **STOP** key, press the ►◄◄ [MARK ►◄◄] 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.

Reading, saving and creating AES31 editing information

Loading AES31 editing information

You can load AES31 editing information loaded in the current session to the timeline.

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

{drive name of the card}:\{project name}\{session name}\ {AES31 editing information}

NOTE

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

NOTE

Because the AES31 file standard does not contain support for 176.4kHz or 192kHz projects, edit information for those sample rates will be saved and created in an original format based on AES31.

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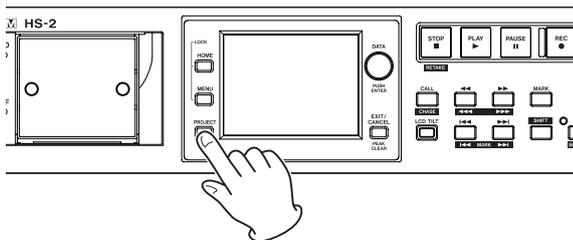
2 Touch the ➡ button next to the project that contains the session with the AES31 editing information that you want to load to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the OK **button.**

3 Touch the ➡ button for the session with the AES31 editing information that you want to load to open the session 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 touch 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.
- The letter "C" appears in the ⬛ icon, which is also highlighted yellow, for the currently loaded AES31 file.

4 Press the ➡ button next to the AES31 editing information that you want to load.

5 When a confirmation message pop-up appears, touch the OK **button or press the DATA dial.**

When loading AES31 editing information, a progress status pop-up appears.

When loading completes, the pop-up window disappears and the Home screen is opened. The loaded contents replace the contents of the timeline.

Saving AES31 editing information

You can save the current timeline as an AES31 file. The saved file is created in the current session folder.

CAUTION

When you edit the timeline, save the AES31 editing information where necessary. If you do not "SAVE", changed contents will be deleted if other AES31 editing information is loaded, a card is removed, or the unit is turned off.

If you have not saved the information after editing, a "*" mark will be shown on the AES31 file name display button.

If you load other AES31 editing information when "*" is shown, create new AES31 editing information, or change the operation mode, a pop-up message asking if you want to save the current AES31 editing information will appear.

1 Press the Home key on the front panel to display the Home Screen.

2 Touch the AES31 file name display button on the home screen to display a pull-down menu.

3   When you touch the SAVE button on the pull-down menu, the information will be saved on the selected card.

During saving, the progress status will be shown in the pop-up window. When saving is complete, the pop-up window will disappear.
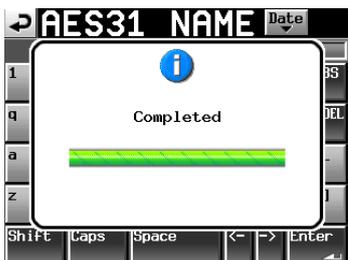
Attaching a name to and saving AES31 editing information

You can attach a name and save the current timeline as an AES31 file. The file saved will be created in the current session folder.

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

2   Touch the AES31 file name display button on the Home screen to open a pull-down menu.

3   Touch the SAVE AS 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 38.

4   Touch the Enter button on the AES31 NAME screen or press the DATA dial to save the data with input name.

During saving, a progress bar will be shown in the pop-up window.

When saving is complete, the pop-up window will disappear.
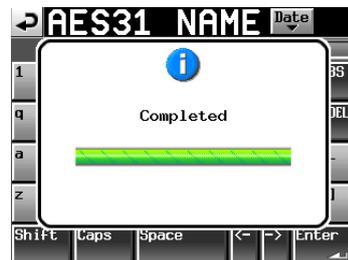
NOTE

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.

Creating new AES31 editing information

You can create a new AES31 file in the current session (session that is currently loaded).

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

2   Touch the AES31 file name display button on the Home Screen to display the pull-down menu.

3   Touch the CREATE AES31 button on the pull-down menu item to display the AES31 NAME screen for inputting the AES31 editing file name.

Input the file name. See "Editing the project name" on page 38 for the input method.

NOTE

You can also create the new AES31 file by touching `CREATE AES31` button on the AES31 file selecting screen.

4 Touch the `Enter` button or press the DATA dial on the `AES31 NAME` screen.

5 Touch the `OK` button or press the DATA dial when the confirmation message appears on the pop-up window to create a new AES31 editing information file with the inputted name.

NOTE

If the entered file name already exists, the pop-up window `This name already exists.` appears. Touch the `CLOSE` button to return to the `AES31 NAME` screen, and enter another name.

Importing all the takes

NOTE

Each take is imported on the timeline of the time code time set for the take. If the time code time is not set, the take is imported to [00 h 00 m 00 s 00 f].

All existing editing information in the current session is cleared and all takes found within the current session's folder are imported when this operation is performed.

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

2 Touch the AES31 file name display button on the Home Screen to display the pull-down menu.
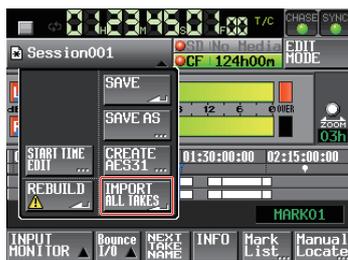
3 Touch the `IMPORT ALL TAKES` button on the pull-down menu item.

4 A confirmation message will appear on the pop-up window.

Touch the `OK` button or press the **DATA** dial to clear the current session and all the takes from the current session's folder.

Touch the `CANCEL` button to return to Home Screen.

Editing an AES31 file name

1 Press the PROJECT key on the front panel to display the `PROJECT` screen.

2 Touch the ➡ button of the project containing the AES31 file you want to rename to display the session selection screen.

If it is not the current project, touch the `OK` button on the pop-up window which appears to confirm loading.

3 Touch the ➡ button of the project containing the AES31 file you want to rename to display the AES31 file selection screen.

If it is not the current session, touch the `OK` button on the pop-up window which appears to confirm loading.

4 Select the AES31 file that you want to rename.

The background color of the selected AES31 file name will become yellow.

5 Touch the `MENU` **button to display the pull-up menu item.**

6 Touch the `EDIT NAME` **button on the pull-up menu item to display the** `AES31 NAME` **screen to enter an AES31 file name.**

NOTE

If you select the loaded AES31 file, you cannot select the `EDIT NAME` button on the pull-up menu item.

7 Touch the `Enter` **button on the** `AES31 NAME` **screen or press the DATA dial.**

NOTE

If the entered file name already exists, the pop-up window `This name already exists.` appears. Touch the `CLOSE` button to return to the `AES31 NAME` screen, and enter another name.

Deleting an AES31 file

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

2 Touch the ➡ **button of the project containing the AES31 file you want to delete to display the session selection screen.**

If it is not the current project, touch the `OK` button on the pop-up window which appears to confirm loading.

3 Touch the ➡ **button of the project containing the AES31 file you want to delete to display the AES31 file selection screen.**

If it is not the current session, touch the `OK` button on the pop-up window which appears to confirm loading.

4 Select the AES31 file that you want to delete.

The background color of the selected AES31 file name selected will become yellow.

5 Touch the `MENU` **button to display the pull-up menu item.**

6 Touch the `DELETE` **button on the pull-up menu item.**

NOTE

If you select the loaded AES31 file, you cannot select the `DELETE` button on the pull-up menu item.

7 Touch the `OK` **button or press the DATA dial when the confirmation message appears on the pop-up window. When deleting is complete, the pop-up window will disappear.**

Editing the timeline

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 disappears and are replaced with the EDIT button, Fade/Level button, and SET/SELECT button.

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

The pull-up menu includes not only nine editing buttons such as Copy, Cut, Erase, Divide, Insert, Insert File, Insert Mute, Paste, Paste File, but also buttons used for editing such as UNDO and REDO buttons.

CAUTION

If you do not save the AES31 editing information after editing it, all changes will be cleared when you load another project/session/AES31 editing information, remove a card or turn off the unit's power, for example.

NOTE

Repeated recordings or editing may greatly consume the memory used in managing regions or editing history.
In this case, the pop-up message Cannot Edit. System limit reached. appears:

Selecting the range to copy/cut/delete

- When the editing start and finish points are designated, the range between the points is selected.
- When the editing start and finish points are not designated, the entire region under the time cursor is selected.

[When the editing points are not designated]

- When the timeline cursor is on the borderline of the region, the region to the right is to be edited. If the region to the right is the muted part, it is not selected.

Designating the editing start point

1 Press the HOME key to display the Home Screen.

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

3 Use the ◄◄/►►, keys etc. to locate the timeline cursor on the position (time) to start editing.

4 Touch the SET/SELECT button to display the pull-up menu.

5 Touch the SET IN button on the pull-up menu item to set the editing start point (IN point)

IN mark ("") will be displayed in the current position marking area.

Designating the editing finish point

6 Use the ◄◄/►►, keys etc. to locate the timeline cursor on the position (time) to finish editing.

7 Touch the SET/SELECT button to display the pull-up menu.

8 Touch the SET OUT button on the pull-up menu item to set the editing finish point (OUT point).

OUT mark ("![icon]") will be displayed in the current position marking area.

The range between the IN mark ("![icon]") and OUT mark ("![icon]") is to be edited, and indicated in light blue.

Deleting the editing start/finish points

1 Touch the SET/SELECT button to display the pull-up menu.

2 Touch the CLEAR button to on the pull-up menu item. When a confirmation pop-up window is displayed, touch the OK button or press the DATA dial.

The current IN and OUT points are deleted, and the IN mark ("![icon]") and OUT mark ("![icon]") disappear from the marking area.

Selecting a complete region for editing

1 Press the HOME key to display the Home Screen.

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

3 Move the timeline cursor to appear within the region to be edited.

4 Touch the SET/SELECT button to display the pull-up menu.

5 When you touch the SELECT Region button on the pull-up menu item, the beginning of the region below the timeline cursor is set to the editing start point (IN point), and the end of the region is set to the editing finish point (OUT point) to select the whole region area.

IN mark "![icon]"/ OUT mark"![icon]" will be displayed in the current position marking area, and the range between the marks is to be edited, and indicated in light blue.

Copying the data in the selected region (Copy)

You can copy the selected region.

| NOTE |

. The copied data will be saved in the copy buffer.

. When the whole fade (in/out) area is included, the fade information will also be retained.
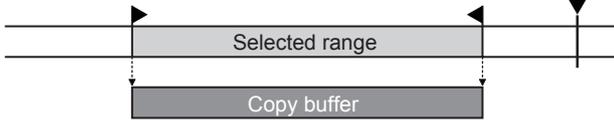
1 Press the HOME key to display the Home Screen.

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

3 Move the timeline cursor to the region to copy.

4 Touch the SET/SELECT **button and select the region you want to copy using the** SET IN, SET OUT **and** SELECT Region **buttons on the pull-up menu.**

5 Touch the EDIT **button to display the pull-up menu.**

6 Touch the Copy **button on the pull-up menu. When copying is complete, the Home Screen will be displayed after the pop-up window is displayed.**

In this case, the EDIT pull-up menu will remain open.

Cutting the data in the selected region (Cut)

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

| NOTE |

. The data cut is saved on the copy buffer.

. When the whole fade (in/out) area is included, the fade information will also be retained.

. When the IN point or OUT point is within the region, the parts outside of the designated region will become a new region.

. When the IN point or OUT point is set in the section of fade-in / fade-out, the fade-in and fade-out information will be deleted.
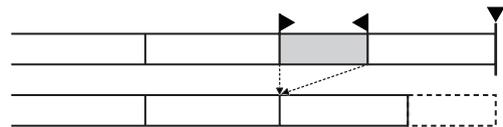
1 Press the HOME key to display the Home Screen.

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

3 Move the timeline cursor to the region to cut.

4 Touch the SET/SELECT **button and select the region you want to cut using the** SET IN, SET OUT **and** SELECT Region **buttons on the pull-up menu.**

5 Touch the EDIT **button to display the pull-up menu.**

6 Touch the Cut **button on the pull-up menu. When cutting is complete, the Home Screen will be displayed after the pop-up window is displayed.**

In this case, the EDIT pull-up menu will remain open.

Erasing the data in the selected region (Erase)

You can erase the selected region to make the sound silent. The position of the following regions will remain unchanged.

NOTE

. The erased data is saved on the copy buffer.

. When the whole fade (in/out) area is included, the fade information will be retained.

. When the IN point or OUT point is within the region, the parts outside of the designated region will become a new region.

. When the IN point or OUT point is set in the section of fade-in / fade-out, the fade-in and fade-out information will be deleted.
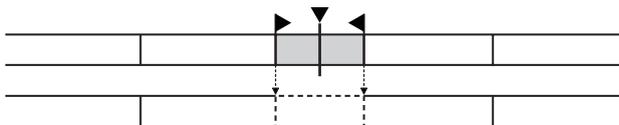
1   **Press the HOME key to display the Home Screen.**

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

3   **Move the timeline cursor to the region to erase.**

4   **Touch the** SET/SELECT **button and select the region you want to erase using the** SET IN, SET OUT **and** SELECT Region **buttons on the pull-up menu.**

5   **Touch the** EDIT **button to display the pull-up menu.**

6   **Touch the** Erase **button on the pull-up menu. When erasing is complete, the Home Screen will be displayed after the pop-up window is displayed.**

In this case, the EDIT pull-up menu will remain open.

Dividing the data at the specified position (Divide)

You can divide the selected region at the position of the timeline cursor.
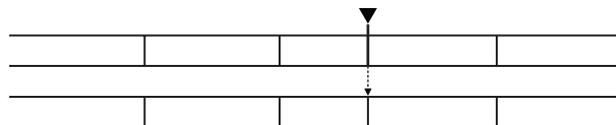
1   **Press the HOME key to display the Home Screen.**

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

3   **Move the timeline cursor to the time where you want to divide the region.**

4   **Touch the** EDIT **button to display the pull-up menu.**

5   **Touch the** Divide **button on the pull-up menu. When dividing is complete, the Home Screen will be displayed after the pop-up window is displayed.**

In this case, the EDIT pull-up menu will remain open.

Inserting the data of the copy buffer into the designated position (Insert)

NOTE

- All regions following the positions inserted will move backward by the time of the data inserted.
- When inserting into a region, the following three regions will be generated: before the timeline cursor, the content of the copy buffer, and after the timeline cursor.
- When the designated position is located between fade-in and fade-out, the fade-in and fade-out information will be deleted.
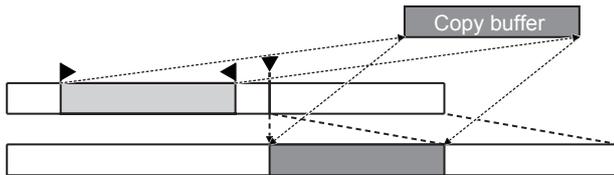
1   **Press the HOME key to display the Home Screen.**
2   **Touch the `EDIT MODE` button to enter the edit mode.**
3   **Move the timeline cursor to the position where you want to insert data.**
4   **Touch the `EDIT` button to display the pull-up menu.**

Touch the `Insert` button on the pull-up menu.

NOTE

The `Insert` button is available only when the copy buffer contains data.

5   **When inserting is complete, the Home Screen will be displayed after the pop-up window is displayed.**

> Edit Completed

In this case, the `EDIT` pull-up menu will remain open.

Inserting the designated file into the designated position (Insert File)

You can insert the entire contents of a 2ch BWF file/WAV file into the designated position.

NOTE

- All regions following the positions inserted will move backward by the time of the file inserted.
- When inserting into a region, the following three regions will be generated: before the timeline cursor, the inserted file, and after the timeline cursor.
- When the designated position is located between fade-in and fade-out, the fade-in and fade-out information will be deleted.
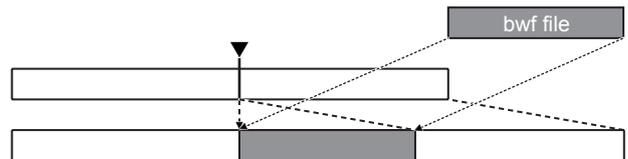
1   **Press the HOME key to display the Home Screen.**
2   **Touch the `EDIT MODE` button to enter the edit mode.**
3   **Move the timeline cursor to the position where you want to insert a file.**
4   **Touch the `EDIT` button to display the pull-up menu.**

Touch the `Insert File` button on the pull-up menu to open the `BROWSE` screen.

5   **Touch the ➡ button to select the media containing a file to insert on the `BROWSE` screen.**
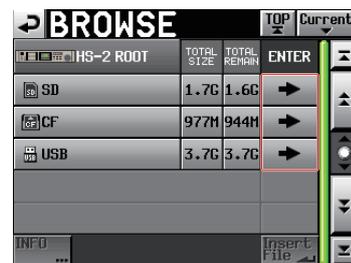
NOTE

If the top page of the `BROWSE` screen is not displayed, touch 🔝 on the screen. The media selection screen appears.

6 **Touch the** `Insert File` **button after selecting a file to insert on the** `BROWSE` **screen displayed.**

7 **Touch either the** `Current Position` **or** `File T/C` **button to start inserting when the pop-up window to select the inserting position is displayed.**

Then, select the `CANCEL` button to return to the `BROWSE` screen.

