CHAPTER 8

Sub ID Edit Mode Menu

The SUB ID EDIT MODE menu in the MAIN MENU is explained in this chapter.
This menu is used when making a new recording or erasing sub ID in a prerecorded tape.

Note when operating on SUB-ID EDIT MODE menu

Recording using this menu of SUB-ID, which allows additional recording over the area where audio siganls have already been recorded, should be conducted at a portion of tape where recorded materials exist.

If recording of END-ID and as such is desired at a blank area, the area must be recorded with silence using ASSEMBLE recording function before END-ID recording is initiated.

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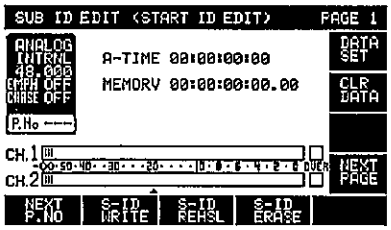
8-1. *Operating functions of the menu*

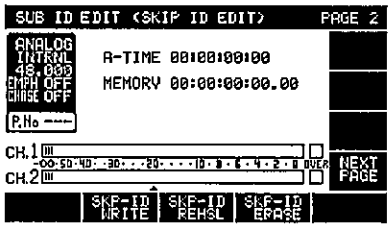
The operation menu is composed of the 1st level PAGE 1 ~ PAGE 3 and the following operations can be executed in each page.

1st level PAGE 1



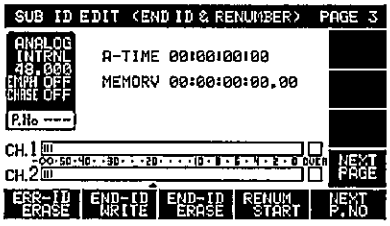
1. Recording of S-ID(START ID EDIT)
2. Rehearsal of S-ID recording
3. Erasing of S-ID

1st level PAGE 2



1. Recording of SKIP-ID(SKIP ID EDIT)
2. Rehearsal of SKIP-ID recording
3. Erasing of SKIP-ID

1st level PAGE 3

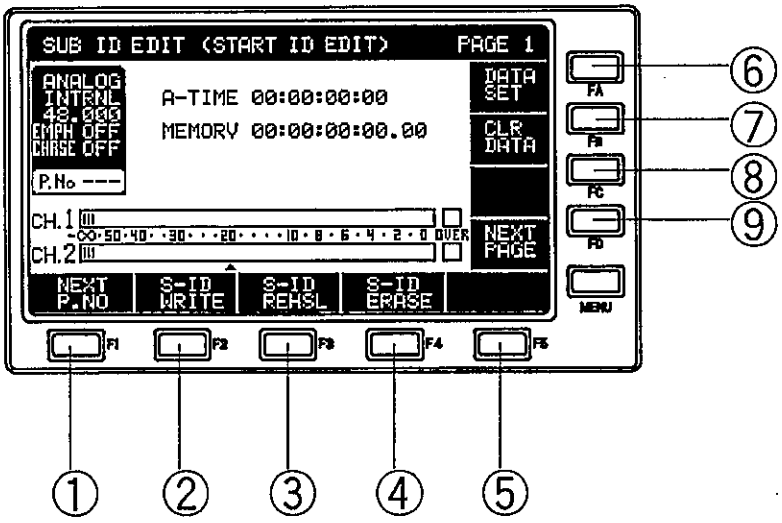


1. Erasing of ERR-ID
2. Recording of END-ID(END-ID & RENUMBER)
3. Erasing of END-ID
4. Renumber function

8-1-1. Functions of each display and function keys

PAGE 1:

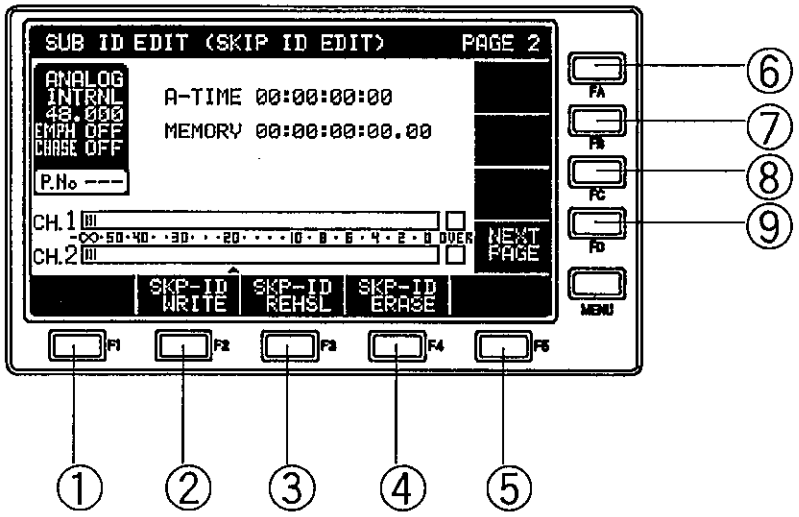
The various functions of the 1st level PAGE 1 display and the function keys are as follows.



No.		Display	Function
①	F1	NEXT P-NO	The P-NO of S-ID to be recorded can be specified.
②	F2	S-ID WRITE	A S-ID will be recorded directly at the point where the key is pressed. If this key is pressed during rehearsal, an S-ID will be recorded from the present offset point.
③	F3	S-ID REHSL	When the key is pressed, rehearsal playback is carried out with the recording point determined as the current time.
④	F4	S-ID ERASE	When this key is pressed in STOP or PAUSE, an S-ID located within 300 frames from the point where the key was pressed will be erased.
⑤	F5		No function at present.
⑥	FA	DATA SET	The NEXT P-NO specified by SET P-NO will be set and input.
⑦	FB	CLR DATA	The NEXT P-NO that is set in the display will be cleared.
⑧	FC		No function at present.
⑨	FD	NEXT PAGE	A page within same mode and same level can be turned

PAGE 2:

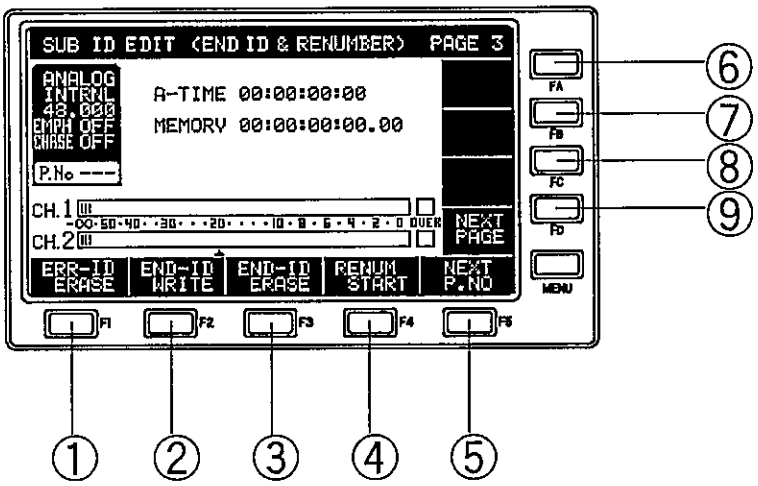
Functions of the 1st level PAGE 2 displays and function key functions are as follows.



No.		Display	Function
①	F1		No function at present
②	F2	SKIP-ID WRITE	A SKIP-ID is directly recorded at the point where this key is pressed. Also, if this key is pressed during rehearsal, a SKIP-ID is recorded from the present offset point.
③	F3	SKIP-ID REHSL	Rehearsal playback of sound erasing is executed with the CURRENT TIME when this keys pressed, as the recording point.
④	F4	SKIP-ID ERASE	When this key is pressed in the STOP or PAUSE mode, a SKIP-ID located within 300frames from the point where the key was pressed will be erased.
⑤	F5		No function at present.
⑥	FA		No function at present.
⑦	FB		No function at present.
⑧	FC		No function at present.
⑨	FD	NEXT PAGE	Pages within same mode and same level can be turned.

PAGE 3:

Functions of the 1st level PAGE 3 displays and each function are as follows.

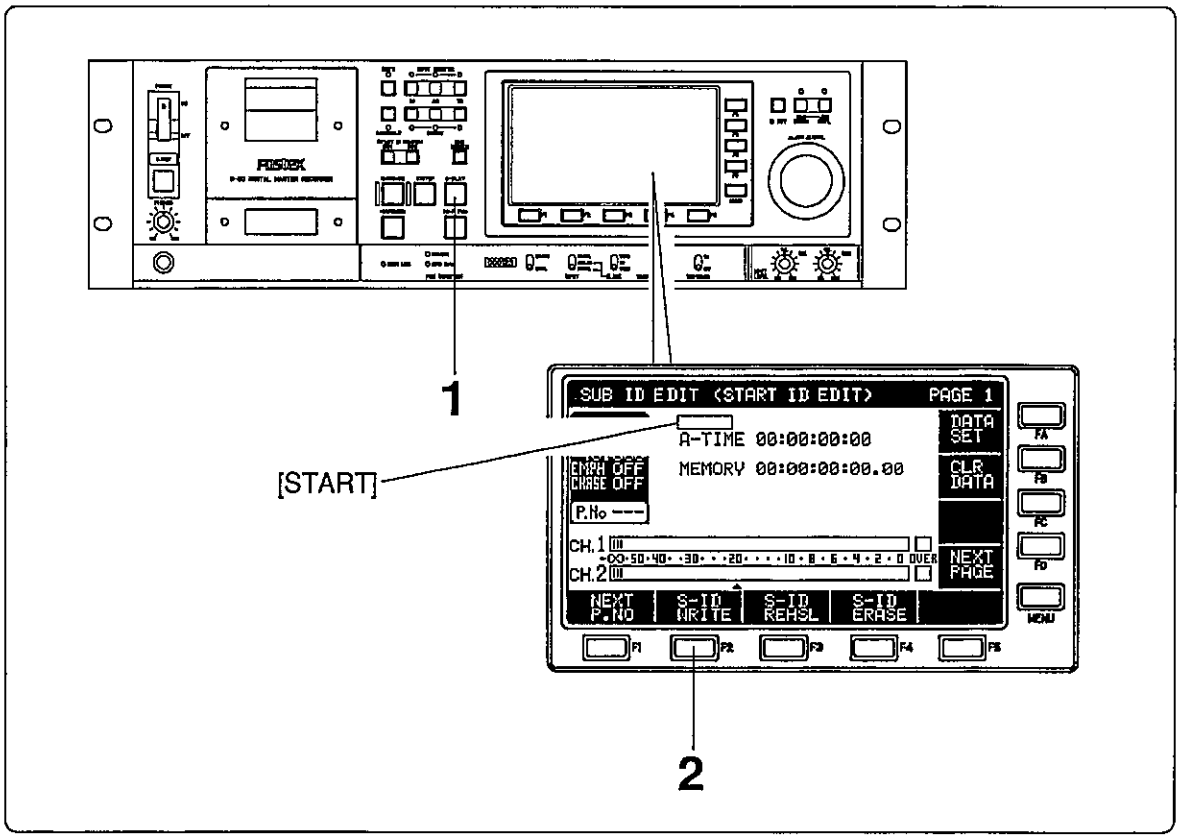


No.		Display	Function
①	F1	ERR-IDERASE	When key is pressed when in STOP or PAUSE, an ERR-ID located within 300 framesfrom point where the key is pressed will be erased.
②	F2	END-ID WRITE	When key is pressed when in STOP or PAUSE, an END-ID is recorded at the pressedpoint and prerolled to 66 frames beforehand of this END-ID.
③	F3	END-ID ERASE	If key is pressed when the tape is located at the END-ID reached by STOP or PAUSE,that END-ID will be erased.
④	F4	RENUM START	Renumbering is started by pressing this key. If the initial figure was not set by SET P-NO, the P-NO will start from [001].
⑤	F5	NEXT P-NO	If this key is pressed, the NEXT P-NO for executing renumbering can then be set.
⑥	FA		This key has no function but when the F5 (NEXT P-NO) key is pressed it will change to the DATA SET key function and [DATA SET] will be displayed.
⑦	FB		No function at present.
⑧	FC		No function at present.
⑨	FD	NEXT PAGE	Page can be turned within the same mode and same level.

8-2. Record/erase of S-ID/P-NO

Record/erase of S-ID/P-NO and renumbering can, respectively, be carried out in PAGE 1 and PAGE 3.