NOTE

If the selected file contains no time code information when the `File T/C` button is touched, the file is inserted at [00 h 00 m 00 s 00 f].

NOTE

If you select a file from other than the current session folder, the file is copied to the current folder and then inserted.

A pop-up window showing `Cannot Copy.` is displayed when a file with the same name exists in the current session folder.

To change the file with the same file name, touch the `RENAME` button, or touch the `CANCEL` button to cancel.

8 **When inserting is complete, the Home Screen will be displayed after the pop-up window is displayed and the** `EDIT` **pull-up menu is closed.**

Inserting mute data into the designated position (Insert Mute)

You can insert mute data into the designated position.

NOTE

- All regions following the IN point will move backward.
- When inserting into a region, the following two regions will be generated: before the timeline cursor and after the timeline cursor.
- When the designated position is located between fade-in and fade-out, the fade-in and fade-out information will be deleted.
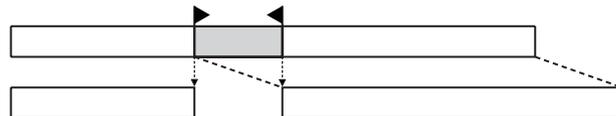
1 **Press the HOME key to display the Home Screen.**

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

3 **Touch the** `SET/SELECT` **button and select the region where you want to insert mute data using the** `SET IN`, `SET OUT` **and** `SELECT Region` **buttons on the pull-up menu.**

4 **Touch the** `EDIT` **button to display the pull-up menu.**

5 **Touch the** `Insert Mute` **button on the pull-up menu. When mute insertion is complete, the Home Screen will be displayed after the pop-up window is displayed.**

In this case, the `EDIT` pull-up menu will remain open.

Pasting the copy buffer data into the designated position (Paste)

You can paste copied data into the designated position.

NOTE

. When the designated position is located between fade-in and fade-out, the fade-in and fade-out information will be deleted.
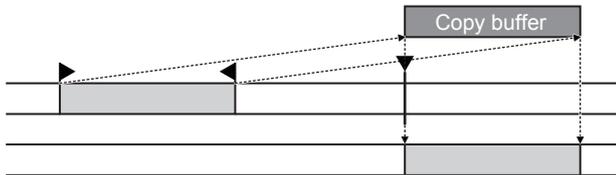
1 **Press the HOME key to display the Home Screen.**

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

3 **Move the timeline cursor to the position where you want to paste copy buffer.**

4 **Touch the** EDIT **button to display the pull-up menu.**

Touch the Paste button on the pull-up menu.

NOTE

The Paste button is highlighted white and available only when the copy buffer contains data.

5 **When pasting is complete, the Home Screen will be displayed after the pop-up window is displayed.**

Edit Completed

In this case, the EDIT pull-up menu will remain open.

Pasting the data in the designated file into the designated position (Paste File)

You can paste an entire 2ch BWF file/WAV file into the designated position.

NOTE

. When the designated position is located between fade-in and fade-out, the fade-in and fade-out information will be deleted.
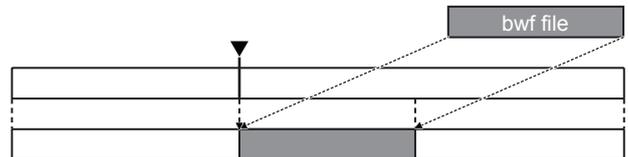
1 **Press the HOME key to display the Home Screen.**

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

3 **Move the timeline cursor to the position where you want to paste a file.**

4 **Touch the** EDIT **button to display the pull-up menu.**

Touch the Paste File button on the pull-up menu to open the BROWSE screen.

5 **Touch the ➡ button to select the media containing a file to paste on the** BROWSE **screen.**
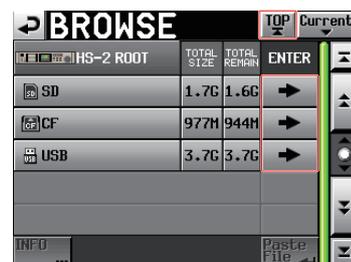
NOTE

If the top page of the BROWSE screen is not displayed, touch [TOP] on the screen. The media selection screen appears.

6 **Touch the** `Paste File` **button after selecting a file to paste on the** `BROWSE` **screen displayed.**

7 **Touch either the** `Current Position` **or** `File T/C` **button to start pasting when the pop-up window to select the pasting position is displayed.**

Then, select the `CANCEL` button to return to the `BROWSE` screen.

NOTE

If the selected file contains no time code information when the `File T/C` button is touched, the file is pasted at [00 h 00 m 00 s 00 f].

NOTE

If you select a file from other than the current session folder, the file is copied to the current folder and then pasted.

A pop-up window showing `Cannot Copy.` is displayed when a file with the same name exists in the current session folder.

To change the file with the same file name, touch the `RENAME` button, or touch the `CANCEL` button to cancel.

8 **When pasting is complete, the Home Screen will be displayed after the pop-up window is displayed and the** `EDIT` **pull-up menu is closed.**

Setting Fade In/ Fade Out for the designated region (Fade IN/ Fade Out)

You can set fade in/fade out for the designated region.
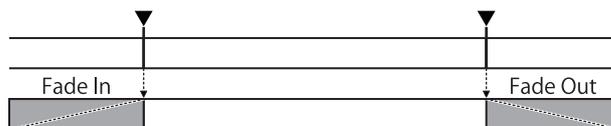
NOTE

The fade-in/fade-out ranges are indicated in light blue.

1 **Press the HOME key to display the Home Screen.**

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

3 **Move the timeline cursor to the end of fade in and the beginning of fade out on the region where you want to set fade in/fade out.**

4 **Touch the** `Fade / Level` **button to display the pull-up menu.**

● To set fade in, touch the `Fade IN` button.

● To set fade out, touch the `Fade Out` button.

5 **When setup is complete, the Home Screen will be displayed after the pop-up window is displayed.**

In this case, the `Fade / Level` pull-up menu will remain open.

Removing the designated fade (Remove Fade IN/ Remove Fade Out)

1 Press the HOME key to display the Home Screen.

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

3 Move the timeline cursor to the region where you want to remove fade in/fade out.

4 Touch the `Fade / Level` **button to display the pull-up menu.**

- To remove fade in, touch the `Remove Fade IN` button.
- To remove fade out, touch the `Remove Fade Out` button.

5 When removal is complete, the Home Screen will be displayed after the pop-up window is displayed.

In this case, the `Fade / Level` pull-up menu will remain open.

Setting the playback level in the designated region (Level)

You can set playback level for the entire designated region (after fade in – before fade out).

1 Press the HOME key to display the Home Screen.

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

3 Move the timeline cursor to the region where you want to remove fade in/fade out.

4 Touch the `Fade / Level` **button to display the pull-up menu.**

5 Touch the `Level` **button on the pull-up menu.**
The region under the timeline cursor is indicated in yellow, and is the target for Level setup.

6 When the level knob is displayed on the `Level` **button, use the** `DATA` **dial to set playback level.**

Setting range
−∞, −120dB to +10.0dB

7 Touch the `Level` **button again to close the level knob.**

(The playback level will be retained.)

Undoing the previous edit (UNDO)

You can undo the previous timeline edit.

1 **Press the HOME key to display the Home Screen.**
2 **Touch the** `EDIT MODE` **button to enter the edit mode.**
3 **Touch the** `EDIT` **button to display the pull-up menu.**

4 **Touch the** `UNDO` **button on the pull-up menu. When the edit is undone, the Home Screen will be displayed after the pop-up window is displayed.**

Undo Completed
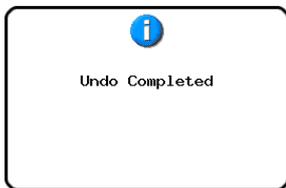
In this case, the `EDIT` pull-up menu will remain open.

NOTE

• The `UNDO` button on the `Fade / Level` pull-up menu is also available to undo the edit.

• 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.

• The timeline mode can store up to 10 most recent recording/editing operations. You can undo the editing within the range of the edit records (**UNDO**) and can redo the edit (**REDO**).

However, when the frequency of editing or the region number increases, the number of operations that can be stored may decrease.

• The timeline mode edit history will be erased by the following actions.

• Turning off the power of this unit
• Loading a project, session or AES31 edit information
• Changing the operation mode

Redoing an edit (REDO)

After undoing an edit, you can redo it.

1 **Press the HOME key to display the Home Screen.**
2 **Touch the** `EDIT MODE` **button to enter the edit mode.**
3 **Touch the** `EDIT` **button to display the pull-up menu.**

4 **Touch the** `REDO` **button on the pull-up menu. When the edit is redone, the Home Screen will be displayed after the pop-up window is displayed.**

Redo Completed
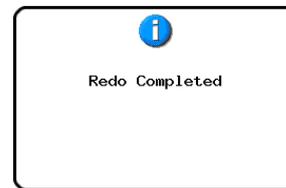
In this case, the `EDIT` pull-up menu will remain open.

NOTE

• The `REDO` button on the `Fade / Level` pull-up menu is also available to redo the edit.

• 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.

• The timeline mode can store up to 10 most recent recording/editing operations. You can undo the editing within the range of the edit records (**UNDO**) and can redo the edit (**REDO**).

However, when the frequency of editing or the region number increases, the number of operations that can be stored may decrease.

• The timeline mode edit history will be erased by the following actions.

• Turning off the power of this unit
• Loading a project or session
• Loading a project, session or AES31 edit information
• Changing the operation mode

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

2   **Use the ◄◄ and ►► keys, for example, to locate the timeline cursor at the bounce start point (time).**

3   **Touch the** `Bounce I/O` **button to open a pull-up menu.**

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 timeline cursor at the bounce ending position (time).**

6   **Touch the** `Bounce I/O` **button to open a pull-up menu.**

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.

The range between the IN mark ("▶") and OUT mark ("◀") is to be edited, and indicated in light blue.

Bouncing the interval

8   **Touch the** `Bounce I/O` **button to open a pull-up menu.**

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 38.

10 **Touch the** `Enter` **button on the** `BOUNCE NAME` **screen.**

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

11 **Touch the** `Bounce I/O` **button to open a pull-up menu.**

12 **Touch the** `CLEAR` **button on the pull-up menu to discard the currently set IN and OUT points.**

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.

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 44.)

Please refer to "4–Basic operation" on page 29 when reading this chapter.

Preparing to record

Basic preparations

Refer to "4–Basic operation" on page 29 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 **Touch the** CREATE PROJECT **button on the** PROJECT **screen to open the** CREATE PROJECT **screen.**
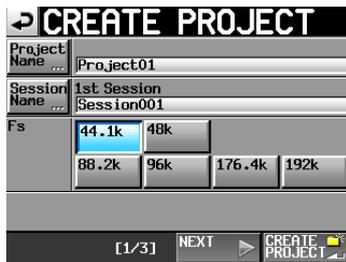
On this screen, set the project name, the name for the first session and the sampling frequency.

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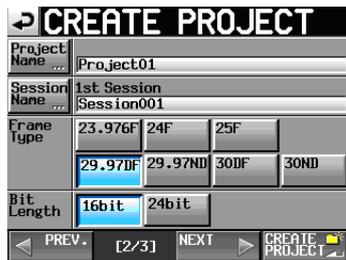
Set the frame type then bit length.

Touch the NEXT button to open the next page.

Finally, set the starting time 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 "Editing the project name" on page 38.

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 38.

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.**

7 **When you have finished making settings,** touch **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 40.

Recording mode settings

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.**

On the REC MODE **page, you can select the recording mode. The background color for the selected mode is light blue. For more details, see "REC MODE page" 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 90.

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 90.

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 **PLAY** key while holding the **REC** key during playback, you cannot overwrite a recording.

> **CAUTION**
>
> 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 "FILE FORMAT page" on page 90.

Playback

Project/session/take selection

1 Press the PROJECT key on the front panel to open the `PROJECT` **screen.**
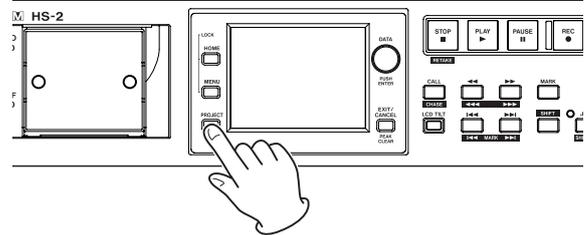
> **NOTE**
>
> You can also touch the session/take name area on the Home Screen to open the `PROJECT` screen.

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.**

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 when playing back. If input monitoring is ON, sound from the input connectors will be output through all output connectors of this unit.

1   Touch the INPUT MONITOR button on the Home Screen to open a pull-up with the input monitoring ON/OFF buttons.

2   If input monitoring is on (ON button appears blue), touch the OFF button to turn it off (OFF button appears blue).

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 ◀◀ **[◀◀◀]** 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 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 91.)
- 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.

Using the flash start function in take mode

Using a TASCAM RC-HS20PD (sold separately) or other remote controller, flash start playback is possible.

For details, see "Flash start function" on page 113.

Take operations

Some takes will be made under session folders. For details on operations for project and session, see "5–Projects" on page 36.

The following functions are used for take operations:

- **Editing the start time of a take**
- **Exporting a take**
- **Deleting a take**
- **Sorting a take**
- **Moving the order of alignment of a take**
- **Editing the name of a take**
- **Dividing a take (Divide)**
- **Combining takes (Combine)**
- **Undoing the previous edit (UNDO)**
- **Redoing the cancelled edit (REDO)**

Changing the start time of a take

1 **Press the PRESET 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 **Touch 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.**

Exporting a take

Exports a take to the current session folder on a different media device.

1 **Select the take you want to export on the take selection screen.**

2 **Touch the** MENU **button on the take selection screen to display the pull-up menu item.**

3 **Touch the** EXPORT **button on the pull-up menu item to display the following pop-up window. Touch the** OK **button or press the DATA dial to eport the selected take.**

   Touch the CANCEL **button on the pop-up window to return to the take list screen.**

NOTE

- If the target destination does not have a directory for the current session, the same project/session structure as the currently loaded session is created automatically during the export.

- If the target destination contains a directory named the same as the currently loaded session, and that directory contains any files that match file names from the current session, a pop-up window stating "Selected Take Already exist in Export destination." is displayed and the export will not be performed.

- When the total size of the EXPORT file exceeds the free space in the export destination, a pop-up window stating "Cannot EXPORT. Not enough space on xxx" (*1) is displayed before the export starts, and the export will not be performed.

   *1) "x x x": SD card / CF card / USB memory (Export destination media name)

- If Fs of the export destination project differs, a pop-up window stating "Cannot EXPORT. Destination Project is different Fs." is displayed before the export starts, and the export will not be performed.

Deleting a take

1 **Select the take that you want to delete on the take selection screen.**

2 **Touch the** MENU **button on the take selection screen to display the pull-up menu item.**
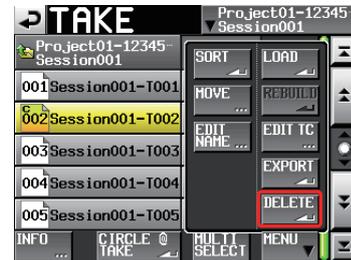
Take selection screen during the pull-up menu display

3 **Touch the** DELETE **button on the pull-up menu item.**

4 **Touch the** OK **button or press the DATA dial when the confirmation message is displayed on the pop-up window.**

Confirmation message screen

5 **Touch the** OK **button or press the DATA dial when the reconfirmation message is displayed on the pop-up window.**

Reconfirmation message screen

During deleting, a progress bar is displayed on the pop-up window. When deleting is complete, the pop-up window will disappear.

CAUTION

You can delete a take already in use in the timeline mode or playlist mode.

If you delete such a take, an error pop-up appears when you attempt to play the corresponding region/entry.

Sorting takes

Sort the order of the played takes by name.

1 Touch the MENU **button on the take selection screen to display the pull-up menu item.**

Take selection screen during the pull-up menu display

2 Touch the SORT **button on the pull-up menu item to display the pop-up window for confirmation.**

Confirmation message screen

3 Touch the OK **button or press the ENTER key on the pop-up window to sort the order of take plays by name.**

 Touch the CANCEL **button to return to the take selection screen.**

Moving a take / re-ordering

Move a take to change the playback order.
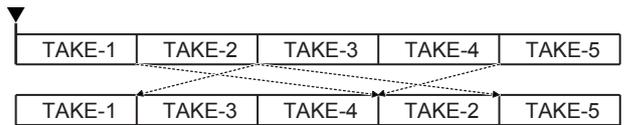
1 Select a take you want to move on the take selection screen.

2 Touch the MENU **button on the take selection screen to display the pull-up menu item.**

Take selection screen during the pull-up menu display

3 Touch the MOVE **button on the pull-up menu item to change to the** TAKE MOVE **screen display.**

4 Operate the DATA dial and the scroll button to move the take you selected.

5 Touch the MOVE **button or press the ENTER key to move the take to the location displayed.**

Touch the "⏎" button on the upper left on the screen or press the EXIT/CANCEL key to return to the take selection screen without moving the take.

Editing take names

1   **Select the take for which you want to edit the name on the take selection screen.**

2   **Touch the** MENU **button on the take selection screen to display the pull-up menu item.**

Take selection screen during the pull-up menu display

3   **Touch the** EDIT NAME **button on the pull-up menu item to display** TAKE NAME **screen.**

TAKE NAME Screen

NOTE

When you have selected multiple takes, you cannot select the EDIT NAME button on the pull-up menu item.

4   **Input the take name.**

See "Editing the project name" on page 38 for the input method.

5   **Touch the** Enter **button on the** TAKE NAME **screen or the DATA dial to determine the take name and to return to the take selection screen.**

CAUTION

It is possible to edit the name of a take already in use in the timeline or playlist modes.

If you edit the name of such a take, an error pop-up appears when you attempt to play the corresponding region/entry.

Dividing a take (Divide)

Divide a take into two at the specified position.

| TAKE-1 | TAKE-2 | | TAKE-3 |

| TAKE-1 | TAKE-2_a | TAKE-2_b | TAKE-3 |

1   **Press the HOME key to display the Home Screen.**

2   **Move the timeline cursor to the position where you want to divide.**

3   **Touch the** EDIT **button to display the pull-up menu.**

Touch the Divide button on the pull-up menu.

4   **When** -- Divide Mode -- **is displayed to enter the scrubbing mode, follow one of the procedures below to find the exact division position.**

. Turn the **JOG/SHUTTLE** dial

. Press the ◄◄/ ►► key (one sample intervals)

. Press the ◄◄ [◄◄◄] or ►► [►►►] key while pressing and holding the **SHIFT** key (1 ms intervals)

. Press the ⏮ [**MARK** ⏮] or ⏭ [**MARK** ⏭] key while pressing and holding the **SHIFT** key (Moves to the next mark point)

When the position is determined, touch the Divide button at the lower-left of the screen. To cancel dividing, touch the Cancel button at the lower left of the screen, or press the **STOP** or **EXIT/CANCEL** key.

If the file name given after divided already exists and the take cannot be divided, the message Cannot Divide. appears.

5   **When dividing is complete, the Home Screen will be displayed after the pop-up window is displayed.**
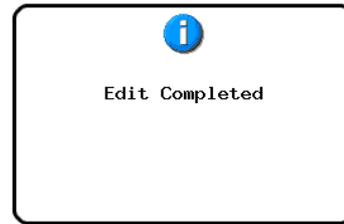
NOTE

. The take name is given as follows after divided:

. First half   : <Take name before divided>_a

. Second half: <Take name before divided>_b

. The first half and then the second half will be played in order.

. The current take will be the second half.

. Takes that followed the current take before divided will follow the second half.

. The total number of takes increases by one after divided.

. If a mark point exists at the specified position of division, it moves to the beginning of the second half.

NOTE

Example)

Take list: Scene001-T001 before division

Take list: Scene001-T001 after division

CAUTION

It is possible to divide a take already in use in the timeline or playlist modes.

If you divide such a take, an error pop-up appears when you attempt to play the corresponding region/entry.

Combining takes (Combine)

Combine a specified take with another one.

NOTE

You cannot combine takes in the following cases:

- The bit length, the number of channels, sampling frequency, etc. are different.
- The file size of the combined takes exceeds `Max File Size` shown on the `REC SETUP/FILE FORMAT` screens.
- The capacity of the media is less than the file size of the second of the 2 takes to be combined.

▼

TAKE-1	TAKE-2	TAKE-3	TAKE-4	TAKE-5

TAKE-1		TAKE-3	TAKE-4	TAKE-5
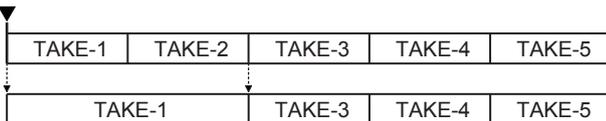
1 **Press the HOME key to display the Home Screen.**

2 **Set a take as the current take, which will be the former half of the combination.**

3 **Touch the `EDIT` button to display the pull-up menu.**

Touch the `Combine` button on the pull-up menu.

4 **When the take selection screen is displayed, touch the -> button of a take to be combined with the current take.**

(The yellow icon indicates the first take that is to be used for the combination that was selected at step 3.)

5 **A confirmation message appears, and 4 seconds in total before and after the combining point will be played repeatedly.** Touch the `OK` button or press the **ENTER** key to combine the takes. Touch the `CANCEL` button or press the **EXIT/CANCEL** key to stop the repeat play, and the take selection screen reopens.

6 **During combining, a progress bar is shown in the pop-up window.** When combining is complete, the pop-up window will disappear.

NOTE

- The file name of the initial take is used for the combined take.
- The time code information from the initial take is used in the combined take.
- If the combined number of mark points between the 2 takes exceeds 100, the 101st and subsequent ones will be lost. These mark points cannot be recovered with UNDO.

CAUTION

It is possible to combine takes that are already in use in the timeline or playlist modes.

If you combine such takes, an error pop-up appears when you attempt to play the corresponding region/entry.

Undoing the previous take edit (UNDO)

You can undo the previous take edit (divide/combine).

1 Press the HOME key to display the Home Screen.

2 Touch the EDIT button to display the pull-up menu.

Touch the UNDO button on the pull-up menu.

3 When the edit is undone, the Home Screen will be displayed after the pop-up window is displayed.

In this case, the EDIT pull-up menu will remain 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.

. The take mode edit history will be erased by the following actions:

  . Turning off the power of this unit
  . Loading a project or session
  . Changing the operation mode
  . Recording

Redoing the previously undone take edit (REDO)

After undoing an edit, you can redo it.

1 Press the HOME key to display the Home Screen.

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

3 Touch the EDIT button to display the pull-up menu.

Touch the REDO button on the pull-up menu.

4 Touch the REDO button on the pull-up menu. When the edit is redone, the Home Screen will be displayed after the pop-up window is displayed.

In this case, the EDIT pull-up menu will remain 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.

. The take mode edit history will be erased by the following actions:

  . Turning off the power of this unit
  . Loading a project or session
  . Changing the operation mode
  . Recording

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 44.)

Please refer to "4–Basic operation" on page 29 when reading this chapter.

Playlist operations

Loading project/sessions

Takes/files can only be added to the playlist from the folder of the currently loaded session. When takes/files that are in the folders of other sessions are added to a playlist they are copied to the folder of the current session. Load the session first.

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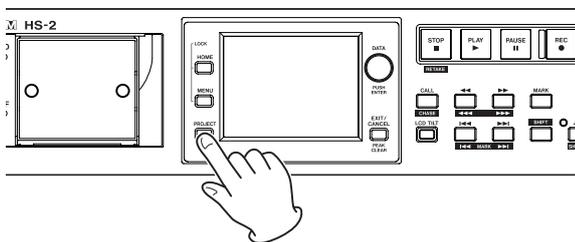
2 **Touch the** ➡ **button for the project that you want to select to open the session selection screen. If it is not the current project, a pop-up window appears confirming that you want to load it. Touch the** OK **button.**

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 **Touch 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.**

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

Creating a new playlist

Create a playlist (JPPA PPL file) in the folder of the current session.

The following is the path when you see a card on your computer:

{Card drive name}:¥{Project name}¥{Session name}¥{_playlists}¥{Playlist file}

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, one JPPA PPL file is created automatically.

4 **Touch the** CREATE PLAYLIST **button to open the** PLAYLIST NAME **screen.**

To enter the playlist name, follow the procedures in "Editing the project name" on page 38.

5 Touch the `Enter` button or press the DATA dial.

6 When the confirmation message pop-up appears, touch the `OK` button or press the DATA dial to complete the playlist name.

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

When playlist creation completes, the pop-up disappears.

NOTE

- Immediately after a new playlist is created, it is the current playlist (currently loaded playlist).
- A new playlist can also be created by touching the `CREATE PLAYLIST` button on the pull-down menu that will be displayed by touching the entry name buttons on the home screen.
- "`C`" (current) appears inside the [icon] icon of the currently loaded playlist.

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.

7 Input the playlist name. Follow the procedures in "Editing the project name" on page 38.

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

Load a playlist (JPPA PPL file) in the folder of the current session.

The following is the path when you see a card on your computer:

{Card drive name}:¥{Project name}¥{Session name}¥{_playlists}¥{Playlist file}

NOTE

You cannot load a playlist file that is not in the current 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 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 and switch to that project. 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 and switch to that session. 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.**

6   **Touch the** LOAD **button in the pull-up menu.**

NOTE

You can also load by touching the ➡ button on the playlist you want to load.

7   **When a confirmation message pop-up appears, touch the** OK **button or press the DATA dial.**

After loading completes, the Home Screen opens.

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 and switch to that project. 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 and switch to that session. Touch the OK **button.**

4   **Select the playlist that you want to delete.**

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.**

NOTE

If you have selected the currently loaded playlist, you cannot select the DELETE button on the pull-up menu item.

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.

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 the folder of another session in the same project is added to a playlist, it is copied to the folder of 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` file screen.
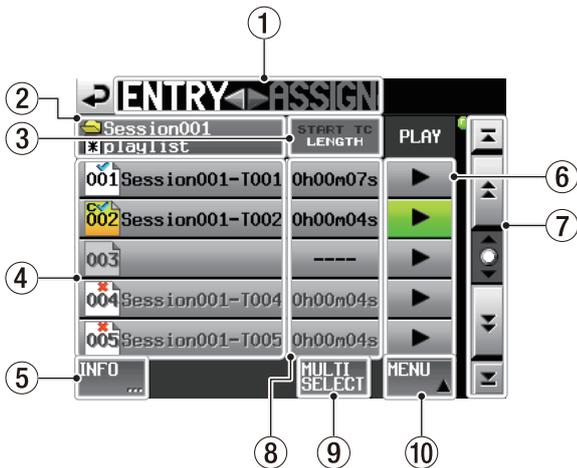
① **ENTRY ◄ ► ASSIGN button**

Switches between the entry list and `ASSIGN` file screens.

Touch the `► ASSIGN` part to open the `ASSIGN` file screen.

② **Playlist name display**

The current playlist name is shown.

"✳" is displayed if editing has been performed without saving.

③ **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.

④ **Entry name button**

Touch to select the corresponding entry.

Touch this button to display the take list on the right side.

You can assign a take to this button by touching the button with the take name you want to register under this status.

Status of take list on

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 different or the file does not exist, its name appears in gray.

002	Currently loaded entry
001	Entry that is okay
004	Entry is a format that cannot be played back
005	Entry does not exist as the registered file has been deleted via FTP or on the `BROWSE` screen
003	No entry

⑤ **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.

⑥ **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.

⑦ **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.

⑧ **START TC/LENGTH column**

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

⑨ **MULTI SELECT button**

Touch to enable the selection of multiple entries.

⑩ **MENU button**

Touch to open a pull-up menu where you can select `REBUILD`, `CLEAR`, `ADJUST`, `SAVE` and `SAVE AS`.

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 `ASSIGN` file screen.
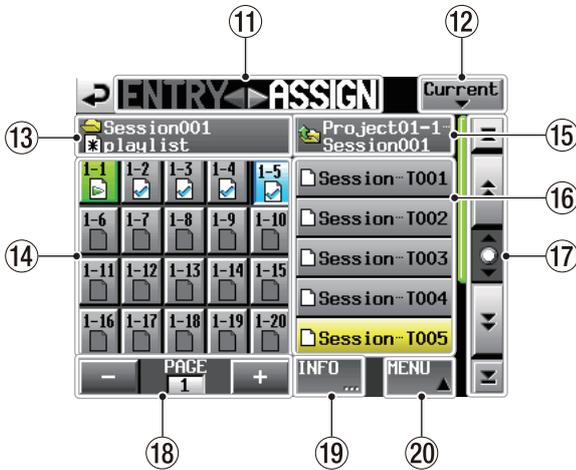
⑪ **ENTRY ◄ ► ASSIGN button**

Switches between the `ENTRY` list and `ASSIGN` file screens.

Touch the `ENTRY ►` part to open the `ENTRY` list screen.

⑫ **Current button**

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

⑬ **Session name/ Playlist name display**

The current session name and playlist name are shown.

When entries have been edited but not saved, [✳] appears.

⑭ **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
[?]	Entry does not exist as the registered file has been deleted via FTP or on the `BROWSE` screen
[ ]	No entry

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

⑮ **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.

⑯ **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.

⑰ **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.

⑱ **Page display and selection buttons**

The current key assign button page is shown.

Touch the + or – button to change the page.

⑲ **INFO button**

When a key assign button is selected, touch this button to open an information pop-up for that key assign button.

When a take is selected, touch this button to open an information pop-up for that take.

When nothing is selected, touch this button to show information about the current playlist.

⑳ **MENU button**

Touch to open a pull-up menu where you can select `REBUILD`, `CLEAR`, `ADJUST`, `SAVE`, and `SAVE AS`.

Assigning a take to an entry

1 **Press the HOME key on the front panel to open the Home Screen.**
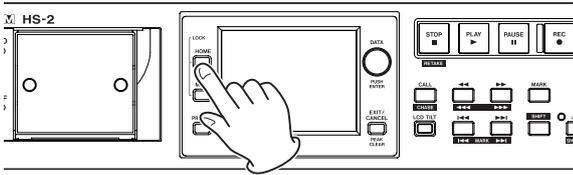
2 **Touch the file name or title name display button to open a pull-down menu, and touch the** ASSIGN FILE **button to open the** ASSIGN **file screen where you can assign entries.**

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.**

4 **Use the + and − buttons to open the page where you want to assign a file.**

5 **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 yellow in the take list.

6 **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.

7 **Repeat steps 3–6 as necessary.**

8 **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. From the Home Screen, you can touch a file name or title name button to open a pull-down menu and touch the** SAVE **button. For details about saving, see "Saving a playlist" on page 85.**

TIP

You can also assign a take to an entry with a similar procedure on the Entry List screen.

CAUTION

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

Entry number page allocation

Playlist entry numbers are displayed.

Page numbers	Entry number
1	1 - 20
2	21 - 40
3	41 - 60
4	61 - 80
5	81 - 100

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 is highlighted in yellow and the take list is shown on the right side.

When you select the entry to which the take has been assigned, the background of the applicable take on the take list is highlighted in yellow.

| NOTE |

You can clear entry assignments by touching the take name button highlighted in 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 ENTRYXXX` **screen. (**"`XXX`" **is the entry number.)**
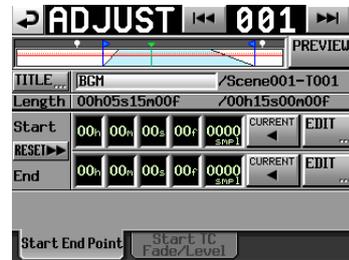
| NOTE |

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 38.

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

Editing the playback starting time/ending 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 on the pull-down menu to open the** `ADJUST 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 on 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.

3 **Displays the** `Start End Point` **tab screen.**
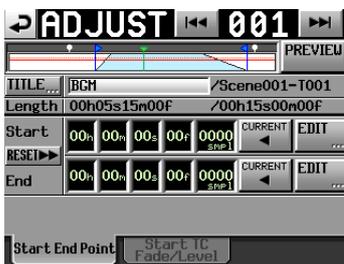
4 **When you touch the time display digits, its background is highlighted in yellow and the applicable cursor starts blinking.**

   You can change the Start / End points using the DATA dial when the time display digits have been selected.

   Changing the selected digit past its natural limit will increment or decrement the next higher digit.

5 **You can select the digit according to the resolution power you want to change. When changing it by frame precision, select the frame digit. When changing it by sampling accuracy, select the sampling digit. You can capture the current playback point to the Start / End point using the** `CURRENT` **button.**

NOTE

- Touch the `CURRENT` button to capture the current playback position as the Start/End point.
- Touch the `RESET` button to display a pop-up window asking you to reset the Start/End Point to the beginning/ending time of the file. Touch the `OK` button on the pop-up window to reset the Start/End Point to the beginning/ending time of the file.

Editing the playback starting time/ending point using the number buttons/mark list screen

1 **When you touch the** `EDIT` **button, the** `EDIT START POINT` **screen/** `EDIT END POINT` **screen for editing the playback start / end point are shown.**

   Use the `FRAME EDIT` **button on the** `EDIT START POINT` **screen to set whether or not you will edit the frame value.**

2 **Use the number buttons to input the playback start / end point.**

- 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 end time on the file 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.
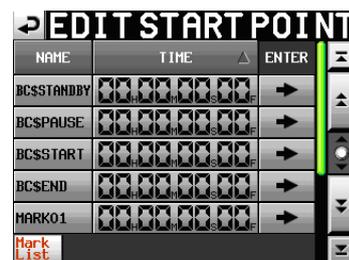
   On this screen, touch the ➡ button of a mark to to copy its time to the playback start / end point and return to the `ADJUST ENTRY XXX` screen.

NOTE

When you change the playback start / end time, the setting value of the playback start / end time will be controlled automatically for the length of the playback start / end time to become longer than the total of lengths for fade-in/ fade-out.