8-2-1. Recording of new S-ID/P-NO (Page 1) at playback of prerecorded tape



Operating procedure

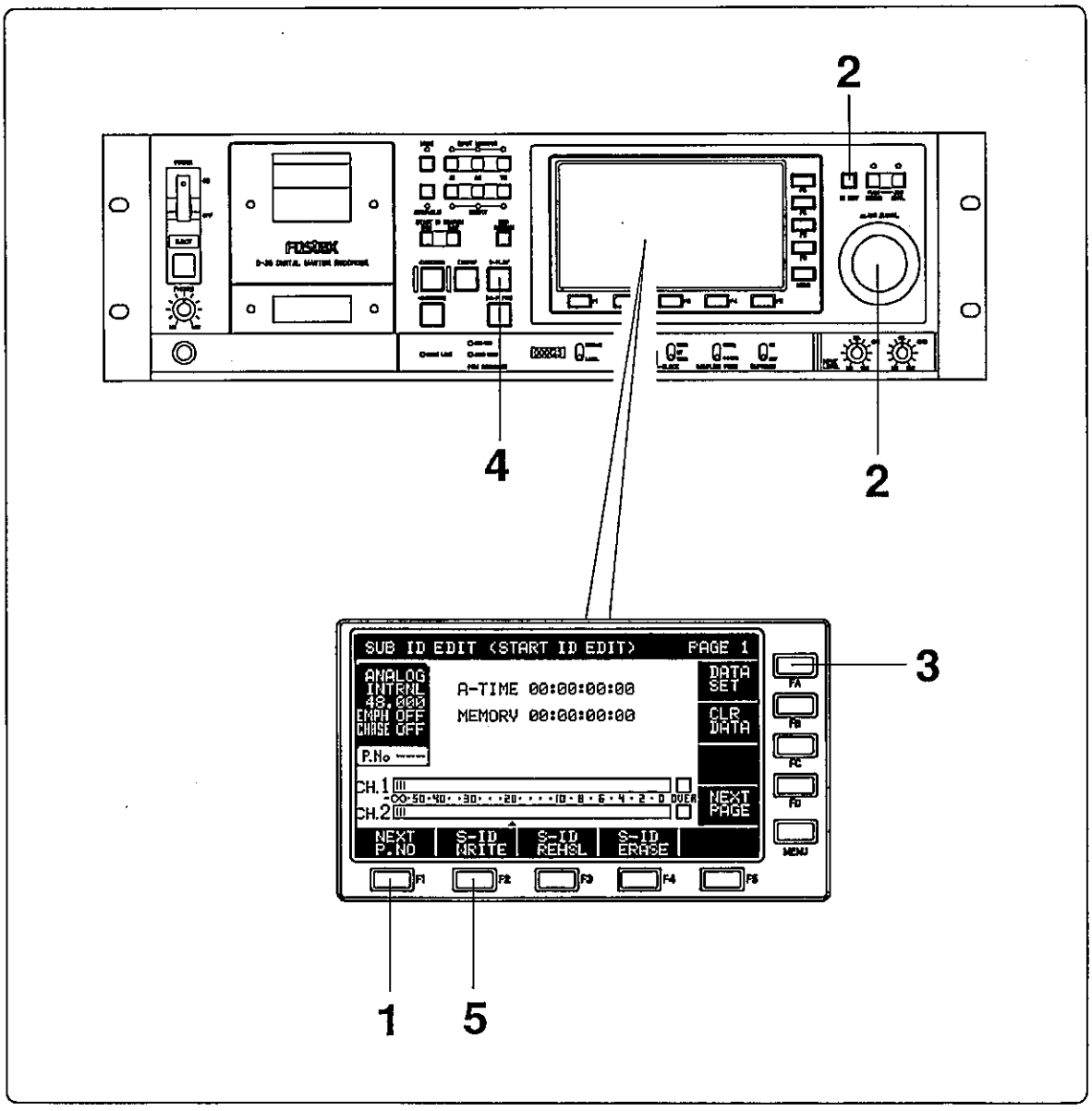
1. Press the PLAY button to playback the tape.
   Monitor the playback signal with headphones or monitor speaker.

2. Press the F2 (S-ID WRITE) key at point where S-ID is to be recorded.
   The RECORD button lamp will light when this key is pressed and an S-ID will be recorded. During recording, [START] will be shown in the upper section of the display TIME section, and disappear upon completion of recording.
   In this process, if a P-NO is shown in the display, a continuous P-NO will be recorded from this P-NO. On the other hand, if F2 (S-ID WRITE) key is pressed after specifying NEXT P-NO, the specified P-NO will be recorded (Please refer to the next page for details).

<NOTE>
An S-ID only will be recorded if the P-NO display is [---] or [000].

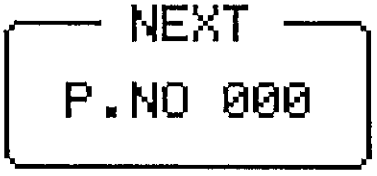
8-2-2. Recording an S-ID/P-NO (PAGE 1) after specifying a P-NO.

Here, the desired P-NO is specified to record an S-ID/P-NO.



Operating procedure

1. While in STOP or PAUSE, press the F1 (NEXT P-NO) key.
   When this key is pressed, the following will be shown in the display and the desired P-NO can be input.



2. Input desired P-NO with the JOG dial or the 10 KEY (keypad).

P-NO can be input via the JOG dial or 10 KEY (keypad) and the procedure is as follows.

Input by the JOG dial

CW direction	Number will increase.
CCW direction	Number will decrease.

Input by the 10 KEY (keypad)

Switch ON the 10 KEY mode. The display will change to the 10 KEY mode when this key is pressed.

↓

Input the desired number from the 10 KEY (keypad)

↓

After input, cancel the 10 KEY (keypad) mode by pressing the 10 KEY mode key again.

3. Press the FA (DATA SET) key.

The input P-NO will be fixed at the instant this key is pressed and [NEXT P-NO ***] will be displayed.

Indicates the input numbers

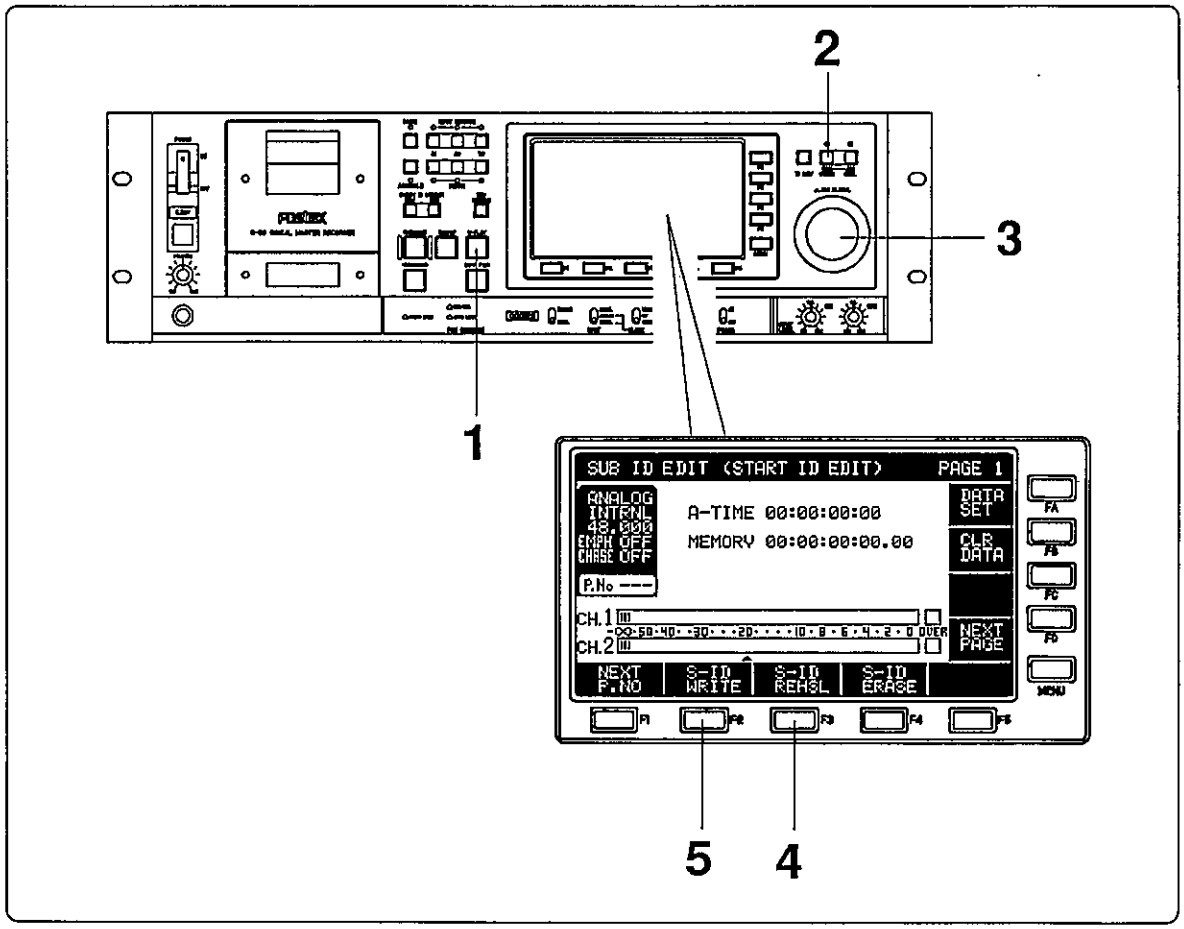
4. Playback tape by pressing the PLAY button.

5. Press F2 (S-ID WRITE) key at the recording point.

Simultaneous to recording of an S-ID at the point where this key was pressed, the specified P-NO will be recorded. After completing recording, the new P-NO will be shown in the P-NO section of the display.

8-2-3. Recording of S-ID/P-NO (PAGE 1) at the cueing point

In the following, the point at which recording is to be made is found by RAM SCRUB, etc. and an S-ID/P-NO recorded at that point.



Operating procedure

1. Playback tape by pressing the PLAY button.

2. Press the RAM SCRUB key.
   RAM SCRUB mode is entered upon pressing this key and enter the PAUSE mode.

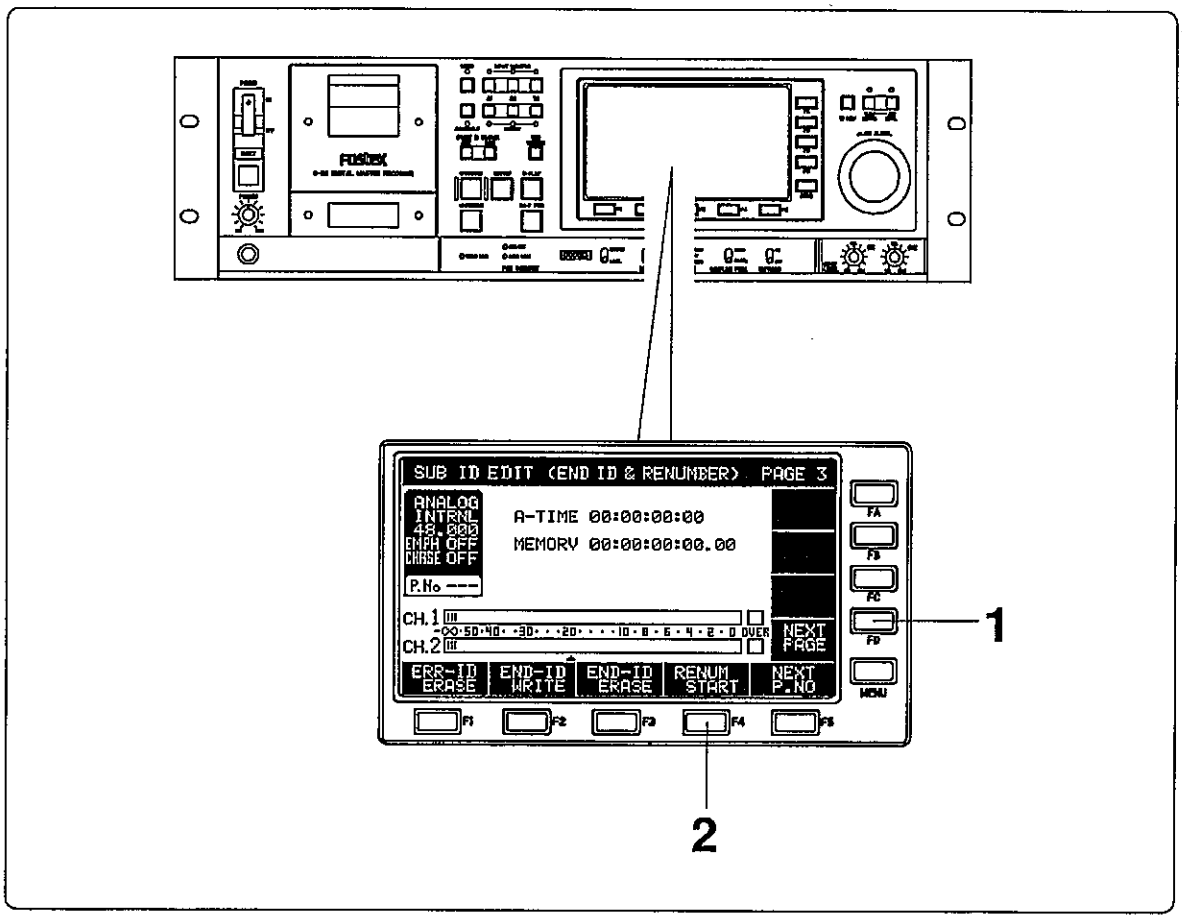
3. Search for the point where recording is to be made with the JOG dial.

4. Press the F3 (S-ID REHSL) key.
   Rehearsal playback of sound startup is executed with the CURRENT TIME (at the instant when this key is pressed) as the S-ID recording point. If the JOG dial is manipulated again, the rehearsal point can be changed in real time.

5. Press the F2 (S-ID WRITE) key.
   S-ID is recorded from the point with the present OFFSET. To specify the P-NO, it is input by SET P-NO before pressing the F2 (S-ID WRITE) key.

8-2-4. Renumbering of P-NO from head of tape (PAGE 3).

In cases where P-NOs are discontinuous as a result of repeated editing or an S-ID only is recorded but there is no P-NO, new continuous P-NO can be recorded from head of tape. This operation is executed in PAGE 3.



Operating procedure

1. Change the display to PAGE 3 by pressing the FD (NEXT PAGE) key.

2. Press the F4 (RENUM START) key.

   The display will enter the renumber function and a continuous P-NO with the tape head S-ID as [001] will be renumbered. If the tape is located midway in the wind when the key is pressed, the recorder will automatically rewind the tape to the head, search the head S-ID and renumber from [001] in the same way as above.

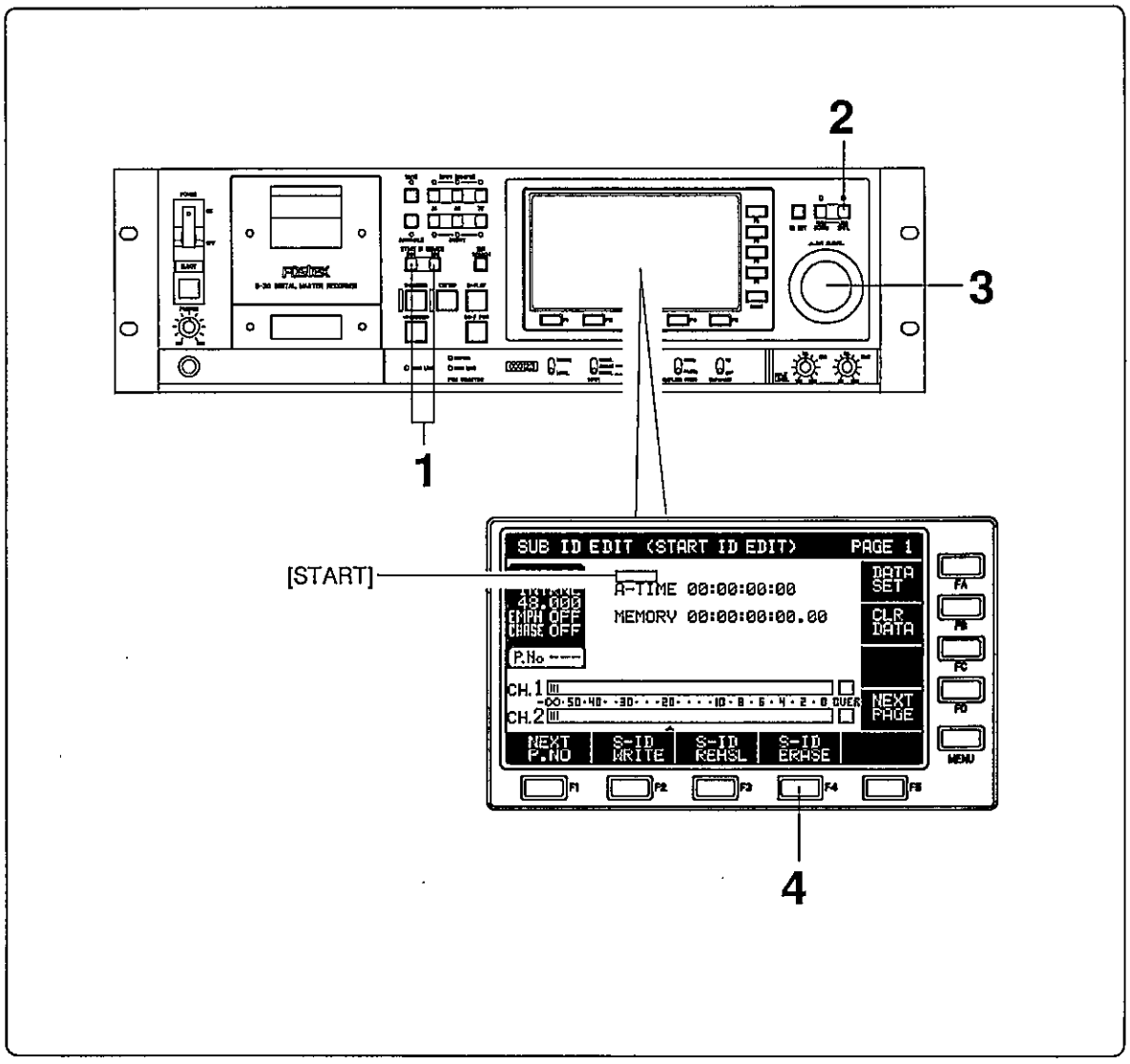
   If renumbering is to be executed by specifying with NEXT P-NO, press the F4 (RENUM START) key after specifying the P-NO by NEXT P-NO.

<NOTE>

If END-ID is recorded on the tape or it is blank, the recorder will rewind from that point and end the mode.

8-2-5. Erase of S-ID/P-NO (PAGE 1)

Unnecessary S-ID/P-NOs can be erased when the transport is in the STOP or PAUSE modes.



Operating procedure

1. Press the START ID SEARCH key and search for the S-ID to be erased.
   The S-ID will be found and the recorder will pause two seconds before the desired S-ID.

2. Switch ON (LED will light) the JOG/SHTL mode key.

3. Accurately search the S-ID with the JOG dial.
   Rotate the JOG dial CW until [START] is shown in the display or after executing above step 1, press the PLAY button to playback tape and search for the [START] display.

4. Press the F4 (S-ID ERASE) key.

   The RECORD button will light and the desired S-ID/P-NO will be erased. In doing so, [START] will disappear when erase is started.

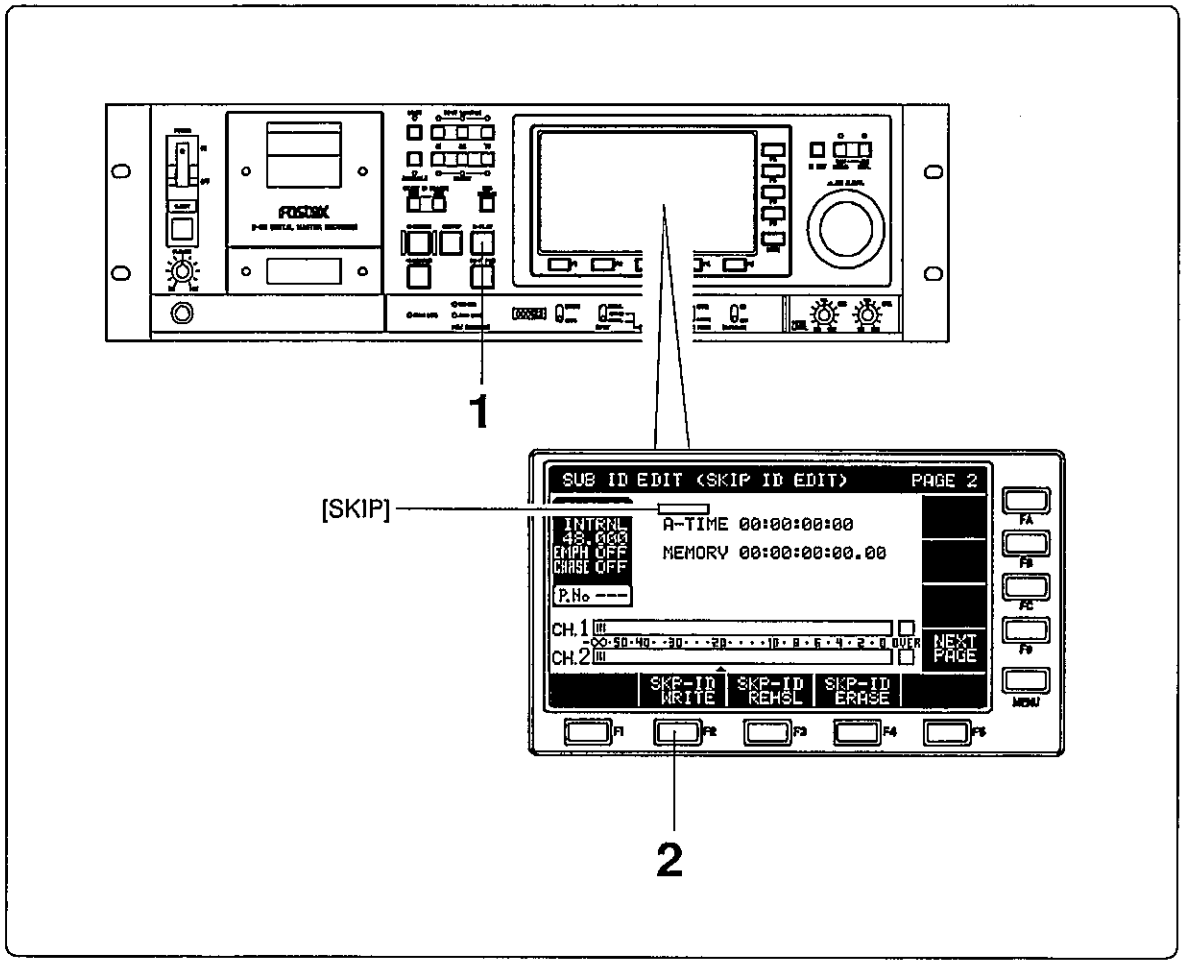
<NOTE>

In the S-ID/P-NO erase mode, the S-ID/P-NO located about 9 seconds (300 frames) beforehand of where the transport is stopped will be searched and erased.

8-3. *Record/erase of SKIP-ID*

Record/erase of SKIP-ID can be executed in PAGE 2.

8-3-1. Recording of new SKIP-ID during playback of a prerecorded tape



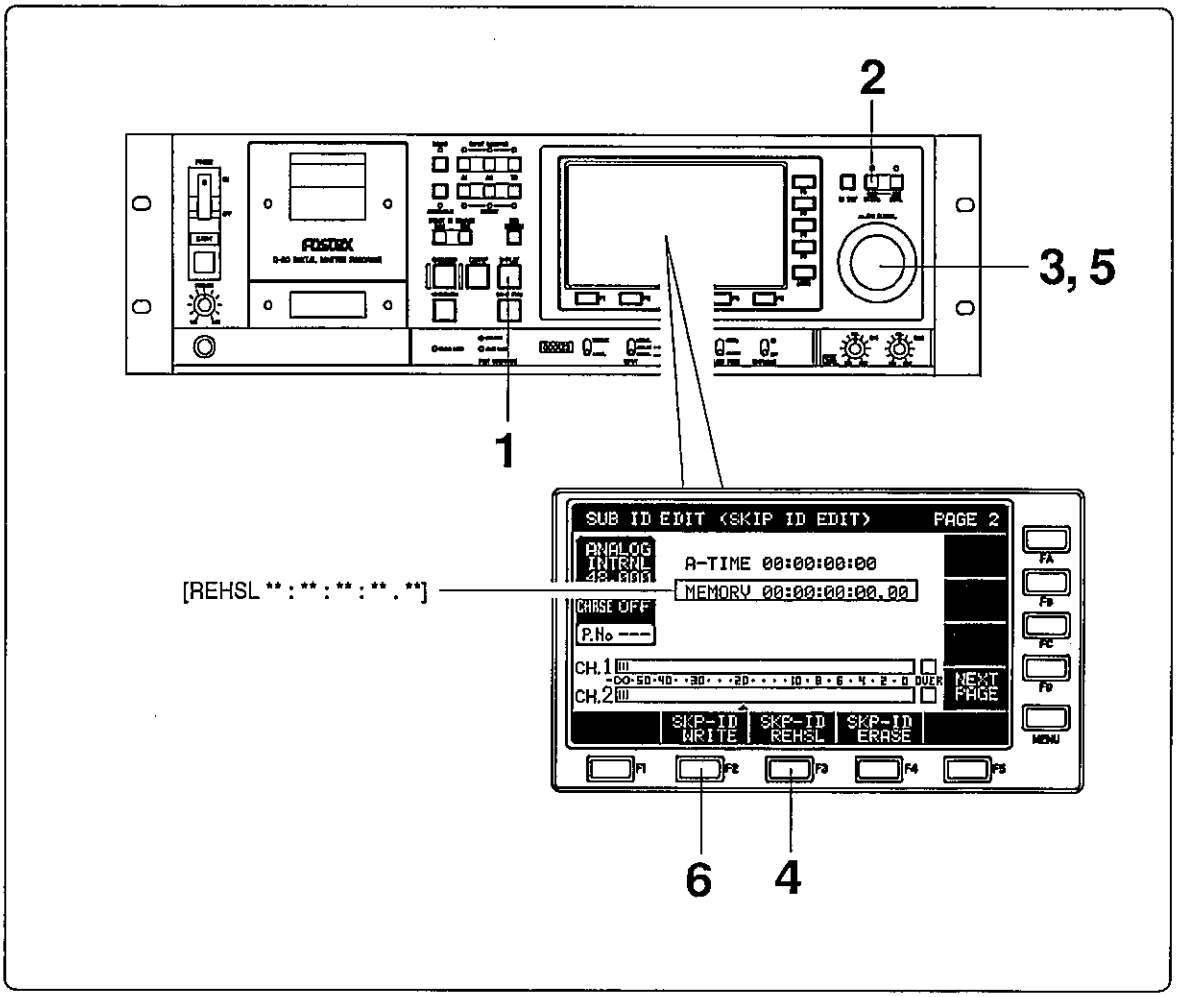
Operating procedure

1. Press the PLAY button to playback tape.
   Monitor the playback signal with a headphone or monitor speaker.

2. Press the F2 (SKIP-ID WRITE) key at point where SKIP-ID is to be recorded.
   RECORD button lamp will be lit when key is pressed, SKIP-ID is recorded and [SKIP] will appear in the TIME section at upper part of the display.

8-3-2. Recording SKIP-ID (PAGE 2) at the cueing point

In the following, the point at which a recording by cueing is to be made, is found by RAM SCRUB, etc. and a SKIP-ID can be recorded at that point.



Operating procedure

1. Press the PLAY button to start playback of tape.

2. Press the RAM SCRUB key.
   The recorder enters the RAM SCRUB mode when key is pressed and enters the STILL mode.

3. Search for the point at which a recording is to be made with the JOG dial.

4. Press the F3 (SKIP-ID REHSL) key.

   Using the CURRENT TIME at the point where this key was pressed as the location where SKIP-ID is to be recorded, it will enter rehearsal playback for sound erasing at this point.

   The rehearsal point [REHSL**:**:**:**.**] is shown in the display at the instant the F3 key is pressed and the RECORD button will blink during the rehearsal operation.