3 Touch the ENTER button to confirm the setting.

TIP

- You can also use the **PLAY** key and other transport keys while listening to the audio to find the location, and then touch the CURRENT ▼ button to input that value here.
- This can also be edited using an externally connected keyboard on the EDIT START POINT screen / EDIT END POINT screen.

  Press the keyboard's ESC key to clear all the values.

Editing 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 ENTRYXXX 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.

3 Touch the Start TC Fade/Level tab to display the screen below.
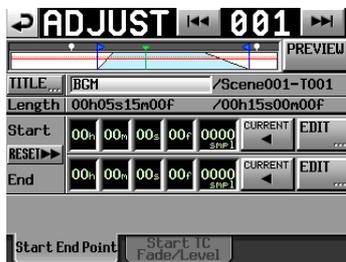
4 Touch the EDIT button to open, and touch the number buttons on the EDIT START TC screen to change the Start TC.

5 The value shown next to the Start TC item is the playback starting time for the selected entry. Touch 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.**

6 Use the number buttons to input the playback start time on 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.

7 Touch the ENTER button to confirm the setting.

TIP

- You can also use the **PLAY** key and other transport keys while listening to the audio to find the location, and then touch 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 length and level of fade-in/fade-out

1 Touch the HOME key on the front panel to display the HOME screen.

2. Touch the ADJUST ENTRY button on the pull-down menu that is displayed by touching the file name display button or the title name display button.

The ADJUST XXX **screen is shown. ("XXX" is the entry number.)**
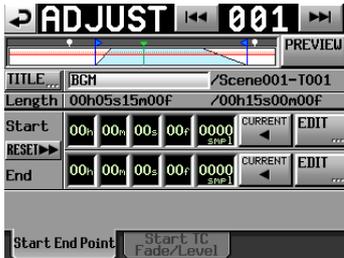
3 Touch the Start TC Fade / Level tab to display the screen below.

4 Set by rotating the DATA dial after selecting the knobs of Fade In, Fade Out and Level.

Setting value:

- Fade In / Out Length: 0 – 30 seconds
  (0.1 second per step or 1.0 second per step when the dial is pressed and rotated)
- Level range: -∞ to +10dB

<div>NOTE</div>

- When the length of the fade-in / fade out is changed, the value is automatically edited to match the maximum possible within the playback start / end time constraints.
- The playback level is shown by the red, solid line.
- The basic level (0dB) is shown by the orange, dotted line.

Rehearsal playback operation / action

You can perform a rehearsal playback using the transport controls while on the ADJUST ENTRY screen.

- The operation is the same as during normal transport operation expect that the ◄◄ / ►► keys are used to jump to the Entry's File Start / Start Point / End Point and File End positions.
- Change the Start Point / Fade In Length to move the playback point to the Start Point. If you change it during the playback, playback will be performed after the playback point is moved.
- Change the End Point / Fade Out Length to move the playback point to the point below. If you change it during the playback, playback will be performed after the playback point is moved.

	When PREVIEW OFF	When PREVIEW ON
When changing EndPoint	Two seconds before EndPoint	Two seconds before FadeOut starts
When changing Fade Out Length	Two seconds before FadeOut start point	Two seconds before FadeOut start point

- Touch the PREVIEW button to change the contents of the rehearsal playback.

Rehearsal playback when PREVIEW OFF is set

- The original audio is played back without the Fade IN / OUT or Level adjust parameters being applied.
- You can move out of the range of Start / End Point.
- When the End Point is reached during rehearsal playback, the playback jumps back to the Start Point and stops.
  Press the **PLAY** key to start playback from the Start Point.
  Transfer to the following End Point is made using the , ◄◄ key, ►► key, **SHIFT+►► key**, and by **JOG/SHUTTLE** dial operations.

Rehearsal playback when PREVIEW ON is set

- Only the range between the Start / End Point is played back.
  Locating to a point outside of that range is not possible.
- The audio is played back with the Fade IN / OUT and Level adjustment parameters applied.

Saving a playlist

The current playlist is saved in the current session (session currently loaded) as a JPPA PPL file.

NOTE

After editing a playlist, save it as necessary. If you do not save a playlist after editing, all changes will be lost when, for example, you load another playlist, remove the selected card, or turn off the unit's power. 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.

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.**

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 touch 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.**

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 38.**

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.

NOTE

When a file with the input name already exists, a pop-up window to confirm whether you want to overwrite the file is displayed.

Touch the OK button to overwrite the file. Touch the CANCEL button to return to the PLAYLIST NAME screen.

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.

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.**

Playlist selection screen pull-up

6   **Touch the** LOAD **button in the pull-up menu to load the playlist.**

    A confirmation pop-up window appears.

    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 in the pull-up menu item, you can also touch the ➡ button for the playlist that you want to play to load it.

The same pop-up message as above appears. Touch the OK button or press the **DATA** dial.

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 ◄◄ **[◄◄◄]** key 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 91.)
- 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.

Using the flash start function in playlist mode

Using a TASCAM RC-HS20PD (sold separately) or other remote controller, flash start playback is possible.

For details, see "Flash start function" on page 113.

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.
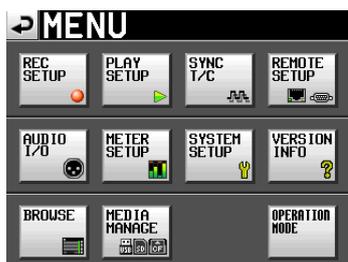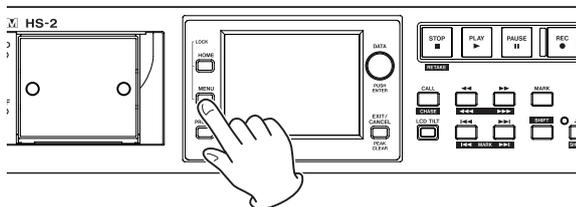
REC SETUP button

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.

AUDIO I/O button

Make settings related to the input and output audio signals.

METER SETUP button

Make level meter settings.

SYSTEM SETUP button

Make system settings.

VERSION INFO button

Show the system version.

BROWSE button

Display and perform operations on the folders and files within the SD card, CF card and USB memory device.

MEDIA MANAGE button

Perform operations with the MEDIA

OPERATION MODE button

View and select the system operating mode.

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.

- Single: Recording on only the selected media storage device (current media). (default value)
- Mirror: Recording on two media storage devices simultaneously.

NOTE

When the current project Fs is 88.2k, 96k, 176.4k or 192kHz, the REC Mode setting is fixed to single, and cannot be changed.

- **Button Display**

REC mode setting	Display
Single	
Mirror	
Mirror (but Mirror recording is not possible or invalid) (*1, *2)	

*1 Conditions that make recording impossible
- Insufficient remaining space on the current media device.
- The currently selected media is not present.
- The CF card set as current media is not a compatible media type. (PIO mode)
- The current media storage device is not in a compatible format.(Except for FAT16 / FAT32)
- A take already exists on either media with a name that matches the NEXT TAKE NAME details and that is already at number 999. ("----" is shown for the number on the HOME NEXT TAKE NAME screen.)
- The total number of entries in the current folders of both media storage devices (total number of files and folders) exceeds the system limitation. Recording/Editing has been repeated in timeline mode, the capacity for managing the regions or edit history has run short, and recording cannot be performed. (RecLimit is shown on the media storage device remaining space display button.

*2 Conditions that make mirror recording unavailable

. Remaining space on the mirror paired media is insufficient. (If the remaining space on the current media is exhausted, recording is also impossible *1)

. The mirror paired media is not present (If the current media is not present, recording is also impossible *1)

. The CF card set as current media is not a compatible media type. (PIO mode) (If the current media storage device is not of a compatible media type, recording is impossible *1)

. The non-current media storage device is not in a compatible format. (Other than FAT16 / FAT32. If the format of the current media storage device is not compatible, recording is impossible *1)

. The CF card is not compatible with UDMA.

. Either of the media storage devices has not been formatted on this unit. (Has not been formatted with the cluster size this unit recommends.)

If the mirror paired media is not present (If the current media is not present, recording is also impossible, mirror recording cannot be performed and recording can be performed only on the current media storage device.

NOTE

. If `Mirror` is set, the same project / folder as the current project / folder of the current media storage device is created on the media storage device that is not selected.

If you start recording with `Mirror` set, recording is performed with the same take name on the same project / folder of both media storage devices.

. If you perform the retake with `Mirror` set, only the take on the current media storage device is deleted and the take in the non-current media storage device is not deleted.

. If the current media storage device with `Mirror` set cannot be recorded to, even if the non-current media storage device has space available, recording is impossible.

. In `Mirror` recording, if the time counter display mode is `TOTAL REMOTE`, the recordable time for the media storage device with the lowest remaining space is shown.

If either of the media storage devices runs out of space during mirror recording, the recordable time for the media storage device continuing recording is shown.

Various messages

. If the `REC Mode` setting is changed to `Mirror` while `Mirror` is invalid, the following messages are shown.

① If either of the media storage devices cannot be recorded to,

② If the CF card is not compatible with UDMA,

③ If either of the media storage devices has not been formatted on this unit,

. If recording starts with `Mirror` invalid, the following message is shown.

① If the reason for the invalidity of `Mirror` is anything other than ② and ③ below,

② The CF card is not compatible with UDMA

③ The CF card has not been formatted on this unit

. If the space on either of the media storage devices runs out or an error occurs during recording with `Mirror` set, recording to the media storage device with no space remaining or to the media storage device on which an error has occurred will stop. Recording of the current file to the other media storage device will stop. However, recording to the next take as a new file will start.

Then, the message and media storage device remaining space display button will be shown as follows:

① If either of the media storage devices has run out of space

Media storage device remaining space button

② If a recording error has occurred on either of the media storage devices

Media storage device remaining space button

FILE FORMAT page

Make settings related to the file format.
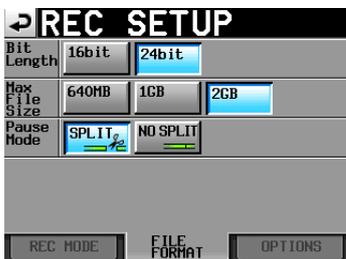
Bit Length

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

Turn this function ON or OFF and set the length of pre-recording time. (Default: `OFF`)

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` 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`)

PRE / REC / END:

Marks are attached automatically on the PREREC start point/ recording start point/ recording end point. Set the ON / OFF status of the functions. (Default: `OFF`)

NOTE

`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.)

NOTE

The `PRE/REC/END` auto marker is only recorded into takes in take mode, and does not appear on the timeline in timeline mode.

NOTE

After an `Audio Over` or `Sync Unlock` auto marker has been placed, the same type of mark is not repeated until at least 10 seconds has passed.

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).

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 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-HS20PD remote control (sold separately), and play and flash start commands from external controllers (RS-232C/ RS-422/ 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.
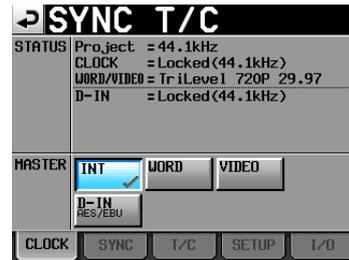
STATUS

> **Project:**
>
> Displays the sampling frequency of the project.
>
> **CLOCK:**
>
> Displays the clock synchronization status.
>
> **WORD/VIDEO:**
>
> Displays `WORD`, `VIDEO` or `TriLevel` if such a signal is detected at the input.
>
> **D-IN:**
>
> Displays the digital input signal status as shown in the following table:

Digital input signal status	Display
Locked	`Locked (xx.xxx kHz)`
When sampling rate conversion is ON	`Locked (xx.xxx kHz FsCnv)`
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`

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.

D-IN button:

Synchronize with the clock of the digital signal selected as the input for DIGITAL IN.

You cannot select an input as the master clock if the sampling rate converter is ON for that input.

On the second line of the button, the digital input signal selected is shown.

> **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.

> **NOTE**
> If the Option SY-2 has not been installed, the display is shaded and the setting cannot be selected.

STATUS

Shows the status of the currently loaded project's sampling frequency and clock synchronization.

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.

10–Internal settings

T/C page

Make settings related to time code on this page.
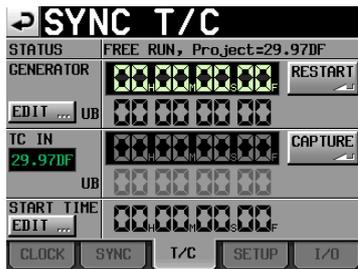
Set to free run
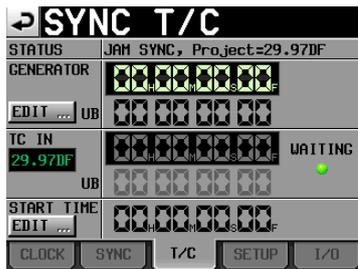
Set to jam sync (and free once)

NOTE

If the Option SY-2 has not been installed, the display is shaded and the setting cannot be selected.
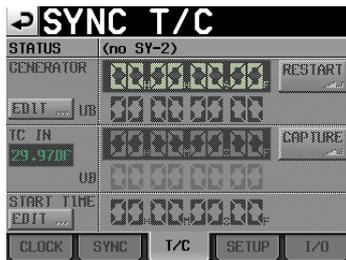
STATUS

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.
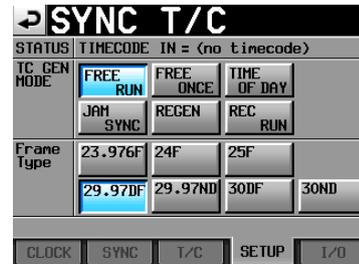
STATUS

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.

NOTE

If the Option SY-2 has not been installed, the display is shaded and the setting cannot be selected.

FREE RUN button:

The time code generator runs on its own.

FREE ONCE button (default):

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:

The time code generator only functions during recording. At all other times, the time code generator stops.

94 TASCAM HS-2

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`

I/O page

Set the synchronization signal status display and time code output on this page.

NOTE

If the Option SY-2 has not been installed, the display is shaded and the setting cannot be selected.

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**, **RS-422** and **Ethernet** (Network) connectors.

The `REMOTE SETUP` screen has 5 pages: `GENERAL`, `PARALLEL`, `RS-232C`, `RS-422` and `ETHERNET`. Touch the tabs at the bottom of the screen to open the corresponding page.

GENERAL page

Make the external remote controller settings on this page.
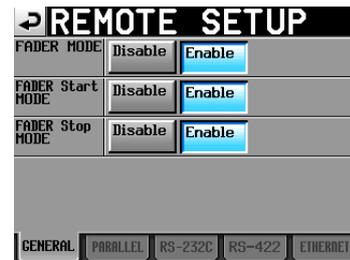
FADER MODE

Allows the fader on an external TASCAM RC-HS20PD remote controller (sold separately) to be enabled or disabled. 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-HS20PD remote controller (sold separately), for example, is on, set whether fader starts, 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 start function of an external TASCAM RC-HS20PD 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 standby, 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-HS20PD remote controller (sold separately) will be turned off automatically, and the **FADER START** indicator will turn off. In this state, if you touch the **Fader Start** key on the TASCAM RC-HS20PD 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.
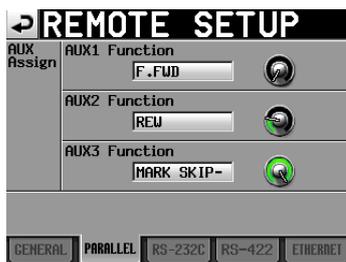
AUX Assign

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+, and CALL.

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).

RS–232C page

Make RS-232C serial control transmission settings on this page.
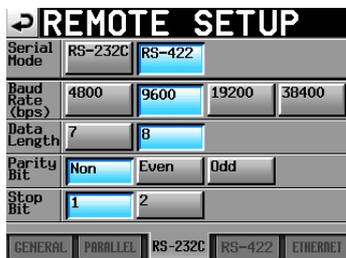
Serial Mode

Set the serial connection mode with the following buttons.
Setting buttons: RS-232C (Default), RS-422

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.
- If the Option SY-2 has not been installed, RS-422 cannot be selected.

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.
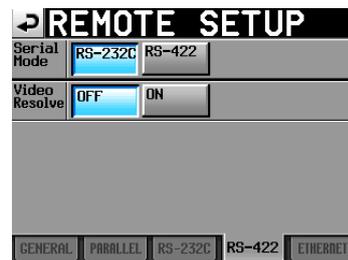
NOTE

If the Option SY-2 has not been installed, the display is shaded and the setting cannot be selected.
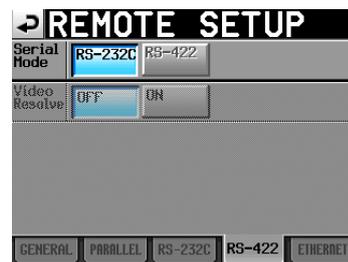
Serial Mode

Set the serial connection mode with the following buttons.
Setting buttons: RS-232C (Default), RS-422

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.
- If the Option SY-2 has not been installed, RS-422 cannot be selected.