5. A more accurate point is set by the JOG dial.

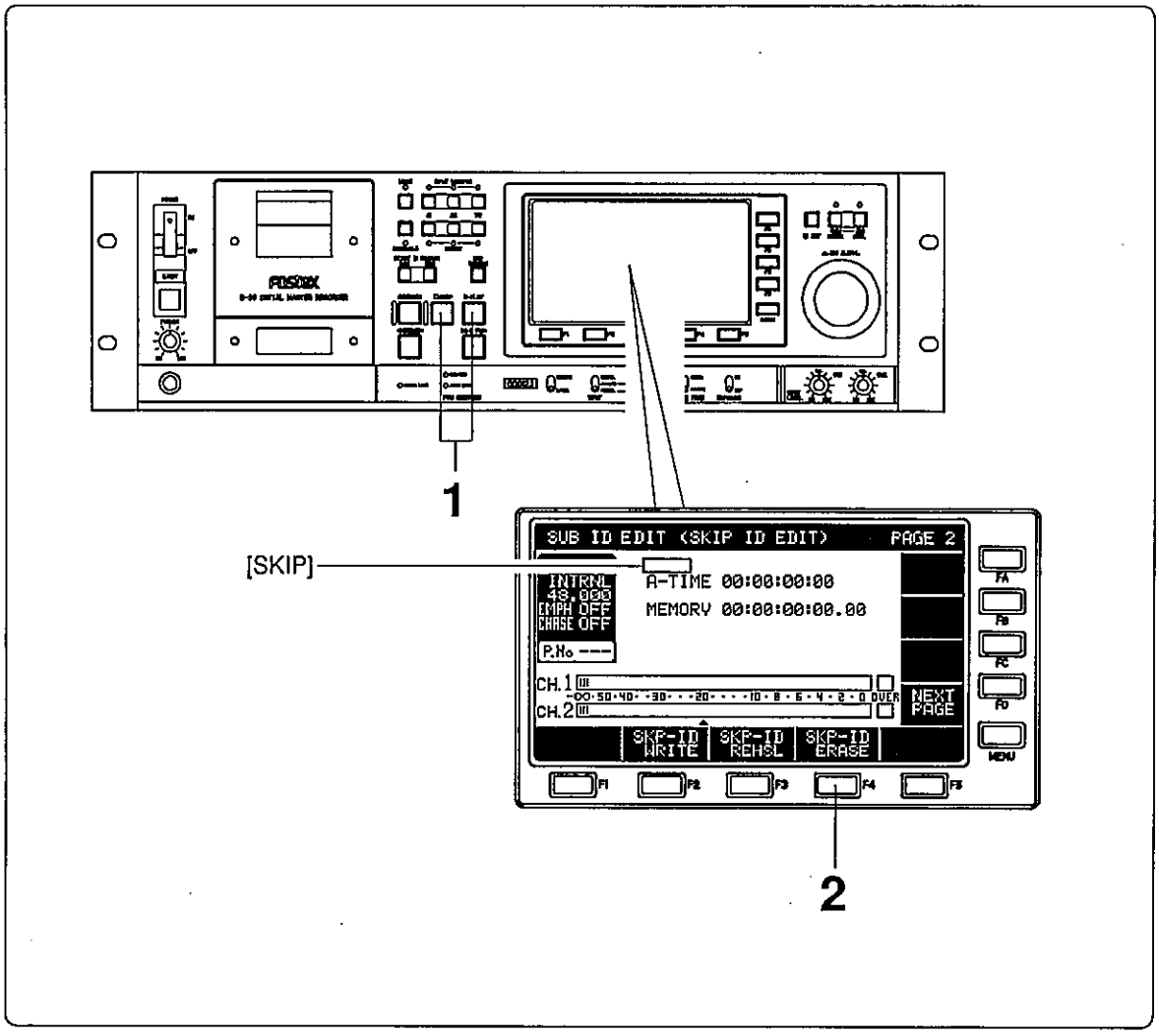
   In this process, an accurate point can be set by attaching an OFFSET of ±127 frames to the rehearsal point with the JOG dial.

6. Press the F2 (SKIP-ID WRITE) key.

   A SKIP-ID will then be recorded from the point with the present OFFSET.

8-3-3. Erasing the SKIP-ID (PAGE 2)

Unnecessary SKIP-ID can be erased when the transport is in STOP or PAUSE.



Operating procedure

1. Press the PLAY button to playback the tape.

   Playback tape until [SKIP] is shown in the display and when this appears, stop tape by pressing the STOP button.

2. Press the F4 (SKIP-ID ERASE) key.

   When this key is pressed, a SKIP-ID located about 9 seconds (300 frames) beforehand of where the transport is stopped will be located and erased and [SKIP] will disappear.

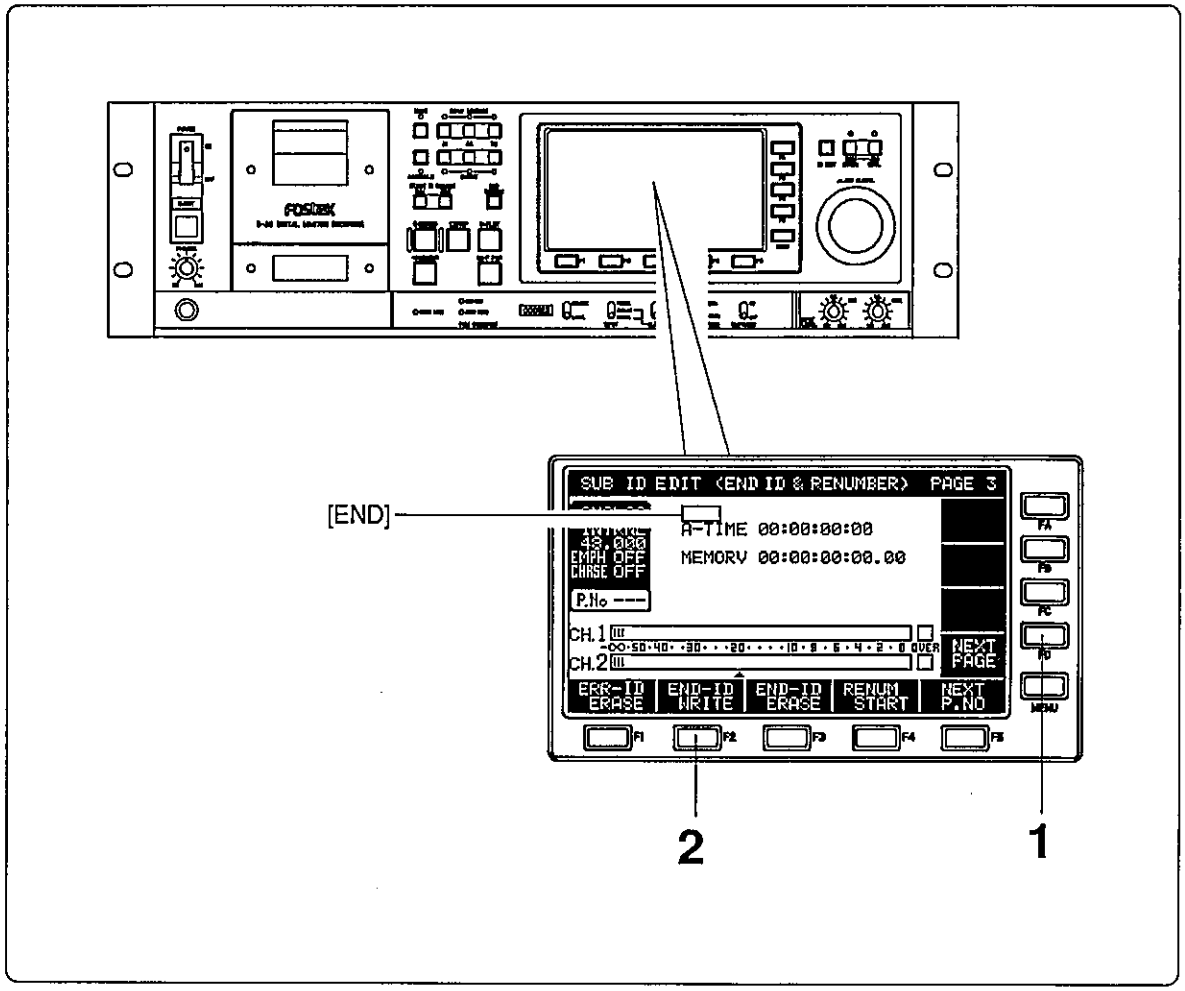
8-4. *Record/erase of an END-ID (PAGE 3)*

Record/erase of END-ID can be executed in PAGE 3.
This process is possible with the transport in STOP or PAUSE.

<NOTE>
If recording of END-ID and as such is desired at a blank area, the area must be recorded with silence using ASSEMBLE recording function before END-ID recording is initiated.

8-4-1. Recording of END-ID (PAGE 3)

An END-ID is recorded at the final point of the recording.



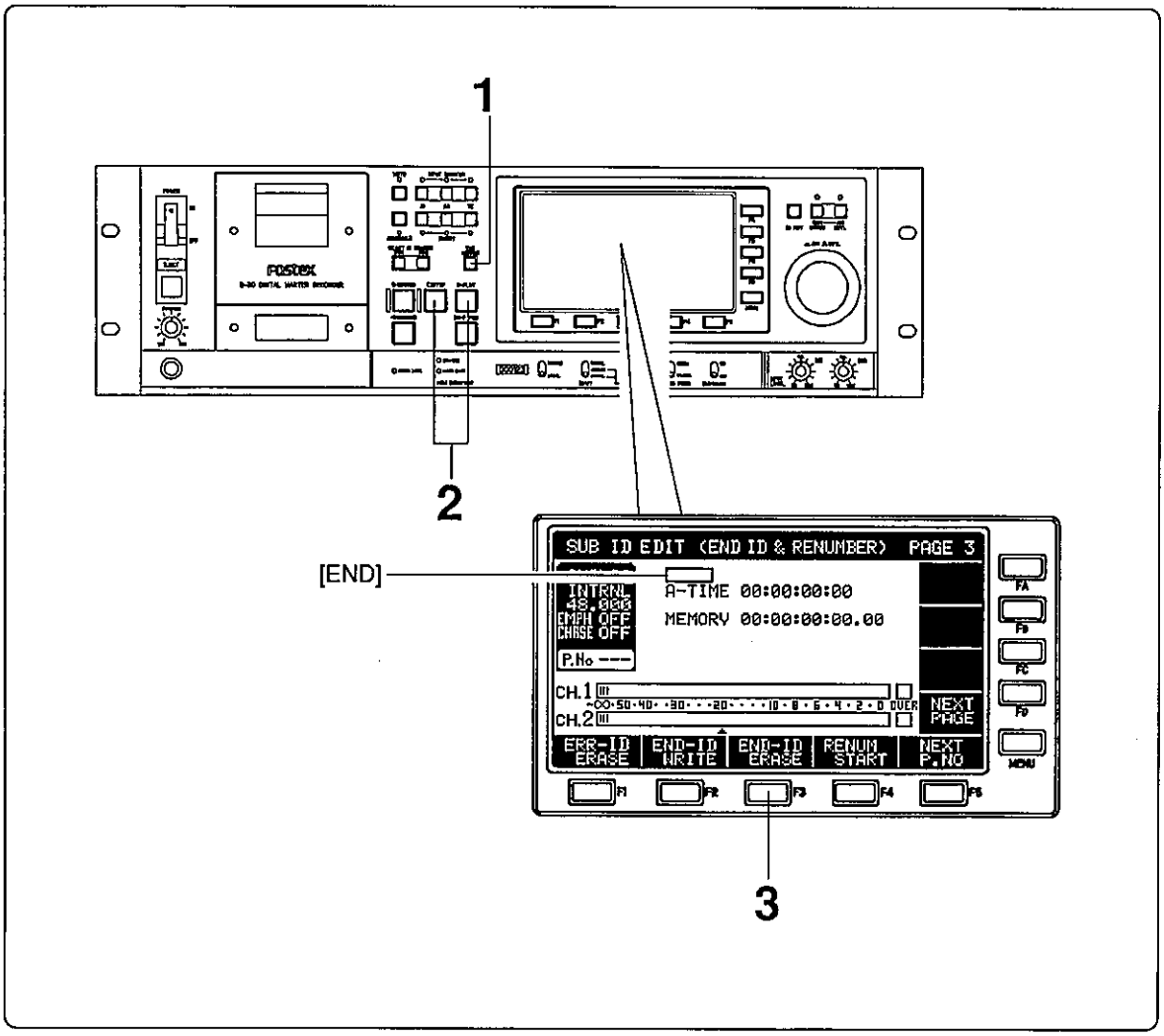
Operating procedure

1. Press the FD (NEXT PAGE) key to display PAGE 3.

2. Press the F2 (END-ID WRITE) key when in STOP or PAUSE.
   An END-ID is recorded at the point where this key is pressed, preroll about 2 seconds beforehand of this point and stop. At the moment of recording, [END] will be shown in the TIME display.

8-4-2. Erase of END-ID (PAGE 3)

Unnecessary END-ID will be erased.



Operating procedure

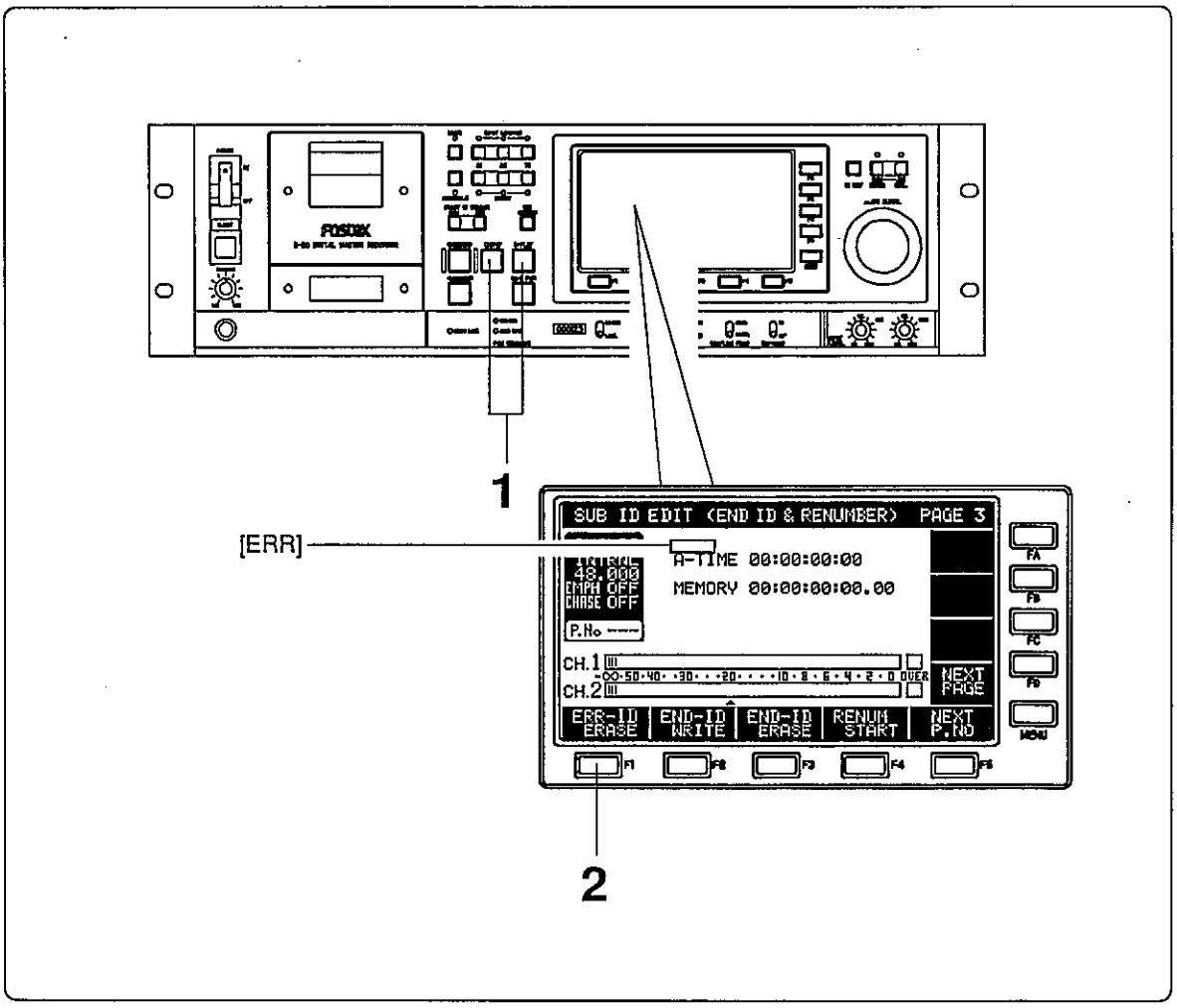
1. Press the BLANK SEARCH key.
   Final point of the recording where END-ID is recorded will be searched by BLANK SEARCH.

2. Playback tape by pressing the PLAY button.
   Playback tape until [END] is shown in the display at which the STOP button is pressed to stop the tape.

3. Press the F3 (END-ID ERASE) key.
   END-ID is erased and [END] in the display will disappear.
   The RECORD button will be lit during erasing.

8-5. *Erasing ERR-ID (PAGE 3)*

Any unnecessary ERR-ID will be erased. This process can be executed in PAGE 3.
In tape recorded by the Fostex portable DAT Model PD-2, an ERR-ID is recorded in some cases. Although it will not present any problem if an ERR-ID is recorded, it can be erased by the following procedures.



Operating procedure

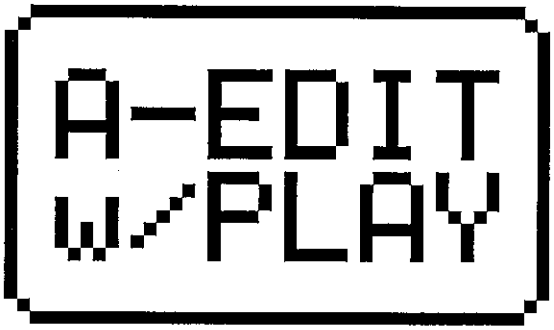
1. Playback tape by pressing the PLAY button.
   Playback until [ERR] is shown in the display at which the STOP button is pressed to stop tape.

2. Press the F1 (ERR-ID ERASE) key.
   An ERR-ID located at about 9 seconds (300 frames) beforehand of where key was pressed, will be searched and erased.

CHAPTER 9

Auto Edit with Player Mode Menu

This chapter describes AUTO EDIT with PLAYER MODE menu found in the main menu.
This menu is used to control other DAT recorder such as the Fostex D-20B and D-30 when connected to the 9 PIN REMOTE-B of a D-30.
In this menu, assemble or insert editing is possible by setting up each of the connected DAT recorders as a recorder and a player.
RAM rehearsal is also possible if the optional 8331 memory board is installed.



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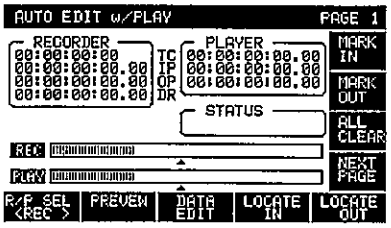
9-1. *Operating functions of the menu*

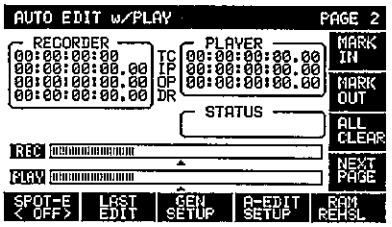
The operation menu consists of pages one and two of the first level display. Use this menu to execute the following functions.

1st level PAGE 1



1. Selecting RECORDER-PLAYER function
2. PREVIEW-REVIEW function
3. EDIT function of IN and OUT points (moves to the second level display)
4. LOCATE IN/LOCATE OUT function

1st level PAGE 2

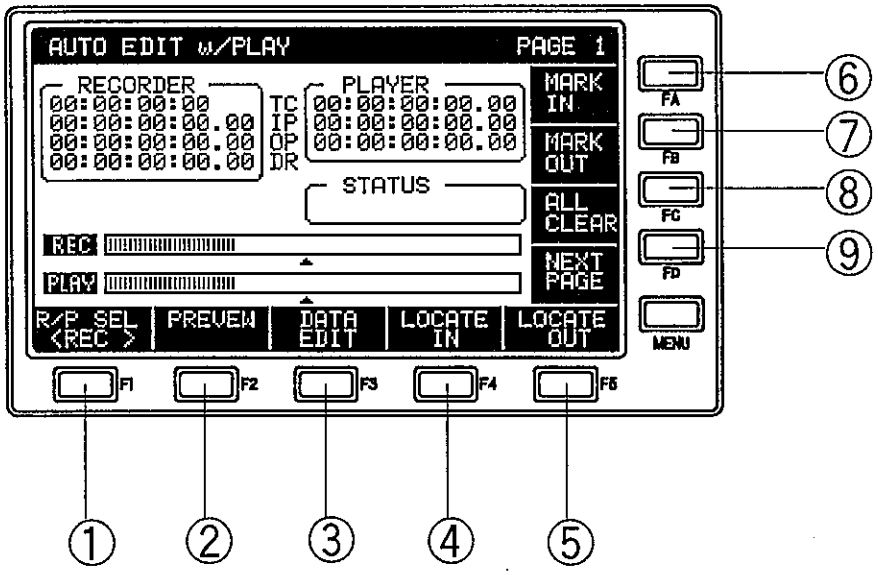


1. ON/OFF function of SPOT ERASE MODE
2. LAST EDIT function
3. GENERATOR SETUP function (refer to chapter 12)
4. AUTO EDIT SETUP function (refer to chapter 13)
5. RAM REHEARSAL function (possible when the optional memory board is installed.)

9-1-1. Function key display and functions.

PAGE 1:

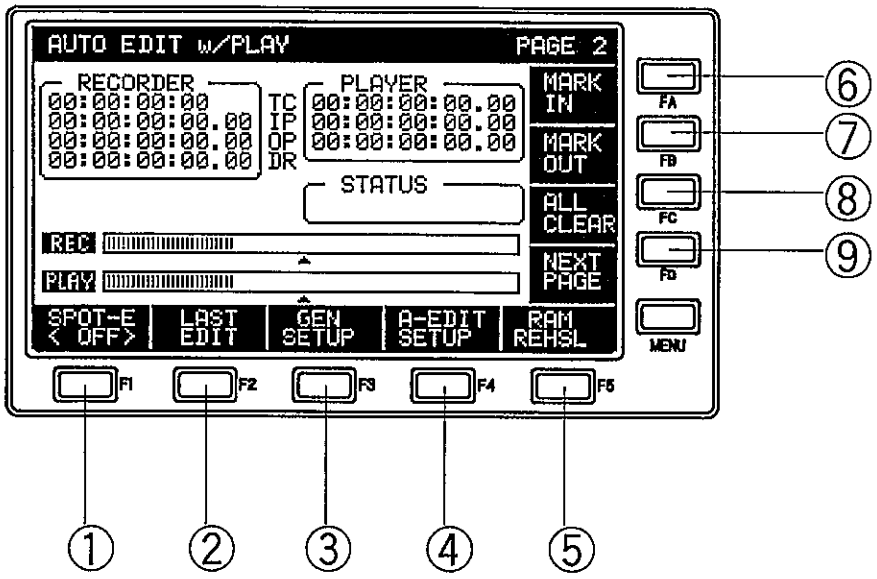
The display and each function of the function keys available on page one of the first level display are as follows:



No.		Display	Function
①	F1	R/P SEL (REC/PLAY)	Determines which to control from the front panel of this recorder, the recorderor player which is connected to the 9 pin remote
②	F2	PREVEW	Starts rehearsal of the IN and OUT points. [REVIEW] will be displayed upon execution and completion of auto edit by pressing the record button. [REVIEW] indication will resume as soon as a new edit point is set.
③	F3	DATA EDIT	Causes DATA EDIT mode (the second level display) to appear where MEMORY DATA of IN and OUT points may be edited.
④	F4	LOCATE IN	Locates to MARK IN or data-set IN point. With RECORDER selected with R/P SELECT, the IN point of the recorder willbe located to, and with PLAYER selected, to IN point of the player.
⑤	F5	LOCATE OUT	Locates to MARK IN or data-set OUT point. With RECORDER selected with R/P SELECT, the OUT point of the recorder willbe located to, and with PLAYER selected, to OUT point of the player.
⑥	FA	MARK IN	Registers the currently displayed CURRENT TIME as the selected IN point (IN POINT MEMORY) of the recorder or player.
⑦	FB	MARK OUT	Registers the currently displayed CURRENT TIME as the selected OUT point (OUT POINT MEMORY) of the recorder or player.
⑧	FC	ALL CLEAR	Causes all data stored in the recorder/player to be cleared away.
⑨	FD	NEXT PAGE	Makes it possible to move to other pages within the same mode or the pages of the same display level.

PAGE 2:

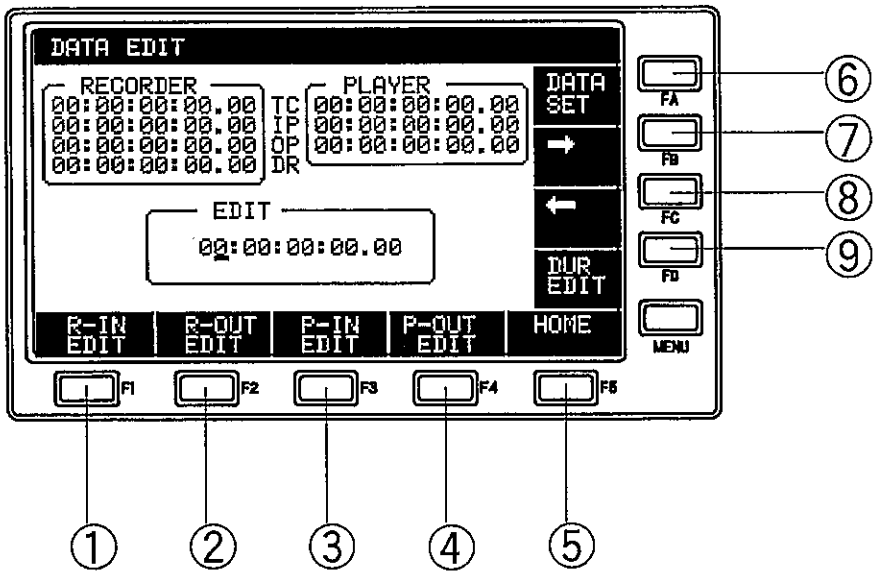
The display and each function of the function keys available in page two of the first level display are as follows:



No.		Display	Function
①	F1	SPOT-E (ON/OFF)	Toggles the spot erase mode on and off.
②	F2	LAST EDIT	Returns the last auto-edited EDIT point to the display.
③	F3	GEN SETUP	Causes to move to GENERATOR SETUP mode (the second level display) related to INTERNAL GENERATOR control. Refer to Chapter 12 for details.
④	F4	A-EDIT SETUP	Causes to move to input mode (the second level display) necessary for AUTO EDIT. Refer to chapter 13 for details.
⑤	F5	RAM REHSL	This key only functions when the optional memory board is installed in the D-30. Pressing this key will cause audio data in the vicinity of IN and OUT points to be recordedin the RAM, and RAM REHEARSAL mode (the second level display) to turn up.
⑥	FA	MARK IN	Same function as on page one is available.
⑦	FB	MARK OUT	Same function as on page one is available.
⑧	FC	ALL CLEAR	Same function as on page one is available.
⑨	FD	NEXT PAGE	Same function as on page one is available.