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

ETHERNET page

Perform settings related to the ETHERNET communication.
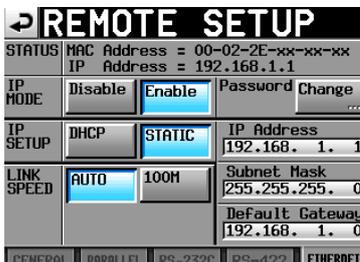
STATUS

Shows the MAC Address of this unit and the current IP Address.

IP MODE

This button is to enable or disable all network activity.

Setting buttons: `Disable` (Disabled, Default), `Enable` (Enabled)

IP SETUP

Selects how the unit's IP address is specified

In DHCP mode, if a DHCP server exists on the same LAN network as the unit, the IP address, Subnet Mask and Default Gateway settings are automatically obtained.

In the STATIC settings, IP Address, Subnet Mask and Default Gateway must be set manually.

Setting buttons: `DHCP`, `STATIC` (default)

LINK SPEED

This button affects how the link speed is determined.

Setting buttons: `Auto` (Default. Negotiates the best possible link speed according to the network environment.)

`100M` (Operates with a fixed link speed of 100Mbps)

IP Address / Subnet Mask / Default Gateway

Allows setting and display of the specified values to be used in STATIC IP address mode.

Default: `0. 0. 0. 0.`

According to the above `IP SETUP` settings, the display of this area will change as follows:
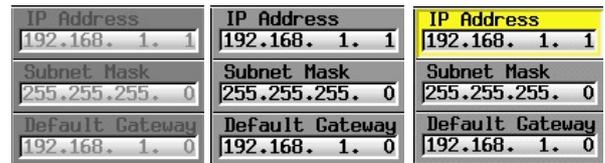
When setting DHCP   When setting STATIC   When touching

Changing the IP Address / Subnet Mask / Default Gateway settings

Touch the applicable area on the `ETHERNET` page of the `REMOTE SETUP` screen to display each setting adjustment screen.

- Numbers are three digits. (For those of two digits or less, you do not need to input `0` first.)
- The first digits are selected after the screen is displayed.
- Touch the first number button after entering the selection mode to set that only the numbers of the buttons touched are input. Subsequently, the numbers are input using the number pad.
- Touch the dot (".") button to move the selection to the next number.

Example)

When displayed on the screen	192.	168.	1.	1	
Input 1234	234.	168.	1.	1	(The first "1" is pushed forward.)
Input "."	192.	168.	1.	1	
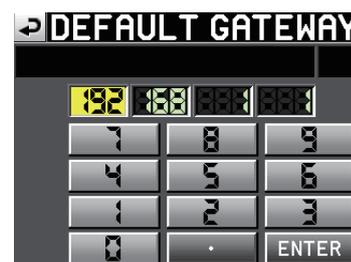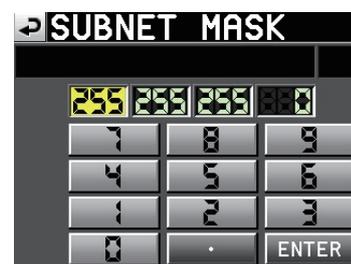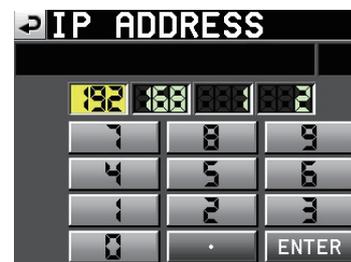
Changing the password settings

Touch the `Change` button located near Password on the `ETHERNET` page of the `REMOTE SETUP` screen to open the `CHANGE PASSWORD` screen enabling you to set the password.

Up to nine characters can be entered.

Network functions (FTP/ telnet / VNC)

FTP (File Transfer Protocol)

Use a FTP client application to transfer files between this unit and a computer system. Connect with this unit and log in like other FTP servers.

Connect with this unit and log in to display [A:], [B:], [C:] on the root directory. These correspond to [SD], [CF] and [USB], respectively.

If there is no media storage device loaded, the contents of the corresponding directory [A:], [B:] or [C:] will not be shown.

> **NOTE**
> - Use an FTP application which is compatible with Unicode if you want to display Japanese characters.
> - Be sure to set the maximum simultaneous transfer number of the FTP client applications to "1".
>   If a number other than "1" is set, file transfer may not be possible.
> - Consult with TASCAM Customer Support for details on FTP client applications that have been tested with this unit.

- **Settings necessary to connect via FTP**

  The setting values necessary to connect FTP with this unit are as follows:

  IP Address : The IP Address of this unit is shown on the IP Address in `ETHERNET` page of the `REMOTE SETUP` screen.

  Port number : 21

  User name : "HS-2"
  Distinguishes between capital letters and small letters.
  (You can not change this)

  Password : The default password is "HS-2".
  Distinguishes between capital letters and small letters.
  You can change the password with the Password [Change…] button in `ETHERNET` page of the `REMOTE SETUP` screen.

> **NOTE**
> - Only one FTP connection can be active at a time.
> - Because some FTP client applications may allow you to start multiple FTP connections to the same unit, you may not be able to transfer files correctly. Avoiding having 2 FTP connections simultaneously.
> - If the `EXTERNAL Control` on the `LOCK SETUP` screen is set as LOCK, you cannot connect via FTP.
> - If the External LOCK setting is enable when an FTP connection is active, that FTP connection will be disconnected.
> - If you change the setting on `ETHERNET` page of `REMOTE SETUP` during the FTP connection, the FTP connection is disconnected.

- **File operations by FTP client application**

  1. Reading out the file from this unit.
     Reading out the file from this unit is always possible.

  2. Adding a new file to this unit
     Adding a new file to this unit is always possible.
     If BWF file or WAV file is added to the current session during recording, it will be displayed on the list in the order of the existing file, recording file and additional file.

  3. Overwriting this unit on the existing file
     Overwriting on the current take is possible only during stop. Takes which are being used on the entry edit screen of the playlist mode cannot be overwritten. Overwriting on the existing files other than this is always possible.
     However, if the `PLAY SETUP` screen is on the playback with `Play Mode` of `GENERAL` page is set as `All Take`, overwriting the take that follows the current take may be dependent on the timing of the write access..

> **CAUTION**
> If you overwrite the take assigned on the playlist entry in the playlist mode, a "?" mark is shown on the applicable entry icon on the entry list screen or file assignment screen and the entry will no longer be playable. Assign the overwritten file on the entry once again to enable you to play back the overwritten file.

CAUTION

When overwriting an existing file, a mismatch may occur on the existing timeline or playlist if the new wave file size, number of channels, bit length or Fs are different.

If you attempt to start play back with such a mismatch, the following error message may appear.

Perform the following to resolve the mismatch and avoid the error message.

- Timeline mode : Delete the applicable region
- Take mode : Delete the applicable take from the card.
- Playlist mode : Assign the overwritten file on the entry again.

CAUTION

Do not overwrite an existing audio file with a file with a different Fs. Doing so may leave you unable to resolve the mismatch.

4. Deleting a file on this unit
   Deleting the current take is possible only when playback is stopped.
   Files other than the current take may always be deleted.
   However, you need to perform REBUILD (reconfiguration) after a file is deleted.
   - Perform REBUILD when the following REBUILD performance confirmation message appears after a file is deleted (while stopped if during playback / recording).

   - If you do not perform a REBUILD, the following message may be appear to the information mismatch between the internal file lists and the audio files.

- When REBUILD is necessary, a ⚠ mark is shown on the following buttons. Touch the REBUILD button on various MENU to perform REBUILD.
  - File name display buttons on the HOME screen
  - PROJECT screen MENU button
  - REBUILD button on various MENU

5. Adding a new folder to this unit.
   Adding a new folder to this unit is always possible.

6. Deleting a folder on this unit
   Deleting the current project / session folder is possible only while playback is stopped.
   Folders other than the current project / session folder may be always deleted.

7. Changing the name of files and folders on this unit.
   The FTP commands for File and Folder renaming are not available for this unit.

NOTE

If you operate the files/ folders of this unit during recording with FTP, RETAKE (deleting the region/take recorded last) is impossible.

Remote control (Telnet)

This unit enables you to utilize remote control with ETHERNET using Telnet via port 23.

- **Setting values necessary to connect with Telnet**

  The setting values necessary to connect Telnet with this unit are as follows:

  IP Address : The IP Address of this unit is shown in IP Address on the ETHERNET page of the REMOTE SETUP screen.

  Port number : 23

  Password : The default password is "HS-2".
  Distinguishes between capital letters and small letters.
  You can change the password using the Password [Change…] button on the ETHERNET page of the REMOTE SETUP screen

- **Connecting Telnet with this unit**

1. Press the enter key after connecting Telnet with this unit using the above IP address and port number.
2. Enter the above password and press the enter key when Enter Password appears on the Telnet console.
3. When you have successfully logged in, Login Successful appears on the Telnet console. Enter "exit" and press the Enter key to disconnect Telnet.

NOTE

- Two simultaneous Telnet connections are possible.
- If EXTERNAL Control on the LOCK SETUP screen is set to LOCK, you cannot make Telnet connections.
  Telnet connection is cancelled if set to LOCK during Telnet connection.
- Telnet connection is cancelled if you change the settings on the ETHERNET page on the REMOTE SETUP screen during Telnet connection.
- Please consult with TASCAM Customer Support for the Telnet command protocol of this unit.

VNC (Virtual Network Computing)

You can operate the system on a computer by displaying the screen which is displayed on this unit's LCD on the computer using VNC Viewer Application.

You can operate the following using a mouse on the VNC Viewer Application.

Left click of the mouse : Operates in the same way as touching the LCD of this unit.

Mouse wheel click : Operates in the same way as the **ENTER** key of this unit.

Mouse wheel rotate : Operates in the same way as the **DATA** dial of this unit.

Mouse wheel press and rotate : Operates in coarse settings in the same way as when you press and rotate the **DATA** dial of this unit (COARSE mode operation).

You can perform the following operations using the computer keyboard with the VNC Viewer Application active.

F1 to **F12** key : Operate in the same way as an external keyboard connected with this unit.
See "Section 12 Other functions" Operations using the computer keyboard –Keyboard Operation" in the Operation Manual of this unit.

HOME key : Operates in the same way as the **HOME** key of this unit and displays the **HOME** screen. Press the **End** key while holding the **HOME** key to display the LOCK SETUP screen.

End key : Operates in the same way as the **MENU** key of this unit and displays the MENU screen. Press the **End** key while holding the **HOME** key to display the LOCK SETUP screen.

PageDown : Operates in the same way as the **PROJECT** key of this unit and displays the PROJECT screen.

Cursor ↑ key : Operates in the same way as rotating the **DATA** dial of this unit clockwise. when editing parameter values, or scrolls the list up when the screen shows a list.

Cursor ↓ key : Operates in the same way as rotating the **DATA** dial of this unit anti-clockwise. when editing parameter values, or scrolls the list down when the screen shows a list.

Character input keys : Input the characters while this unit displays the keyboard screen.

Setting values necessary to connect with VNC

Setting values necessary to connect VNC Viewer Application with this unit are as follows:

IP Address : The IP Address of this unit is shown in IP Address on the ETHERNET page of the REMOTE SETUP screen.

Password : The default password is "HS-2".
Distinguishes between capital letters and small letters.
You can change the password using the Password [Change] button on the ETHERNET page of the REMOTE SETUP screen.

NOTE

- Only one active VNC connection is allowed.
- If EXTERNAL Control" on the LOCK SETUP screen is set to LOCK, display in the VNC Viewer Application is possible, but mouse and keyboard interaction is ignored.
- If you change any setting on the ETHERNET page on the REMOTE SETUP screen while a VNC connection is active, that VNC session will be disconnected.
- Please consult with TASCAM Customer Support for information about VNC Viewer Applications that have been tested with this unit.
- VNC Viewer Application response will slow down when a file is being transferred by FTP, or at high system Fs rates (88.2kHz/96kHz/176.4kHz/192kHz)

Audio Signal Input and Output settings (AUDIO I/O)

Input and Output Audio signal settings can be changed here.

The AUDIO I/O screen has two pages: INPUT and OUTPUT.

Touch the tabs at the bottom of the screen to open the corresponding page.

INPUT page

Make input settings on this page.

INPUT SOURCE

You can set the input source. Select analog XLR input, analog RCA input or digital input.

Setting buttons: Analog XLR (Default), Analog RCA, Digital X ("X" stands for either AES/EBU or S/PDIF)

DIGITAL SOURCE

You can select the digital input source.
Setting buttons: AES/EBU (Default), S/DIF

Fs CONVERT

Turn the sampling rate converter ON or OFF (default) for each pair of inputs.

OUTPUT page

This shows the output setting and signal route.
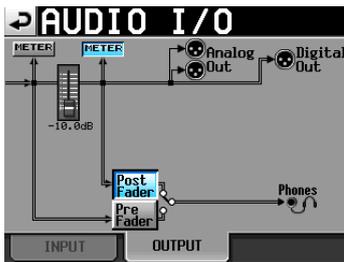
METER buttons

Use these buttons to set whether the meter shows the position before or after the 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 headphone output is from before or after the fader.

Pre Fader button:
Signals before the fader are output for headphones.

Post Fader button (default):
Signals after the fader are output for headphones.

Fader

When RC-HS20PD is connected, the RC-HS20PD fader level is shown.

When it is not connected, it is fixed at 0dB.

Level meters settings (METER SETUP)

Make level meter settings on this screen.
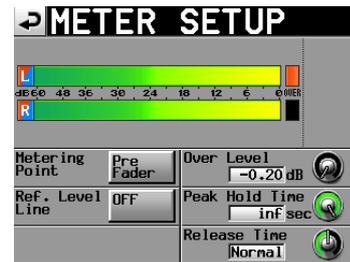
Metering Point

Set whether the meters show the signal before or after the 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`.
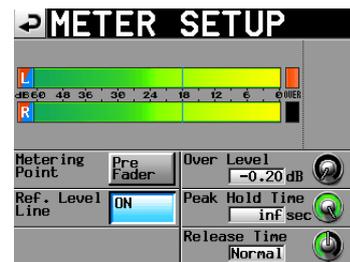
Reference level line display ON

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.

System settings (SYSTEM SETUP)

Make system settings on this screen.

The `SYSTEM SETUP` screen has 3 pages: `PREFERENCES`, `BACKUP STARTUP`, `CLOCK ADJUST`.

Touch the tabs at the bottom of the screen to open the corresponding page.

PREFERENCES page

Set system preferences on this page.
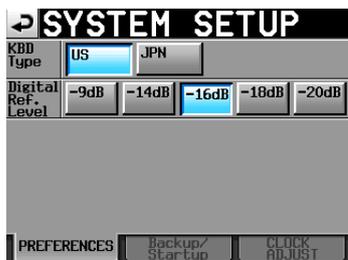
KBD Type

Set the connected keyboard type to either `US` for English-language keyboards or `JPN` for Japanese keyboards.

Setting buttons: `US`, `JPN` (default)

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)

Backup functions of system settings and preset memory functions

You can Import / Export system files, save/ read user settings, and select the unit startup settings using the `Backup / Startup` page on the `SYSTEM SETUP` screen.

■ System Backup

- You can write all System Backup DATA (including User Preset DATA) to the selected card using the `Export` button.

- You can read all System Backup DATA (including User Preset DATA) on the selected card using the `Import ALL` button to rewrite the built-in memory.

  The User Preset DATA read is applied to the operation of the device.

- You can read only the User Preset DATA from the SystemBackup DATA on the selected card using the `Import User` button to rewrite UserPreset in the built-in memory.

  User Preset DATA read is not applied to the operation of the device. Load the User Preset DATA using the `User` button of the `LOAD Preset` in order to apply it.

  If there are no System Backup files, a pop-up window indicating that the import cannot be performed is shown.

■ Save User Preset

- You can save the current setting values as Preset DATA in the built-in memory by pressing the `Save` button.

■ Load Preset

- Touch the `User` button to load the User Preset DATA and touch the `Factory` button to load the Factory DATA (the setting values when shipped out of the factory).

■ Startup Mode

`Last Setting`	: Load the previous settings on power-on
`User Preset`	: Load the User Preset settings on power-on
`Factory Preset`	: Load the Factory Preset settings on power-on

NOTE

- The following backup setting items are subject to saving and reading of the Preset DATA and are not included in the project:

Screen name	Page name	Applicable setting item
HOME screen		Time counter display mode
`LOCK SETUP` screen		All settings
`PLAY SETUP` screen	`CONTROL` page	`PLAY INHIBIT TIME`
`SYNC T/C` screen	`CLOCK` page	`MASTER`
	`SYNC` page	`Master TC`
REMOTE SET-UP screen	`GENERAL` page	`FADER MODE`
		`FADER Start MODE`
		`FADER Stop MODE`
	`PARALLEL` page	`AUX Assign`
	`RS-232C` page	All settings
	`ETHERNET` page	All settings
`AUDIO IO-` screen	`INPUT` page	`INPUT SOURCE`
`SYSTEM SET-UP` screen	`PREFERENCE` page	`Digital Ref Level`
	`Backup/Startup` page	`Startup Mode`

- User Preset DATA upon shipping from the factory is the same as the Factory Preset DATA.