The second level display (editing function of the IN and OUT points)

If F3 (DATA EDIT) key is pressed when in page one of the first level display, the DATA EDIT mode of the second level display pages will be displayed. The display and each function of the function keys available are as follows:

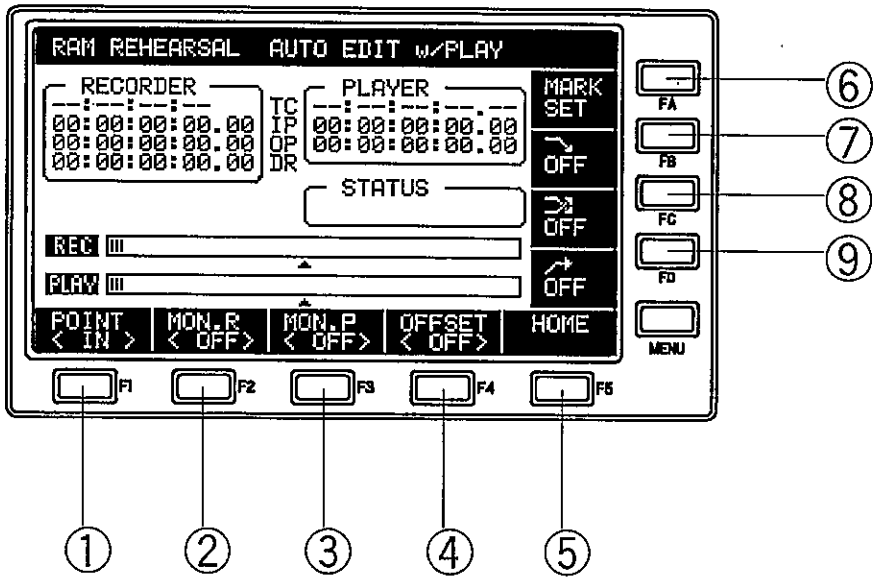


No.		Display	Function
①	F1	R-IN EDIT	Allows IN POINT of the recorder to be edited. After editing is finished, pressing this key following the FA (DATA SET) key will define the data edited as a new IN point of the recorder.
②	F2	R-OUT EDIT	Allows OUT POINT of the recorder to be edited. After editing is finished, pressing this key following the FA (DATA SET) key will definethe data edited as a new OUT point of the recorder.
③	F3	P-IN EDIT	Allows IN POINT of the player to be edited. After editing is finished, pressing this key following the FA (DATA SET) key will define data edited as a new IN point of the player.
④	F4	P-OUT EDIT	Allows OUT POINT of the player to be edited. After editing is finished, pressing this key following the FA (DATA SET) key will define data edited as a new OUT point of the player.
⑤	F5	HOME	Causes the page displayed before the current one to be restored. Press this key to cease DATA EDIT.
⑥	FA	DATA SET	Causes the edited data to be defined.
⑦	FB	⟶	Causes the edit point to move rightward.
⑧	FC	⟵	Causes the edit point to move leftward.
⑨	FD	DUR EDIT	Allows the duration data to be edited. After editing is finished, pressing this key following the FA (DATA SET) key will define data edited as new duration data.

The second level display (RAM rehearsal function)

Pressing the F5(RAM REHSL) key when on page two of the first level display will terminate recording of data on RAM. As soon as this takes place, the display will change to the RAM rehearsal mode of the second level display pages.

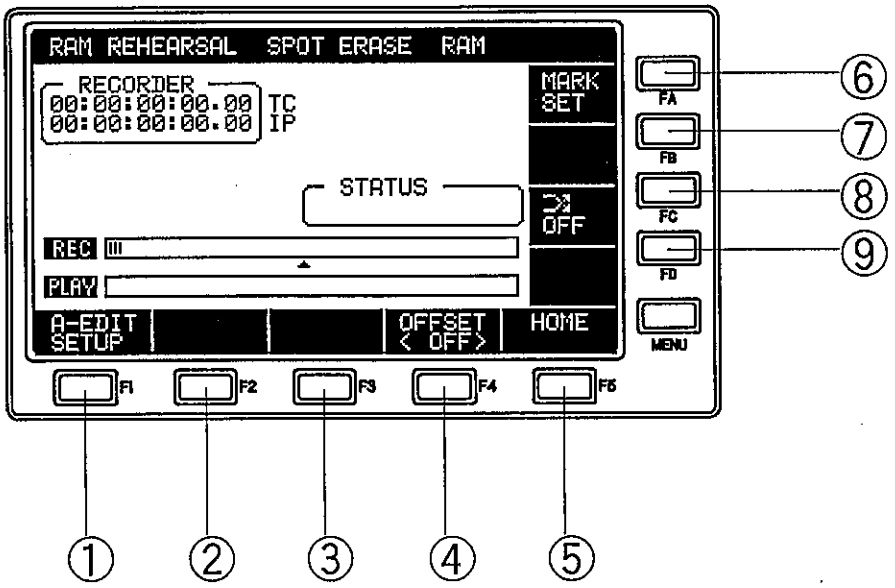
The display and each function of the function keys available are as follows:



No.		Display	Function
①	F1	POINT (IN/OUT)	Selects the point where to rehearse RAM between IN and OUT points.
②	F2	MON.R (ON/OFF)	Scrubs the recorder RAM. When this function is on, cue playback of RAM is possible via JOG/SHUTTLE. When the F4 (OFFSET ON/OFF) key is on, using JOG will make it possible to move the IN and OUT points of the recorder in real-time.
③	F3	MON.P (ON/OFF)	Scrubs the player RAM. When on, cue playback of RAM is possible via JOG/SHUTTLE. When the F4 (OFFSET ON/OFF) key is on, using JOG will make it possible to move the IN and OUT points of the player in real-time.
④	F4	OFFSET (ON/OFF)	When on, allows the selected IN and OUT points to be fine-adjusted in real-time.
⑤	F5	HOME	Returns the current display to the previous one. Press this key to disable RAM rehearsal.
⑥	FA	MARK SET	Sets current time code of RAM to IN or OUT point memory which is selected with MON.R/MON.P key.
⑦	FB	↘ (ON/OFF/RPT)	When on, allows to perform RAM rehearsal of FADE OUT at IN or OUT point. During rehearsal, pressing this key once will cause RAM rehearsal to be repeated until disabled.
⑧	FC	⤭ (ON/OFF/RPT)	When on, allows to perform RAM rehearsal of CROSS FADE at IN or OUT point. During rehearsal, pressing this key once will cause RAM rehearsal to be repeated until disabled.
⑨	FD	↗ (ON/OFF/RPT)	When on, allows to perform RAM rehearsal of FADE IN at IN or OUT point. During rehearsal, pressing this key once will cause RAM rehearsal to be repeated untill disabled.

The second level display (RAM Rehearsal Spot Erase)

When executing RAM rehearsal with F1 (SPOT-E OFF/ON) key of PAGE 2 of the first level display placed [ON], the display will appear where the point of spot erase can be RAM-rehearsed.
The display and each function of the function keys available are as follows:



No.		Display	Function
①	F1	A-EDIT SETUP	Makes input mode necessary for AUTO EDIT available. Refer to Chapter 13 for details.
②	F2		Nothing will happen.
③	F3		Nothing will happen.
④	F4	OFFSET (ON/OFF)	When on, makes real-time fine adjustment of IN and OUT points possible if JOG is used.
⑤	F5	HOME	Causes the current display to change to the previousone. To cease RAM rehearsal, press this key.
⑥	FA	MARK SET	Sets CURRENT TIME of RAM as new data.
⑦	FB		Nothing will happen.
⑧	FC	(ON/OFF/RPT)	Turning this key from [OFF] to [ON] will cause RAM rehearsal of CROSS FADE at IN point to be performed. During operation, pressing this key once will activate [RPT], and rehearsal will be repeated until disabled.
⑨	FD		Nothing will happen.

9-2. *Insert/Assemble Editing*

This section describes how to insert/assemble-edit from the source tape onto recorded tape using two D-30s, one set as a recorder, and the other as a player.
Insert editing allows to edit audio CH1 and CH2 independently. All data, including sub-areas, may be edited on assemble editing, unlike insert editing.

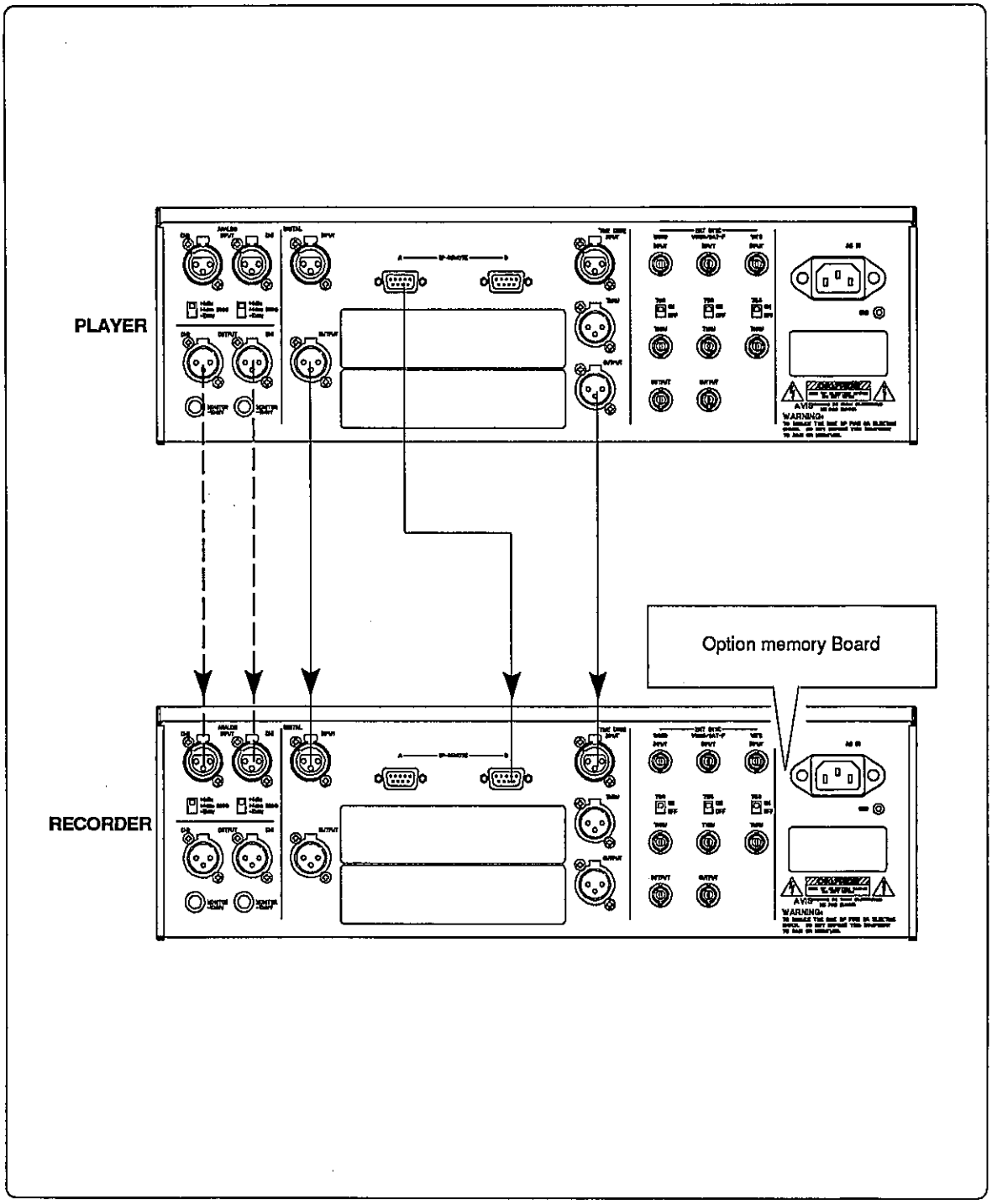
9-2-1. Connections

Follow the procedure as below to connect recorders for insert/assemble editing using two D-30s.

1. **Connect 9 PIN REMOTE-B connector of the recorder to 9 PIN REMOTE-A connector of the player.**
   When connecting to D-20B as the player, use DATA COM connector of the D-20B.
2. **Connect DIGITAL OUT of the player to DIGITAL IN of the recorder.**
   *Analog audio input/output signal must also be connected.
3. **Connect TIME CODE OUT of the player to TIME CODE IN of the recorder.**

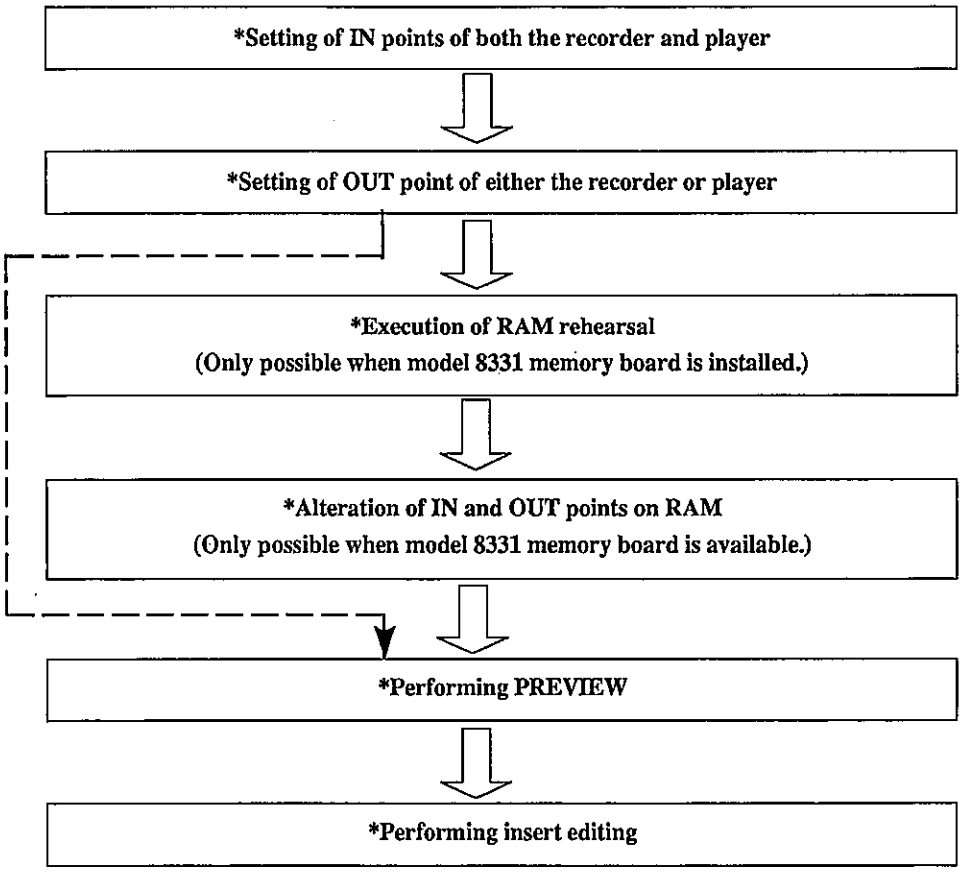
<NOTES>
* Make sure recorders are turned off when connection is being made.

* Power PLAYER [ON] first, then RECORDER, so that 9 PIN REMOTE-B of RECORDER may be used as CONTROLLING.
If turned [ON] in reverse, control of PLAYER may be impossible with the display on RECORDER reading [NO CONNECT].
Turn RECORDER OFF, then ON, should this situation be encountered.


PLAYER
Option memory Board
RECORDER

9-3. *Insert Editing*

The following is one example of insert editing.



<NOTES>

* For performing insert editing, TC must be provided.

* The broken line designates the procedure flow when no source RAM (model 8331) is available.

BEFORE STARTING TO OPERATE

1. Turn on both the player and recorder.

2. Make the INSERT mode available by turning insert A1/A2 keys on.

3. Insert the target tape into the recorder, and the source tape into the player.
   Both tape must be recorded with the same FS.

4. Set the REMOTE selector switch of the player to [REMOTE].
   This will cause the display to show [REMOTE CONTROL MODE] (when D-30 is used), making control from the recorder possible.

<NOTES>
* Be sure the display is set to PLAY & RECORDING MODE menu when turning the REMOTE switch of the player to [REMOTE].
Also, the setting of SYNC PLAY ON/OFF (PAGE 5) in the SETUP menu must be in [OFF] mode.

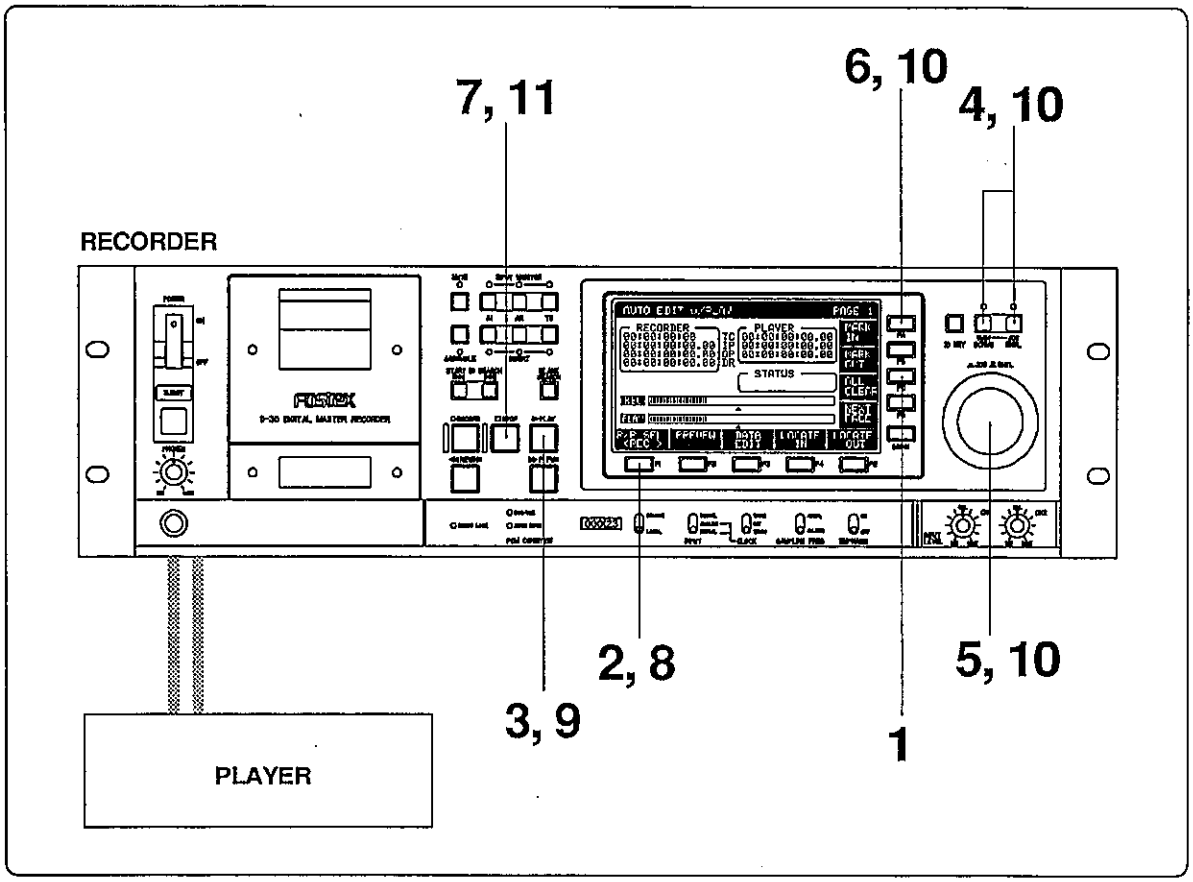
* When SYNC playing with a D-20B as a player, D-20B must be set to "E5-03".

5. Set the display of the recorder to AUTO EDIT with PLAYER MODE menu.

6. Set the INPUT selector switch of the recorder to [DIGITAL], the uppermostposition.

9-3-1. Setting of In Points of Both the Recorder/ Player

This step sets the "IN point" of both the recorder and player.



Operating procedure

1. Press the FC (ALL CLEAR) key to clear old data away.

2. Press the F1 (R/P SEL) key to select <RECORDER>.

3. Press the PLAY button of the recorder.
   The tape loaded on the recorder will start to play.

4. Press the JOG/SHTL mode key or RAM SCRUB mode key at a desired IN point, while monitoring played-back sound of the tape.
   Pressing this key will put you in JOG/SHTL or RAM SCRUB mode, and STILL will take place at the pressed point.

5. Locate the accurate IN point using JOG dial.

6. Press the FA (MARK IN) key.
   The time of the point where the key is pressed is registered as IN point data, and displayed at IP (IN point) of the recorder.

<NOTE>
Registration may be made by pressing the FA (MARK IN) key during playback, with the steps 4 and 5 above skipped over.

7. Press the STOP button to stop the tape of the recorder.

8. Press the F1 (R/P SEL) key to select <PLAYER>.
   This makes INPUT MONITOR keys, A1/A2, of the recorder automatically move to INPUT MONITOR, allowing monitoring of the sound of the player.

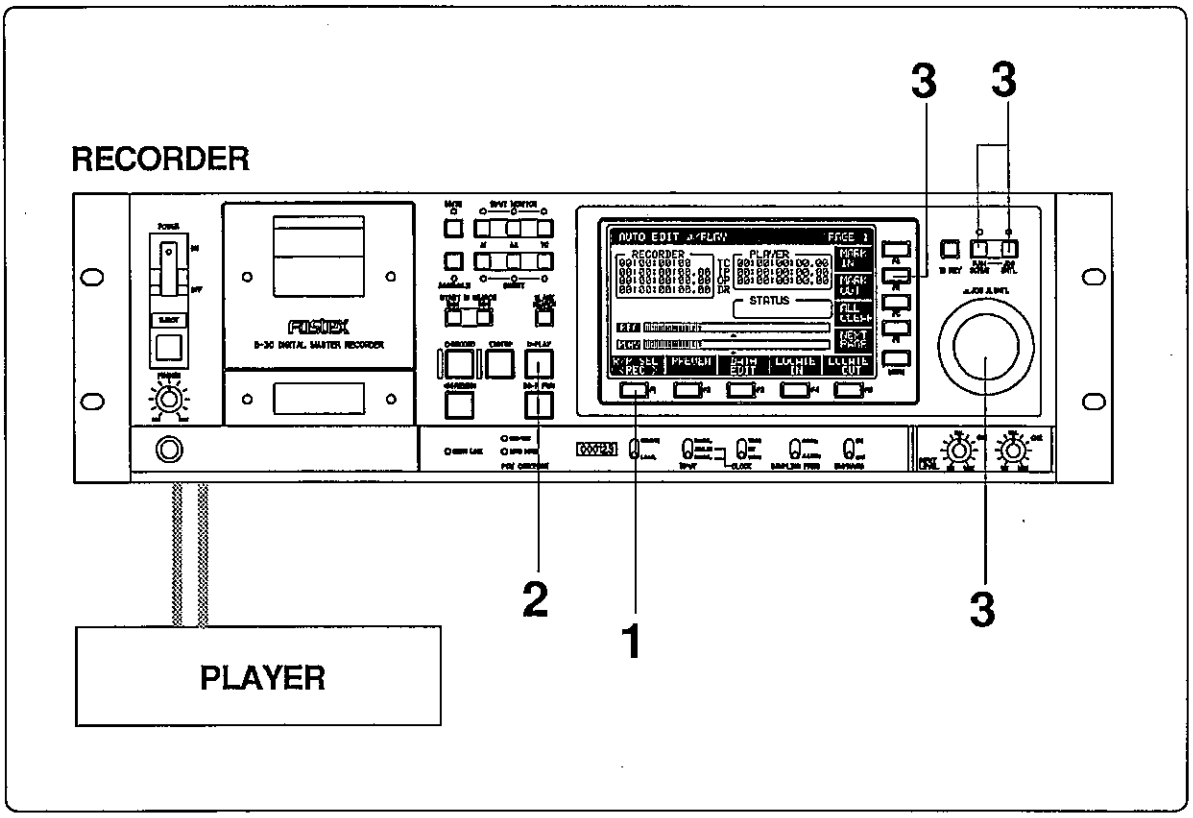
9. Press the PLAY button of the recorder.
   The player will start to play back the tape.

10. Set IN point of the player, following the steps 4 to 5 above.

<NOTE>
RAM SCRUB of the player is not possible when any recorder other than D-30 is connected as the player.

11. Press the STOP button to stop the tape after setting is completed.

9-3-2. Setting of Out Point of the Player



Operating procedure

1. Press the F1 (R/P SEL) key to select <PLAYER>.
   This will make INPUT MONITOR keys, A1/A2, of the recorder automatically move to INPUT MONITOR (LED will be lit), allowing monitoring of the sound of the player.

2. Press the PLAY button of the recorder.
   The player will start to play the tape.

3. Press the F8 (MARK OUT) key to set OUT point of the player, following the same procedure as used when setting IN point of the player.

   *Now, you have set IN point of the recorder and IN/OUT points of the player. Setting of these three points will automatically determine and set both OUT point of the recorder and duration (zone to edit) which remain unset.

<NOTE>
RAM SCRUB of the player is not possible when any recorder other than D-30 is connected as the player.

9-3-3. RAM Rehearsal

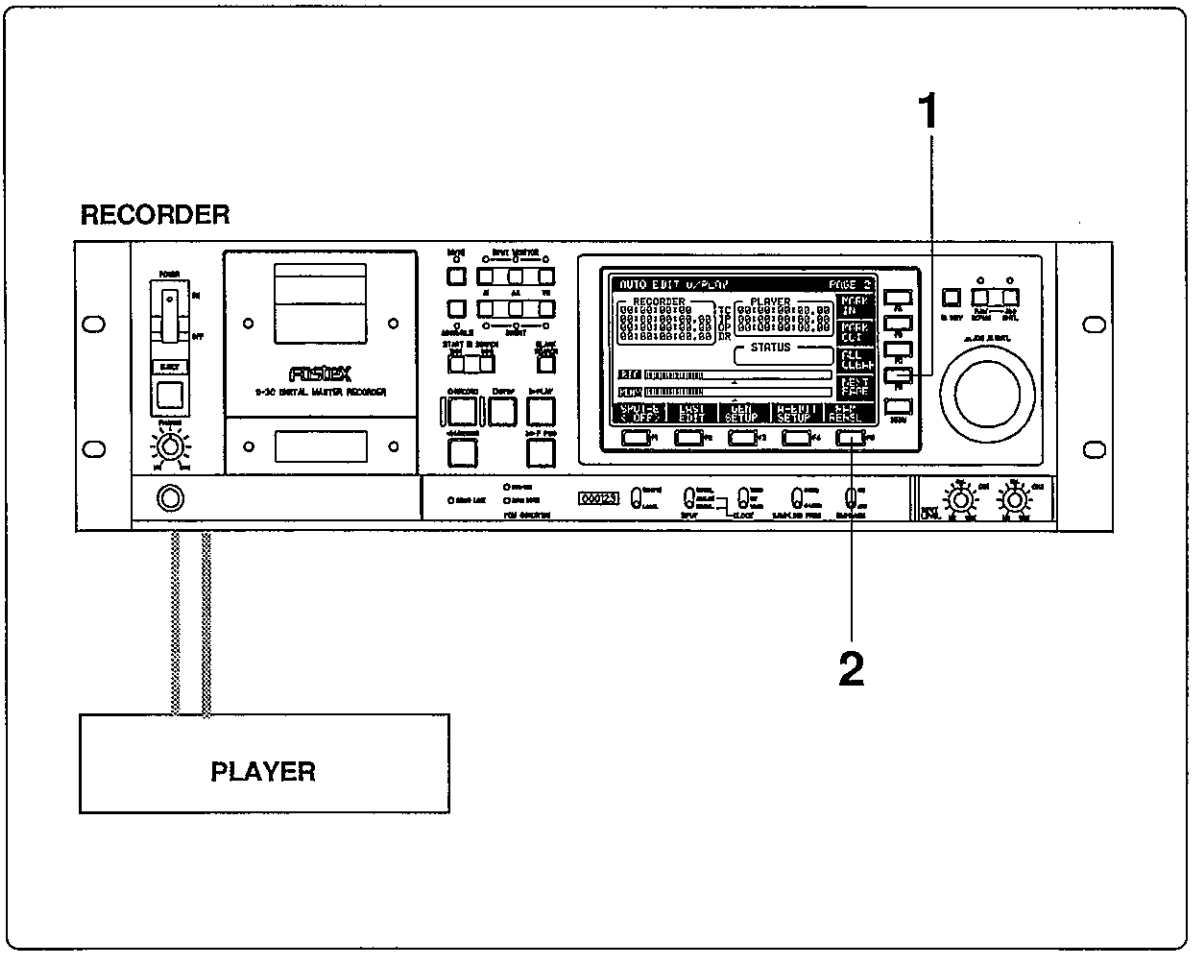
RAM rehearsal is only possible when a memory board (model 8331) which may be optionally procured is installed.
At this stage, verification and alteration of the timing of IN and OUT points is possible on RAM, after various data in the vicinity of IN and OUT points of both the recorder and player are recorded on RAM.

It is also possible is to verify and alter in RAM the timing of the IN and OUT points, after various data in the vicinity of the IN and OUT points of both the recorder and player are recorded on RAM.
RAM can record data for a period of ten seconds. Thus, a ten second recording is possible on both RAM and an optional memory board.