- If powered off and on without performing SaveUserPreset after changing StartupMode to UserPreset when the StarupMode settings stored in the UserPreset memory are LastSetting or FactoryPreset, the UserPreset settings are loaded.

  Then, the StarupMode settings will change to the LastSetting or FactoryPreset stored in the UserPreset memory.

  In this case, you do not need to load the settngs of LastSetting or FactoryPreset again. On next startup, the LastSetting or FactoryPreset settings will be loaded.

CLOCK ADJUST page

Set the time of the built-in clock.
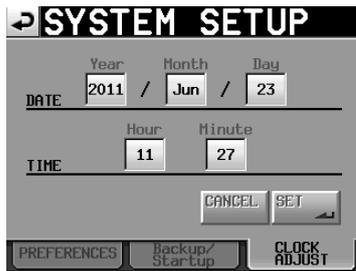
Touch the item that you want to set, and use the **DATA** dial to adjust the item. (See "Setting the time of the built-in clock" on page 27.)

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-HS20PD remote controller (sold separately) connected to the unit.
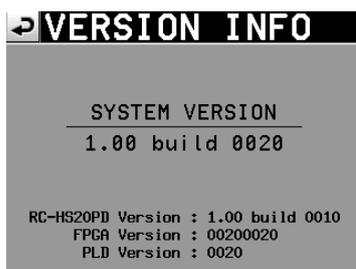
Displaying/Operating a folder/file (BROWSE)

This section describes how to display/manipulate folders and files on SD cards, CF cards and USB memory devices.

- Displaying a folder/file
- Displaying information on a folder/file
- Deleting a folder/file
- Copying a folder/file

Displaying a folder/file

1   **Press the MENU key on the front panel to open the** MENU **screen.**
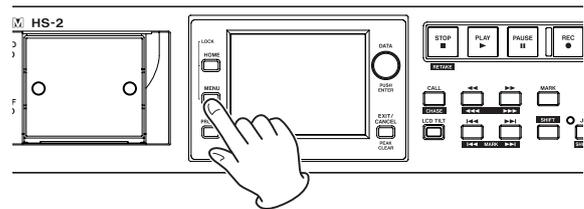
2   **Touch the** BROWSE **button to open the** BROWSE **screen.**

The media selection screen appears the first time.

The last displayed content of the media/folder appears the second time or later.
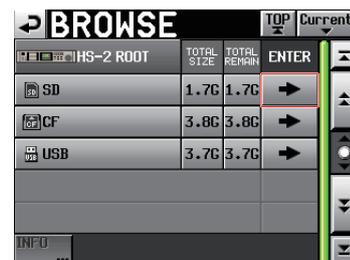
SD card

| NOTE |

- Touch the ⬛ button to return to the media selection screen.
- Touch the Current button to move to the current session folder in the current media.
- The 🄲 icon appears for the current project/session folder in the current media.

3   **Touch the ➡ button to move to the media/folder to see the content.**

Folder: `Project01`

4   **To move to the sub folder, touch the ➡ button of the displayed folder.**

5   **To move to the upper folder, touch the button at the upper left dispaying the media/folder name.**

Displaying a folder/file information

1   **Move to the media/folder containing the folder/file to see information on.**

SD card

2   **Select a folder/file.**

Folder: `Project01`

The selected folder/file is highlighted in yellow.

3   **Touch the `INFO` button to display information on the selected folder/file in pop-up.**

.   If a folder is selected, the creation date and time are displayed.

.   If a file other than BWF/WAV is selected, the update date and time and file size are displayed.

.   If a BWF/WAV file is selected, the following information is displayed.

.   File update date and time
.   File size
.   Sampling frequency
.   bit length/Number of channels
.   Time length/START T/C

Copying a folder/file
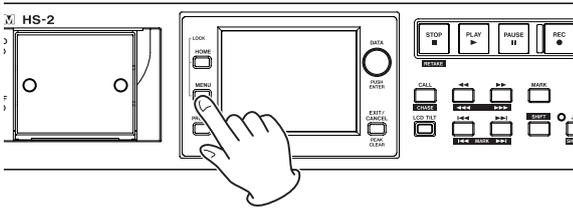
1 Press the MENU key on the front panel to open the MENU **screen.**

2 Touch the BROWSE **button to open the** BROWSE **screen.**
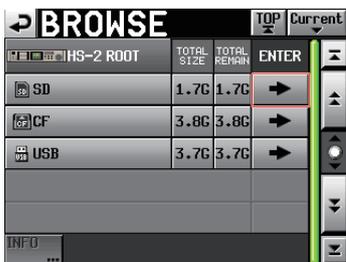
SD card

3 Move to the media/folder containing a folder/file to copy.

Folder: Project01

Select a folder/file to copy.
The selected folder/file is highlighted in yellow.

4 Touch the MENU **button to display the pull-up menu.**

5 Touch the COPY **button on the pull-up menu to change to the copy destination folder selection screen.**

6 Move to the copy destination folder.

- The media selection screen appears for the first copy. Touch the ➡ button for the media containing the copy destination folder.

First media selection screen

- The last displayed copy destination folder selection screen appears the second time or later.
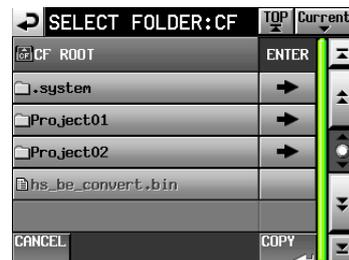
If a CF card was selected last time

NOTE

- While the copy destination is been selected, the BROWSE screen title changes to the blinking name "SELECT FOLDER".

- If the CANCEL button or ↵ button is touched while selecting a copy destination, the BROWSE screen reappears.
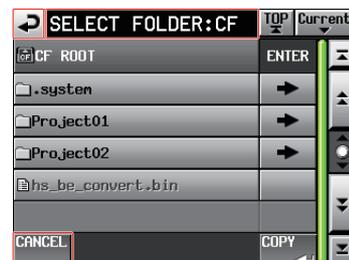
7 Touch the COPY **button to display a confirmation message on the pop-up window. Touch the** OK **button or press the ENTER key to copy.**

To cancel copying or change the copy destination, touch the CANCEL button.

NOTE

If the folder/file name already exists in the copy destination, the pop-up window Cannot Copy Folder or Cannot Copy File appears.

To change the folder/file name, touch the RENAME button.

For how to enter a name, see "Editing the project name" on page 38.

To cancel copying, touch the CANCEL button.

8 **A pop-up window is displayed during copying. When copying is complete, the pop-up window disappears and the** BROWSE **screen reopens.**
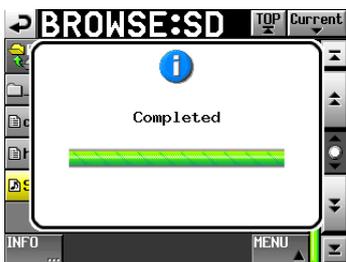
Deleting a folder/file

1 **Press the MENU key on the front panel to open the** MENU **screen.**
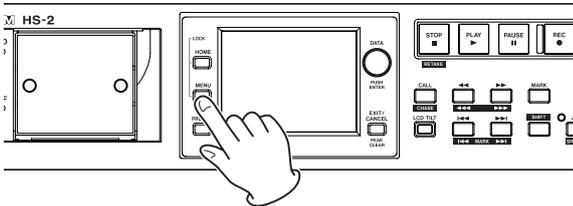
2 **Touch the** BROWSE **button to open the** BROWSE **screen.**
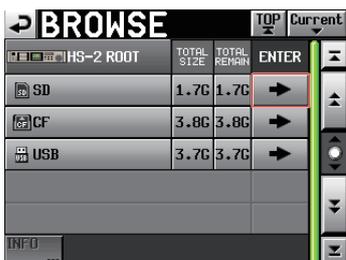
SD card

3 **Move to the media/folder containing a folder/file to delete.**
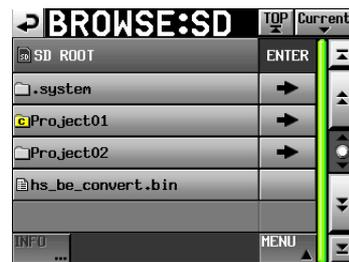
Folder: Project01

Select a folder/file to delete.
The selected folder/file is highlighted in yellow.

4 **Touch the** MENU **button to display the pull-up menu.**
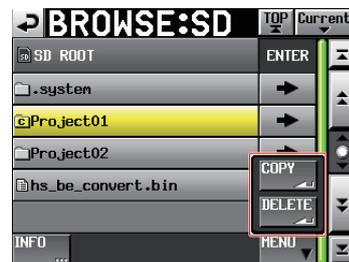
5 **Touch the** DELETE **button on the pull-up menu.**

6 **A confirmation message is displayed on the pop-up window. Touch the** OK **button or press the DATA dial.**

7 **A reconfirmation message is displayed on the pop-up window. Touch the** OK **button or press the DATA dial to delete.**

To cancel deleting, touch the CANCEL button.

8 A pop-up window is displayed during deletion. When deletion is complete, the pop-up window disappears and the `BROWSE` **screen reopens.**
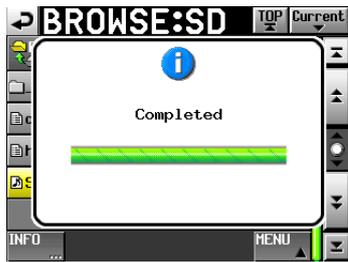
CAUTION

You can delete a folder or file that is already in use by the unit in the timeline or playlist modes.

If you delete such a folder/file, an error pop-up appears when you attempt to play the corresponding region/entry.

NOTE

If the audio file of the current session is deleted, the rebuild confirmation message appears on the pop-up window. Perform the rebuild. If rebuild is not performed, the managed file and audio file do not match, and the pop-up message `Play Error` appears.

When rebuild is necessary, the ⚠ mark appears on the following buttons.

Touch the `REBUILD` button on each menu to perform rebuild.

. File name display button on the Home Screen
. `MENU` button on the `PROJECT` screen
. `REBUILD` button on each menu

Managing media (MEDIA MANAGE)

You can operate SD cards, CF cards and USB memory devices.

NOTE

If you perform any of the `FORMAT` item commands or COPY, all the data on the media storage device will be erased. Execute these commands only if you are absolutely certain that you want to erase the media storage device contents.
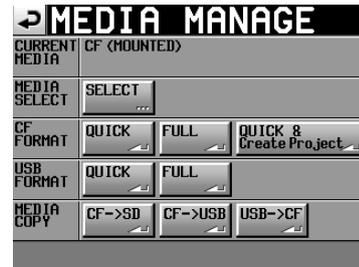
CURRENT MEDIA

This shows the currently selected media storage device name and its status.

MEDIA SELECT

This shows the `MEDIA SELECT` screen. It selects the media storage device to record and playback.

FORMAT

Format the selected media storage device

QUICK button:
This only formats the media storage device management information.

FULL button:
This formats the entire media storage device.

QUICK & Create Project button:
After formatting only the media storage device management information, it creates the currently set project automatically.

USB FORMAT

Format the USB memory device

QUICK button:
Initialize only the USB memory device management information.

FULL button:
Initialize the entire USB memory device

MEDIA COPY

This copies the media storage device contents.

SD ➡ CF / CF ➡ SD:
This copies the entire contents from the selected media storage device to the unselected media storage device.

SD ➡ USB / CF ➡ USB:
This copies the entire contents from the selected media storage device to USB memory device.

USB ➡ SD / USB ➡ CF:
This copies the entire contents from the USB memory device to the selected media storage device.

Operation mode selection (OPERATION MODE)

Set the unit's operation mode on this page.
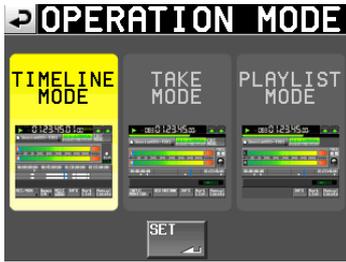
After selecting an operation mode, touch the SET button to switch to it and return to the Home Screen.

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

The playlist mode becomes active and the Home Screen reopens.

Folder structure

The folder structure is as shown below.

You can check the SD card/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-2 might not be able to play that project.

NOTE

Other management files and folders are created in addition to these.

File names

The format used in naming files is as follows.
[Take name first half]-[letter][take number].wav

```
ROOT
├─ 📁 Project01
│   │
│   │
│   ├── 📁 Session001
│   │   │
│   │   ├─ defaultAES.adl *1
│   │   ├─ Session001-T001.wav
│   │   ├─ Session001-T002.wav
│   │   │           :
│   │   ├─ Session001.adl
│   │   │
│   │   └─ 📁 _playlists
│   │       │
│   │       ├─ defaultPPL.ppl *2
│   │       ├─ Playlist01.ppl
│   │       ├─ Playlist02.ppl
│   │       │           :
│   │       ├─ exportedPPLFile.ppl
│   │       │           :
│   │       ├─ PPLFileforImport.ppl
│   │       │           :
│   │
```
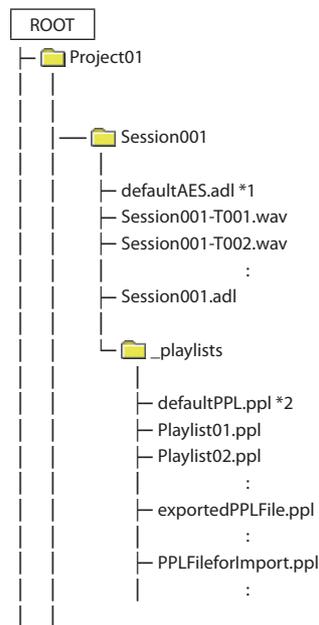
*1: This AES31 file is automatically created
*2: This PPL file is automatically created

Mark functions

Adding marks

Use the following methods to create marks.

One timeline mode or one take 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".
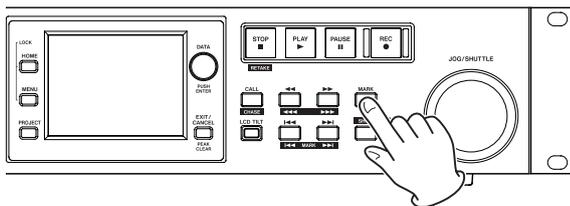
■ Use the auto marker function

When the auto marker function is ON, marks can be added upon PREREC start/ recording start / end when audio overs occur, at regular time intervals and when synchronization errors occur (see "OPTIONS page" on page 90.)

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 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

- "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.
- When an Audio Over or Synchronization Error auto marker is added, an additional event of that same type will not cause a mark to be added until at least 10 seconds have passed.

Using keys to locate to marks

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 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 created during recording.

Erasing marks

1 **Select the mark that you want to erase on the `MARK LIST` screen.**

MARK LIST screen

2 **Touch the `DELETE` button on the `MARK LIST` screen.**

When a confirmation pop-up message appears, touch the `OK` button or the **DATA** dial to erase the mark.

Erasing a mark using the MARK LIST screen

NOTE

On the `mark list information` screen, you can select the mark or type of mark that you want to delete and touch 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 information screen

Erasing marks using the mark list information screen

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.**

Touch the `ENTER` **button to confirm the setting and return to the** `MARK LIST` **screen.**

. 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.

. Touch the `CLEAR` button to clear all input values.

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 38.

NOTE

You can also open the `MARK NAME` screen by touching the mark name area on the Home Screen.

However, since the names of automatic marks cannot be edited, the `MARK NAME` screen is not shown for them.

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.

Touch 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.

Flash start function

Use the flash start function to instantly start playback of takes that you have designated in advance.

A maximum of 100 takes can be started instantly using a keyboard or devices connected to this unit's remote connectors (**REMOTE** and **PARALLEL**).

1 **In take mode, select the session that you want to play back in.** (See "Loading sessions" on page 41)

When in playlist mode, select a playlist. (See "Loading playlists" on page 77.)

2 **Use the DATA dial to select the page that contains the takes or entries that you want to play after touching and highlighting in yellow the operation/display knob on the flash page on the Home Screen.**

The first 100 numbered takes or files in the selected session or playlist can be played back using flash start.

Page number	Take number/Entry number
1	1-20
2	21-40
3	41-60
4	61-80
5	81-100

3 **Touch the flash start key to immediately play the take or entry corresponding to the key.**

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 102.)

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 38.)

● **Session name** (See "Editing the name of the first session" on page 39and "Creating new sessions" on page 40.)

● **Take names (See "Editing take names" on page 71.)**

● **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 "" on page 110 and "Editing mark names" on page 111.)

● **Inputting manual locate points**

(See "" on page 111.)

● **Editing time code offset**

(See "SYNC page" on page 93.)

● **Playlist name**

(See "Creating a new playlist" on page 75 and "Saving a playlist" on page 85.)

● **Names of AES31 files**

(See "Creating new AES31 editing information" on page 50.)

● **Playlist entry titles**

(See "Editing entry titles" on page 81.)

● **Bounce file names**

(See "Bouncing" on page 63.)

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.

  \ / : * ? " < > |

. 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

In this chapter, we explain playback synchronization with timecode that can be realized with Option SY-2 attached. For recording and playback, this unit can be synchronized with SMPTE timecode input through the **TIMECODE IN** connector on SY-2 attached on the rear panel or with its built-in timecode generator ("master timecode" hereafter). Time code synchronization differs according to the operation mode.

Playback synchronized with time code

Timeline mode

In timeline mode, playback can be synchronized with master time code.
When playing back with time code synchronization, when playback starts, it synchronizes with master time code.

Take mode

This unit does not support playback synchronization with timecode.

Playlist mode

This unit does not support playback synchronization with timecode.

Basic operation

1   **In timeline mode, load the sessions that you want to record or play back.**

2   **Either of the following operations will enable synchronized playback or recording.**
   - 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`.
     The `TC` indicator on the Home Screen will change to the `CHASE` indicator.

3   **Press PLAY or PLAY+RECORD to start the synchronized playback or recording in case a valid timecode is received. 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 93).

Rechase

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 "rechase" the timecode. You can set whether or not the unit uses rechase and the degree of the discrepancy before rechasing (see "SYNC page" on page 93).

Recording synchronized with timecode

Timeline mode

In timeline mode, recording can be synchronized with master time code.
When recording with time code synchronization, master time code is captured the instant that recording starts, and recording starts from that time (time code time) on the timeline.

Take mode

Chase and rechase 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 time code synchronization status.

CAUTION

During synchronized recording, this unit only synchronizes to master time code once at the start of recording. There is no rechase function as there is with synchronized playback.

This unit can import and play audio files that meet the following requirements.

In addition, files created by other TASCAM HS series units can be played back as is without recording if they meet the following conditions:

- File format: BWF/WAV
- Sampling frequency: 44.1/48/88.2/96/176.4/192kHz
- Quantization bit rate: 16/24 bits
- Number of tracks: 2 or less

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.**
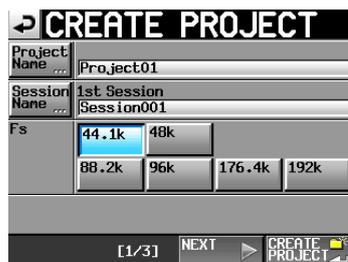
CREATE PROJECT screen 1/3

2   **Create a session as necessary.**

NOTE

For details about creating projects and sessions, see "Project operations" on page 37 and "Session operations" on page 40.

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 media storage device is inserted is not blinking rapidly and eject the media storage device.**

5. **Insert that media storage device into the media slot of the computer, for example.**

If this media storage device was formatted by this unit, it will be recognized by the computer as a drive named HS-2.

In this example, the drive name HS-2 is used.

6. **Copy the audio file that you want to import into the "Session_i" session folder inside the "Project_i" project folder, which is in the HS-2 drive.**

CAUTION

Do not eject the media storage device while DATA is being written to it. Doing so could damage DATA on the media storage device 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 is complete, remove the media storage device from the media slot of the computer or other device.**

Using the imported file on this unit

1   **Insert the media storage device that you copied the file 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 the pull-up menu, and touch the LOAD button.**

The imported file is now recognized as a take.

5   **You can play the file by assigning on the timeline using the timeline mode function, or you can play the file in take mode, or add it to a playlist in playlist mode and play it back.**

See "7–Timeline mode" on page 45 for the edit function with the timeline mode. See "8–Take mode" on page 64 for details about take mode playback or see "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 .)" on page 75 for details about playlist mode.

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 card is securely inserted into the card slot.
- Pause recording or playback.

■ The unit controls do not function.

Is the panel lock function ON?

■ Playback is not possible.

Confirm that the audio file's sampling frequency (44.1/48/88.2/96/176.4/192kHz) and quantization bit rate (16/24) are compatible.

Confirm that the project and the sound file's sampling frequency are consistent.

■ There is no sound.

- Reconfirm the connections of your monitoring system and check the level of your amplifier.
- When using a TASCAM RC-HS20PD remote controller (sold separately), confirm that the fader is not lowered.
- If you cannot hear the input signal, turn input monitoring ON.
- If you cannot hear the playback sound, turn input monitoring OFF.

■ Recording is not possible.

- Reconfirm connections.
- Adjust the recording levels.
- If the media storage device does not have sufficient space, erase unneeded DATA to increase the amount of available space or change the media storage device.
- 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 media storage device 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 media storage device is insufficient, a new project cannot be created.

16–Messages

The following is a list of messages that the HS-2 shows in pop-up windows. Refer to this list to learn more about each message as well as how to respond to them.

The content of the first messages varies depending on the situation. The subsequent messages are listed in alphabetical order.

Message	Details and responses	Remarks
MM (vvvvvvvv) NUM OF PROJECTS : p USED SIZE : u FREE SIZE : f TOTAL SIZE : t	This shows information about the media.	MM = SD or CF vvvvvvvv = volume level p : project number u : capacity used f : unused capacity t : total capacity of media
MM DEVICE ERROR	The media cannot be recognized.	MM = SD, CF, or USB memory
MM Format failed	An error occurred during formatting, and formatting could not be completed.	MM = SD, CF, or USB memory
MM has no projects. Please create a project.	The media does not have any project.	MM = SD or CF
MM is not available	There is no media.	MM = SD, CF, or USB memory
MM is not usable	You cannot copy.	MM = SD, CF, or USB memory
MM MEDIUM ERROR	The unit failed to read the media.	MM = SD, CF, or USB memory
MM 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.	MM = SD or CF This appears when the card is formatted with a cluster size that is smaller than the standard of this unit.
MM Read Error	An error occurred when reading the card.	MM = SD, CF, or USB memory
MM to MM' Copy failed.	Copying all of media to media' was not possible.	MM = SD, CF, or USB memory MM' = SD, CF, or USB memory
MM unrecognized format Please Format this card.	This media has been formatted in a format other than FAT. Format it for use with this unit.	MM = SD, CF, or USB memory
MM unsupported type	This media does not meet the specifications required by the system, so it cannot be used.	MM = SD, CF, or USB memory
MM Write Error	An error occurred when writing to the card.	MM = SD, CF, or USB memory
"nnn" : "eeeeeee" "tttttttt" 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 "tttttttt" : 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
"nnn":"NNNNNNNN" cannot be found	A take with the displayed No. and name cannot be found.	nnn : Take No. NNNNNNNN : Take name
"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
"ssssssss" TAKES : n Fs : f TOTAL SIZE : u TOTAL TIME : t	This shows session information.	"ssssssss" = session name n : number of take f : sampling frequency u : space used t : total time of all takes

Message	Details and responses	Remarks
"tttttttt" date fs/bit/FileMode/NumOfTracks SIZE : u LENGTH : * h ** m ** s ** f	Take information is shown.	"tttttttt" = take name date : year/month/day hour: minute fs : sampling frequency bit : bit rate FileMode : MONO or POLY NumOfTracks : number of tracks u : space used LENGTH : length of the take
"tttttttt" START T/C : ** : ** : ** : ** END T/C : ** : ** : ** : ** FRAME TYPE : ** F	Take information is shown.	"tttttttt" = take name START T/C : file start time code time END T/C : file end time code time FRAME TYPE : frame type
<AES31 ADL Info> "ffffffff" Size : ** MB yyyy/mm/dd hh : mm	AES31 editing file information	ffffffff = editing information file name
Bounce Selected Area to file? "ffffffff"	The selected area will be bounced to file.	ffffffff = file name
Canceled	The operation was canceled.	
Cannot Change Now Currently **	This item cannot be changed during playback, timecode chase or recording.	** = Playing, Chasing TC or Recording
Cannot Change Now Fixed in current Fs.	In the current Fs, settings cannot be changed.	
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. "tttttttt" 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	"tttttttt" = the name of the take to be copied
Cannot Copy. Destination Project is different Fs.	Cannot copy as Fs of the copy destination is different.	
Cannot Copy File. "ffffffff" already exist in Destination.	Cannot copy as the selected file already exists in the copy destination.	ffffffff : File name
Cannot Copy Folder. "ffffffff" already exist in Destination.	Cannot copy as the selected folder already exists in the copy destination.	ffffffff : Folder name
Cannot Copy for Insert. "ffffffff" already exist in current Session.	Cannot copy for inserting as the selected file already exists in the current session.	ffffffff : File name
Cannot Copy for Paste. "ffffffff" already exist in current Session.	Cannot copy for pasting as the selected file already exists in the current session.	ffffffff : File name
Cannot Copy. Selected Take already exist in Copy destination.	Cannot copy as the selected take already exists in the copy destination.	
Cannot Copy. Source folder and Destination folder is same.	Cannot copy as the source and destination folders are the same.	
Cannot Copy. Destination folder is sub-folder of source folder.	Cannot copy as the destination folder is the sub folder of the source folder.	
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.	

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 media does not have enough space, so you cannot create a new project.	
Cannot Divide. "tttttttt_a" or/and "tttttttt_b" already exist in current Session.	Cannot divide as a file with the same name already exists in the current session.	tttttttt: Take name
Cannot Edit. System limit reached.	Cannot edit as there is not enough available space for managing the timeline region or edit history.	
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 execute bounce. Media Full.	The media 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 execute combine. "aaaaaaaa" "bbbbbbbb" These property are not matched.	Cannot combine as the properties of the two takes are different.	"aaaaaaa" = First take to be combined "bbbbbbb" = Second take to be combined
Cannot execute combine. Combine file size is over MMM.	Cannot combine as the file size will exceed Max File Size indicated in the Format page on the REC SETUP screen.	MMM = 640MB, 1GB, or 2GB
Cannot execute combine. Media Full.	The media does not have enough space, so you cannot combine.	
Cannot execute. File property is not matched to current project.	Cannot execute as the file property is not the same as that of the current project.	
Cannot execute. Media Full.	The media does not have enough space, so you cannot complete the operation.	
Cannot Export. Not enough space on MM	There is not enough available space on the export destination media.	MM = SD or CF
Cannot Export. Destination Project is different Fs.	Cannot export as Fs of the copy destination is different.	
Cannot Export. Folder already exists on MM. Overwrite session?	A session with the same name already exists in the export destination. Do you want to overwrite that session?	MM = SD or CF
Cannot Export. Selected Take already exist in Export destination.	Cannot export as the selected take already exists in the export destination.	
Cannot increment Take. Interval is too short. Or Media almost full	The interval was less than 4 seconds or the media 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 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 media 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 media does not have enough space, so you cannot start recording.	

Message	Details and responses	Remarks
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. 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.	
Cannot use Bridge file because it is illegal.	Cannot use the bridge file as it it not correct.	
CF Media Full. SD : Still RECORDING. CF : Stopped.	Recording to CF has been stopped as the CF does not have enough space. Recording to SD is continued.	Occurs when REC Mode is set to Mirror.
CF not recommended for Recording/Playing. (not UltraDMA)	This media does not meet the specifications required by the system, so using it for recording/playback is not recommended.	
CF Record error. SD : Still RECORDING. CF : Stopped.	Recording to CF has been stopped as the error occurs. Recording to SD is continued.	Occurs when REC Mode is set to Mirror.
Clear Current EDL and Import All Takes?	Clear the current AES31 editing information and import all the takes.	
Clear In/Out Point?	Clear IN and OUT points.	
Combine these Takes? "aaaaaaaa" "bbbbbbbb"	Combine the two takes.	"aaaaaaaa" = First take to be combined "bbbbbbb" = Second take to be combined
Completed	The operation has completed.	
CONFIRM QUICK FORMAT MM & Create Project? "pppppppp" "ssssssss" fs/bit/FrameType/NumOfTracks	Reconfirms that you want to conduct both quick-formatting and project creation at once	MM = SD or CF pppppppp = name of project created ssssssss = name of session created
Copy MM to MM'? This will erase all DATA on MM'.	Confirms that you want to copy all of MM to MM'	MM = SD, CF, or USB memory MM' = SD, CF, or USB memory
Copy selected Folder? "nnnnnnnn"	Copy the selected folder.	"nnnnnnnn" = name of folder to be copied
Copy selected File? "nnnnnnnn"	Copy the selected file.	"nnnnnnnn" = name of file to be copied
Copy selected Take?	Copy the selected folder.	"n" = number of selected takes "Take" changes to "Takes" when "n" is 2 or more.
Copying Folder ...	The folder is being copied.	
Copying File ...	The file is being copied.	
Copying Take ...	The take is being copied.	"Take" changes to "Takes" when multiple takes are copied.
Create EDL failed	Failed to create an AES31 editing information file.	
Create new EDL? "eeeeeeee"	Create a new AES31 editing information file.	"eeeeeeee" = name of AES31 editing information file
Create new Playlist? "pppppppp"	Confirm that you want to create a new playlist.	pppppppp = playlist name
Create new project? "pppppppp" "ssssssss" Fs: ** kHz, Frame Type: ** F	Confirm that you want to create a new project.	pppppppp = name of project to be created ssssssss = name of first session to be created

Message	Details and responses	Remarks
Create Project failed	Failed to create the project.	
Creating EDL ...	The AES31 editing information file is being created.	
Creating Project ...	The project is being created.	
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?	Delete the selected marks.	N = number of marks
Delete N selected project?	Delete the selected projects.	N = number selected
Delete N selected session?	Delete the selected sessions.	N = number selected
Delete N selected take?	Delete the selected takes.	N = number selected
Delete selected EDL?	Delete the selected AES31 editing information file.	
Delete selected playlist?	Delete the selected playlists.	
Delete this Folder?	Delete the selected folder.	"nnnnnnnn" = name of folder to be copied
Delete this File?	Delete the selected file.	"nnnnnnnn" = name of file to be copied
Deleting EDL ...	The AES31 editing information file is being deleted.	
Deleting File ...	The file is being deleted.	
Deleting Folder ...	The folder is being deleted.	
Deleting Playlist ...	The playlist is being deleted.	
Deleting Project ...	The project is being deleted.	
Deleting Session ...	The session is being deleted.	
Deleting Take ...	The take is being deleted.	

Message	Details and responses	Remarks	
Digital Input Error (eeeeeeee)	An error occurred with the digital input selected for the input signal.	eeeeeeee =	
		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

Message	Details and responses	Remarks
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.	
Directory contents changed. REBUILD required. REBUILD now?	The directory needs to be rebuilt as the content has been changed.	
Directory contents changed via FTP. REBUILD required. REBUILD now?	The directory needs to be rebuilt as the content has been changed via FTP.	
Edit Completed	The editing operation has completed.	
EDL Load completed but there are some wrong regions.	Loading AES31 editing information has completed, but there are some incorrect regions.	
--- error --- INFO WRITING	An error occurred while writing information.	
Export System Backup Data to MM?	Export system backup data to the media.	MM = SD or CF
Exporting session(s) ...	Exporting all sessions in progress.	
Exporting Take(s) ...	The takes are being copied.	
External Clock Lost, Switched to Internal	Synchronization with an external clock was disrupted, so the internal clock was activated.	

Message	Details and responses	Remarks
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.	
File Copy Failed.	Failed to copy the file.	
Folder Copy Failed.	Failed to copy the folder.	
--- FORMAT --- Completed	Formatting has completed.	
--- FULL FORMAT --- FORMAT MM? This will erase all DATA on card	Full formatting will be performed.	MM = SD, CF, or USB memory
--- FULL FORMAT --- Formatting MM ...	Full formatting is occurring.	MM = SD, CF, or USB memory
Import All System Backup Data from MM?	Import all system backup data from the media.	MM = SD or CF
Import User Preset Data from System Backup Data on MM?	Import user preset data from system backup data on the media.	MM = SD or CF
Initializing ...	The unit is initializing. (starting up after power-on)	
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.	
Load Factory Preset?	Load the factory settings.	
Load selected project? "pppppppp"	Load the selected project.	pppppppp = name of project to load
Load selected playlist? "pppppppp"	Load the selected playlist.	pppppppp = name of playlist to load
Load selected session? "ssssssss"	Load the selected session.	ssssssss = name of session to load
Load selected take? "tttttttt"	Load the selected take.	tttttttt = name of take to load
Load User Preset?	Load the user preset settings.	
Loading File ...	The file is being loaded.	
Loading Playlist ...	The selected playlist is loading.	
Loading Session ...	The selected session is loading.	
Loading Take ...	The selected take is loading.	
Make new Session? "ssssssss" TIMELINE Start Time : **h**m**s**f	Make a new session.	ssssssss = session name
Make Playlist failed	Failed to create a playlist.	
Make session failed	Failed to create a session.	
Making Playlist …	A playlist is being created.	
Making session …	A session is being created.	
Mark Point set	A mark has been created.	
Mirror REC is not available. (MM is not available)	Mirroring is not available as the media cannot be used.	Occurs when REC Mode is set to Mirror. MM = SD or CF
Mirror REC is not available. CF not recommended type for Recording. (not UltraDMA)	Mirroring is not available as this card does not meet the specifications required by the system and correct recording cannot be guaranteed.	Occurs when REC Mode is set to Mirror.

Message	Details and responses	Remarks
Mirror REC is not available. MM formatting not optimal for Recording.	Mirroring is not available as the media has not been formatted on this unit and correct recording cannot be guaranteed. Format the media on this unit before use.	Occurs when REC Mode is set to Mirror. MM = SD or CF
Network Control Locked	Network control has been locked to prevent misoperation.	
New Session Name must not start with "@"	The session name is not allowed. A session name must not start with the "@" mark.	
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.
Now Working ... Do not remove Media.	The operation is being processed. Do not remove the media.	
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.	
Play Error nnn : NNNNNNNN	A playback error occurred on the take with the displayed No. and name.	nnn : take No. NNNNNNNN : take name
Playlist Import completed but there are some wrong entries.	Importing a playlist has completed, but there are some incorrect entries.	
<PlayList Info> "ppppp" Size : **MB yyyy/mm/dd hh : mm	This shows playlist information.	ppppppppp = playlist name
Playlist Load completed but there are some wrong entries.	Loading a playlist has completed, but there are some incorrect entries.	
PLEASE CONFIRM --- FULL FORMAT --- FORMAT MM? This will erase all DATA on card	Reconfirms that you want to full format the media	MM = SD, CF, or USB memory
PLEASE CONFIRM --- QUICK FORMAT --- FORMAT MM? This will erase all DATA on card	Reconfirms that you want to quick format the media	MM = SD, CF, or USB memory
PLEASE CONFIRM Copy MM to MM'? This will erase all DATA on MM'.	Reconfirms that you want to copy all of MM to MM'	MM = SD, CF, or USB memory MM' = SD, CF, or USB memory
PLEASE CONFIRM Delete this File? "nnnnnnnn"	Reconfirms that you want to delete the selected file	"nnnnnnnn" = name of a file to delete
PLEASE CONFIRM Delete this Folder? "nnnnnnnn"	Reconfirms that you want to delete the selected folder	"nnnnnnnn" = name of a folder to delete
PLEASE CONFIRM Delete N selected take?	Reconfirms that you want to delete the selected takes	N = number of selected takes

Message	Details and responses	Remarks
PLEASE CONFIRM Export System Backup Data to MM?	Reconfirms that you want to export system backup data to the media.	MM = SD or CF
PLEASE CONFIRM Import All System Backup Data from MM?	Reconfirms that you want to import all system backup data from the media.	MM = SD or CF
PLEASE CONFIRM Import User Preset Data from System Backup Data on MM?	Reconfirms that you want to import user preset data from system backup data on the media.	MM = SD or CF
PLEASE CONFIRM Load Factory Preset?	Reconfirms that you want to load the factory settings.	
PLEASE CONFIRM Load User Preset?	Reconfirms that you want to load the user preset settings.	
PLEASE CONFIRM Save current setting to User Preset?	Reconfirms that you want to save the current settings as the user preset settings.	
Project Delete failed.	Failed to delete the project.	
Project Load failed.	Failed to load the project.	
Project Rename failed	Failed to rename the project.	
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 in Jog Mode	The project screen cannot be changed when in jog mode.	
Project Screen is not available while Recording	The plroject screen cannot be changed during recording.	
--- QUICK FORMAT --- FORMAT MM? This will erase all DATA on card	Quick formatting will be performed.	MM = SD, CF, or USB memory
--- QUICK FORMAT --- Formatting MM ...	Quick formatting is occurring.	MM = SD, CF, or USB memory
QUICK FORMAT MM & Create Project? "pppppppp" "ssssssss" fs/bit/FrameType	Quick formatting will be executed and a project will be created.	MM = SD or CF "pppppppp" = name of the created project "ssssssss" = name of the first created session fs: sampling frequency bit: bit rate Frame Type: frame type
Reading DATA ...	DATA is being read.	
Reading Media ...	The media is being read.	
Rebuild all Projects?	Rebuild all projects.	
Rebuild changed Directory?	Rebuild the changed directory.	This message appears when you operate a file on this unit via FTP or on the BROWSE screen, and then touch the REBUILD button with the ⚠ mark.
Rebuild current Project?	Rebuild the current project.	
Rebuild current project and changed Directory?	Rebuild the current project and changed directory.	This message appears when you operate a file on this unit via FTP or on the BROWSE screen, and then touch the REBUILD button with the ⚠ mark.
Rebuild current session and changed Directory?	Rebuild the current session and changed directory.	This message appears when you operate a file on this unit via FTP or on the BROWSE screen, and then touch the REBUILD button with the ⚠ mark.
Rebuild current Session?	Rebuild the current session.	

Message	Details and responses	Remarks
Rebuild failed	Rebuilding failed.	
Rebuild selected Project?	Rebuild the selected project.	
Rebuild selected project and changed Directory?	Rebuild the selected project and changed directory.	This message appears when you operate a file on this unit via FTP or on the BROWSE screen, and then touch the REBUILD button with the ⚠ mark.
Rebuild selected Session?	Rebuild the selected session.	
Rebuild selected session and changed Directory?	Rebuild the selected session and changed directory.	This message appears when you operate a file on this unit via FTP or on the BROWSE screen, and then touch the REBUILD button with the ⚠ mark.
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 media could not keep up.	
RECORD stopped. ABS time is over 24h.	The timeline mode's ABS time exceeded 24 hours so recording stopped.	
RECORD stopped. Media Full.	The media 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.	
Renaming Project "ppppppp" to "nnnnnn"	The project is being renamed.	ppppppp = old project name nnnnnn = new project name
--- RETAKE --- Ignore last RECORD pass?	A retake will be performed.	
Save changes in Current EDL "ssssssss"	Save changes to the current timeline.	ssssssss = name of AES31 editing information file
Save changes in Current Playlist "llllllll"	Save changes to the current playlist.	llllllll = playlist name
Save current setting to User Preset?	Save the current settings as the user preset.	
Save Failed.	Saving the file failed.	
Saving File ... Do not remove MM	The file is being saved. Do not remove the media.	MM = SD or CF
Screen Locked LCD Section Locked	LCD section controls have been locked to prevent misoperation.	
Screen Locked Touch screen Locked Out	The touch screen has been locked to prevent misoperation.	
SD Card Locked	The LOCK switch on the SD card has been engaged.	
SD Card Locked Cannot Record/Edit	Cannot record or edit as the SD card has been locked.	This message appears when a locked SD card is inserted.
SD Media Full. SD : Stopped. CF : still RECORDING.	Recording to SD has been stopped as the SD does not have enough space. Recording to CF is continued.	Occurs when REC Mode is set to Mirror.
SD Record Error. SD : Stopped. CF : still RECORDING.	Recording to SD has been stopped as an error occurred during recording. Recording to CF is continued.	Occurs when REC Mode is set to Mirror.
Select Insert Position [File T/C][Current Position]	Select a position where you want to insert a file between the file T/C position and current position.	
Select Paste Position [File T/C][Current Position]	Select a position where you want to paste a file between the file T/C position and current position.	
Session Delete failed.	Erasing the session failed.	

Message	Details and responses	Remarks
Session Export failed	Exporting the session failed.	
Session Load failed.	Loading the session failed.	
Sort all takes?	Sort all the takes.	
Take Copy failed.	Failed to copy the take.	
Take Delete failed.	Failed to delete the take.	
Take Export failed.	Failed to export the take.	
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.	
There is no Take.	There is no take, so playback is not possible. Select a session with takes.	
This file was converted to BWF format.	The file format was converted to BWF.	This message appears when the Start Time code in the WAV file was edited.
This name already exists.	Another project, session or take already has that name.	
This name already exists. Overwrite this file? "nnnnnnnn"	The same name already exists. Do you want to overwrite it?	"nnnnnnnn" = file name
Transport Locked Transport Section Locked	The transport keys have been locked to prevent misoperation.	
Undo Completed	Undoing an edit has completed.	
Unsupported File (too many tracks)	The number of tracks 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

SD card / SDHC card
CompactFlash (CF) card

File system

FAT32 (4 GB or more)
FAT16 (2 GB or less)

File format

BWF (Broadcast Wave Format)
WAV (Waveform Audio Format)

Number of channels

2 channels

Quantization bit rate

16-bit, 24-bit

Sampling frequency

44.1/48/88.2/96/176.4/192 kHz

Clock reference

INTERNAL, WORD IN, VIDEO IN, DIGITAL IN

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 INPUTS L / R (BALANCED) connectors

Connectors: XLR–3–31 (1: GND, 2: HOT, 3: COLD)
Input impedance: 4.3 kΩ
Nominal input level:
    +4 dBu (1.23 Vrms) ±1 dB
    (+6 dBu when maximum input level is set to +15dBu)
    (+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)
        D. Ref: Digital Ref. Level
        A. Input: Analog Input Ref. Level

ANALOG INPUTS L / R (UNBALANCED) connectors

Connectors: RCA PIN JACK
Input impedance : 3.9kΩ
Nominal input level : -10dBV (0.316Vrms)±1dB
Maximum input level: +6dBV (2.0Vrms)±1dB

ANALOG OUTPUTS L / R (BALANCED) connectors

Connectors: XLR–3–32 (1: GND, 2: HOT, 3: COLD)
Output impedance: 100Ω or less
Nominal output level:
    +4 dBu (1.23 Vrms) ±1 dB
    (+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)
        D.Ref: Digital Ref. Level
        A.Output: Analog Out Ref. Level

ANALOG OUTPUTS L / R (UNBALANCED) connectors

Connectors : RCA PIN JACK
Output impedance: 100Ω or less
Nominal input level : -10dBV (0.32Vrms)±1dB
Maximum input level : +6dBV (2.0Vrms)±1dB

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)

Digital audio inputs and outputs

DIGITAL IN (S/PDIF) connectors

Connector: RCA pin jack
Input signal voltage amplitude:
    200mVp-p to 600mVp-p / 75Ω
Input impedance: 75Ω
Format: AES3-2003 / IEC60958-4 (AES/EBU)
          IEC60958-3 (S/PDIF)
Supported sampling frequencies:
    44.1/48/88.2/96/176.4/192kHz (Single / Double / Quad)
Note: When SRC is ON, the receivable range is 32 – 192 kHz.

DIGITAL IN (AES/EBU) connector

Connector: XLR–3–31
Input signal voltage range:
    200 mVp–p to 10 Vp–p/110Ω
Input impedance 110Ω ±20%
Format: AES3-2003/IEC60958-4(AES/EBU)
          IEC60958-3(S/PDIF)
Supported sampling frequencies:
    44.1 / 48 / 88.2 / 96 / 176.4 / 192kHz (Single/ Double/ Quad)
Note: When SRC is ON, the receivable range is 32–192 kHz.

DIGITAL OUT (S/PDIF) connectors

Connector: RCA pin jack
Output voltage: 0.5 Vpp ±20% / 75Ω
Input impedance: 75Ω
Format: IEC60958-3 (S/PDIF)
Supported sampling frequencies:
    44.1 / 48 / 88.2 / 96 / 176.4 / 192kHz (Single/ Double/ Quad)

DIGITAL OUT (AES/EBU) connectors

Connector: XLR–3–32
Output voltage: 2–5 Vp–p/110Ω
Output impedance: 110Ω ±20%
Format: IEC60958–4 (AES3–2003, AES/EBU)
Supported sampling frequencies:
    44.1 / 48 / 88.2 / 96 / 176.4 / 192kHz (Single/ Double/ Quad)

Control inputs and outputs

RS–422 (attached with Option SY-2 board)

Connector: D–sub 9-pin (inch pitch threads.)

RS–232C

Connector: D–sub 9-pin (inch pitch threads.)

PARALLEL

Connector: D–sub 25-pin (inch pitch threads.)

TIME CODE IN (attached with Option SY-2 board)

Connector: BNC connector
Signal voltage amplitude: 0.5–5Vp–p
Input impedance 10 kΩ
Format: SMPTE 12M–1999 compliant

TIME CODE OUT (attached with Option SY-2 board)

Connectors: BNC connector
Signal voltage amplitude: 2 Vp–p
Output impedance: 600Ω
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: 75Ω ±10%
Allowable frequency deviation of external synchronization: ±100 ppm
Includes switch for enabling termination
Input frequencies (WORD):
    44.1 / 48 / 88.2 / 96 / 176.4 / 192kHz
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: 75Ω ±10%
Output frequency (WORD):
    44.1 / 48 / 88.2 / 96 / 176.4 / 192kHz
Frequency stability ±10 ppm or less (Ta = 20º C)
OUT/THRU switch included (OUT is only for WORD OUT)

ETHERNET

Connector: RJ45
Compatibility: 100BASE-TX, 1000BASE-T

KEYBOARD

Connector: Mini-DIN (PS/2)

USB

Connector: USB A-type 4-pin
Protocol: USB2.0 HIGH SPEED (480 Mbps) compliant

REMOTE

Connector: RJ45
Supply voltage: 13 V
Signal: LVDS serial
Transmission contents:
LCD display DATA, asynchronous serial transmission control signals, port control signals

17–Specifications

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)

20 Hz – 80 kHz: +0.5 dB/−5 dB (Fs = 176.4/192 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 more (JEITA) (recording and playback)

Other specifications

Power

AC 100-240 V, 50–60 Hz

Power consumption

22 W

External dimensions (W x H x D)

482.6 x 94 x 317.1 mm/19.00 x 3.70 x 12.48 in

Weight

4.9 kg/10.8 lb

Operating temperature range

5–35ºC/41–95ºF

Dimensional drawings

Block diagram
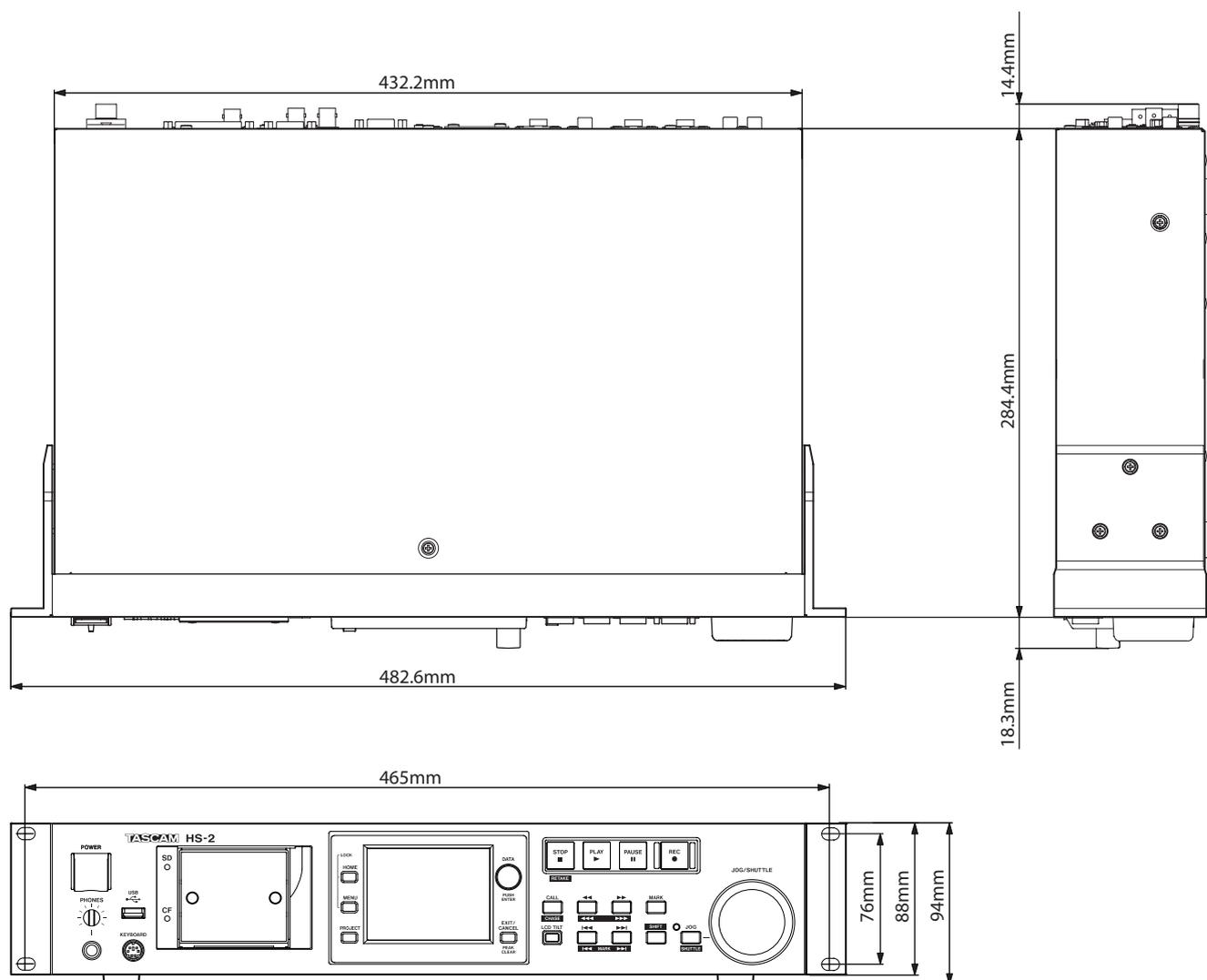
HS-2
Audio Block Diagram

TASCAM

HS-2