The RAM built in this recorder is capable of recording data for 10 seconds, 2.5 seconds immediately before and after IN and OUT points (5 seconds per point).
Similarly, another 10 seconds of data (10 seconds) of each point of the player can be recorded into the memory board.

*RECORDING ON RAM OF DATA OF IN AND OUT POINTS

First, the data in the vicinity of the IN and OUT points of the recorder/player must be recorded into the RAM.



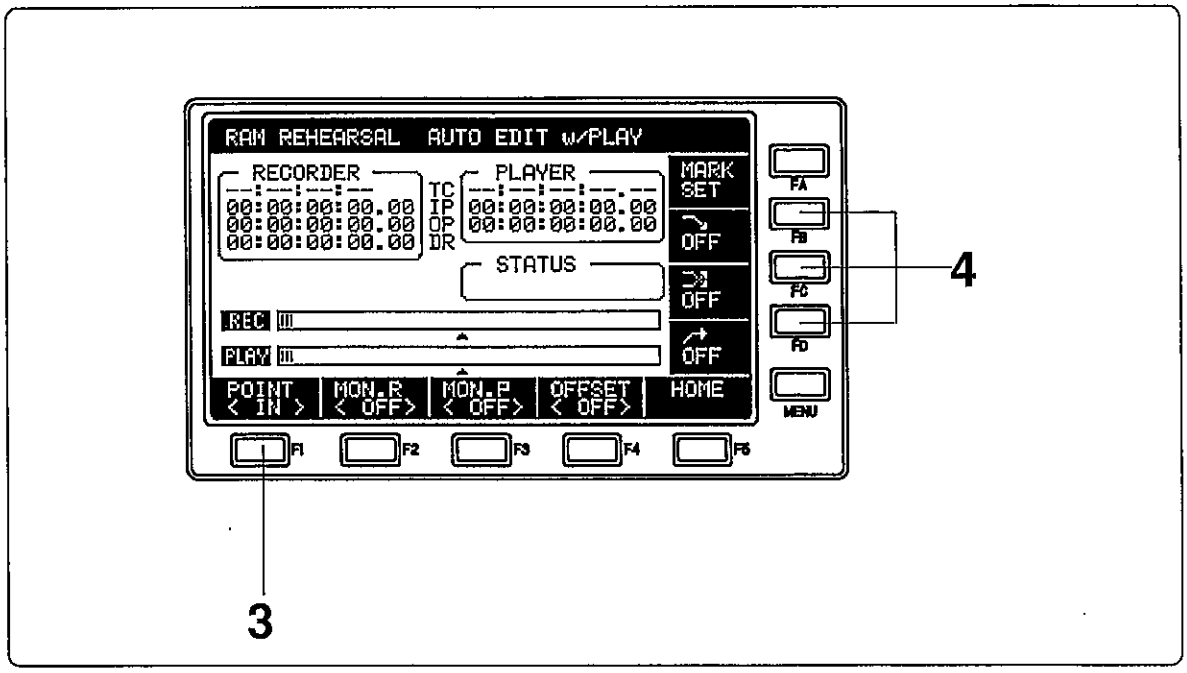
Operating procedure

1. Press the FD (NEXT PAGE) key to have PAGE 2 displayed.

2. Press the F5 (RAM REHSL) key.
   The display will show [RAM RECORDING] at [STATUS], and the data on IN/OUT points of both the recorder and player will be recorded into the RAM.

   As soon as recording is completed, [RAM RECORDING] display will be off and RAM REHEARSAL MODE display will show up. At the same time, the RAM SCRUB mode will be on (LED will be lit).

<NOTE>
Recording operation into RAM is not possible unless the IN and OUT points are set.

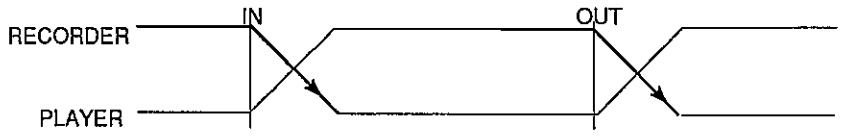


3. Press the F1 (POINT) key to select <IN> or <OUT>.
   Selecting IN or OUT will make rehearsal at IN or OUT point possible, respectively.

4. Press the FB (↘), FD (↗) or FC (⤮) key.
   FADE IN, FADE OUT or CROSS FADE, respectively, at IN or OUT point can be rehearsed.
   While rehearsing, [RAM REHEARSAL] will be seen at [STATUS] display.

   The function of each key may be illustrated as follows:

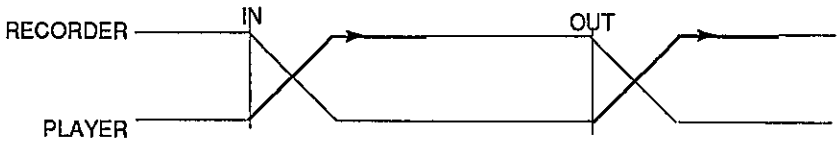
   FB (↘)key:
   Pressing this key once will turn <OFF> to <ON>, play back the faded OUT condition at IN point of the recorder, or of FADE OUT at OUT point of the player, then turn off.
   Pressing this key once during operation will turn <ON> to <RPT>, and playback will be repeated until <OFF> is executed.



FD (↗)key:

Pressing this key once will turn <OFF> to <ON>, play back the faded IN condition at IN point of the player, or of FADE IN at OUT point of the recorder, then turn off.

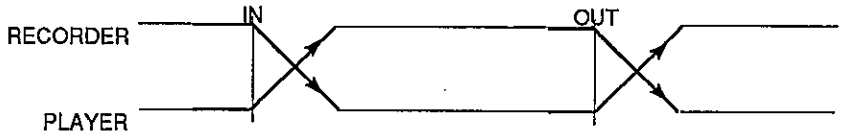
Pressing this key once during operation will turn <ON> to <RPT>, and playback will be repeated until <OFF> is executed.



FC (⇉)key:

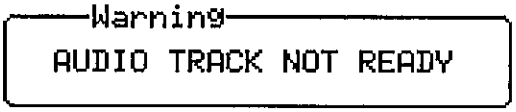
Pressing this key once will turn <OFF> to <ON>, play back the crossfade conditions of both the recorder and player, then turn off.

Pressing this key once during operation will turn <ON> to <RPT>, and playback will be repeated until <OFF> is executed.



<NOTE>

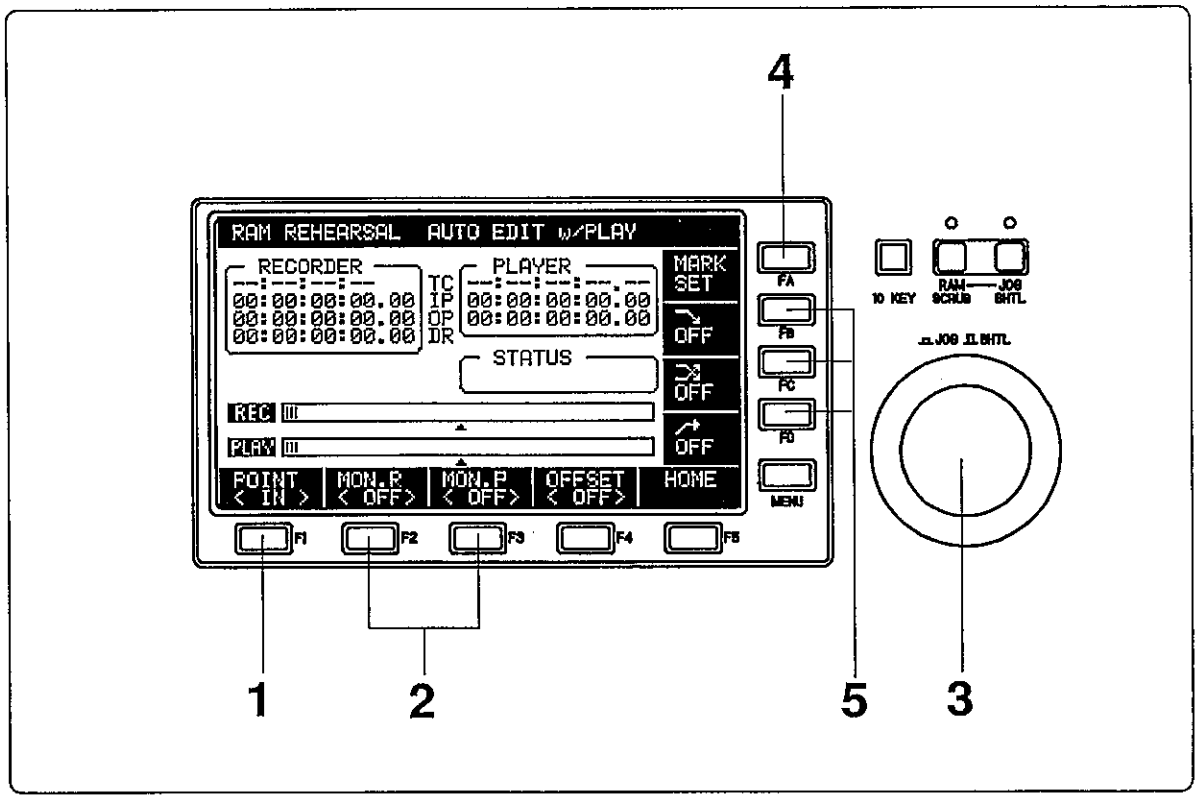
When initiation of rehearsal is intended by pressing the FB, FC or FD key, warning as follows may appear in the display.



If this happens, no rehearsal is possible.

This means that AUDIO INSERT keys (A1/A2) are turned off. Turn them on so that rehearsal may be executed.

*ALTERATION ON RAM OF IN/OUT POINTS



Operating procedure

1. Press the F1(POINT) key to select <IN> or <OUT>.
   Selecting IN or OUT will make alteration at IN or OUT point possible, respectively.

2. Press the F2 (MON.R) or F3 (MON.P) key to select <ON>.
   If F2 (MON.R) key is turned <ON>, RAM SCRUB will be possible in the vicinity of IN and OUT points recorded on RAM of the recorder, and with F3 (MON.P) key <ON>, RAM SCRUB is possible in the vicinity of IN and OUT points of the player.

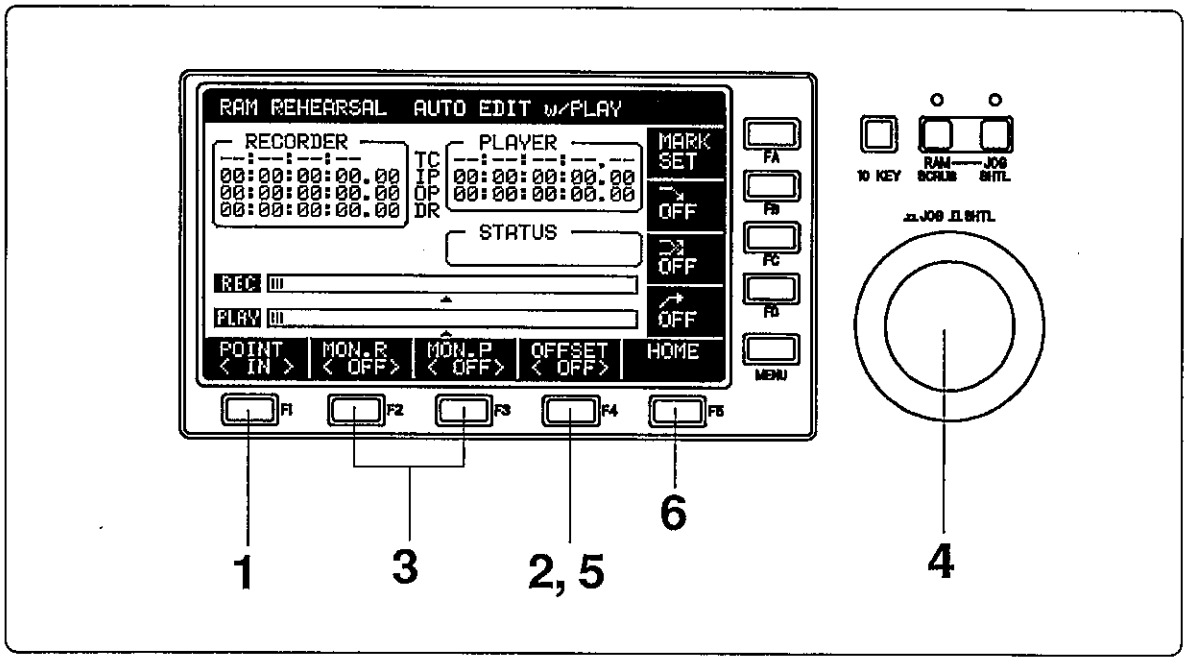
3. Alter IN and OUT points with JOG dial.
   Use of JOG or SHUTTLE will allow alteration of IN and OUT points which are selected at steps 1 and 2 above.

4. Press the FA (MARK SET) key.
   New data altered with JOG/SHUTTLE will be defined, and new IN and OUT points will be set.
   At the same time, the value of DR:duration (zone to edit) will be automatically computed, and renewed accordingly.

5. Again, repeat rehearsal at each point.

*REAL TIME ALTERATION OF IN AND OUT POINTS - 1

Real time alteration of IN and OUT points is possible during rehearsal and other occasions. Operation here allows to alter either one of IN or OUT point of the recorder or player, but duration will remain unchanged.



Operating procedure

1. Press the F1 (POINT) key to select <IN> or <OUT>.
   Pressing IN or OUT key makes alteration of IN or OUT point of the recorder or player possible, respectively.

2. Press the F4(OFFSET) key to turn <ON>.

3. Press the F2 (MON.R) or F3 (MON.P) key to turn <ON>.
   Turning F2 (MON.R) key on allows to alter IN and OUT points of the recorder. When F3 (MON.P) key is turned <ON>, those points of the player may be altered.

4. Alter data with JOG.
   Use of JOG makes it possible to alter on a real-time basis IN and OUT points of the recorder or player whichever is selected at steps 1 and 3.

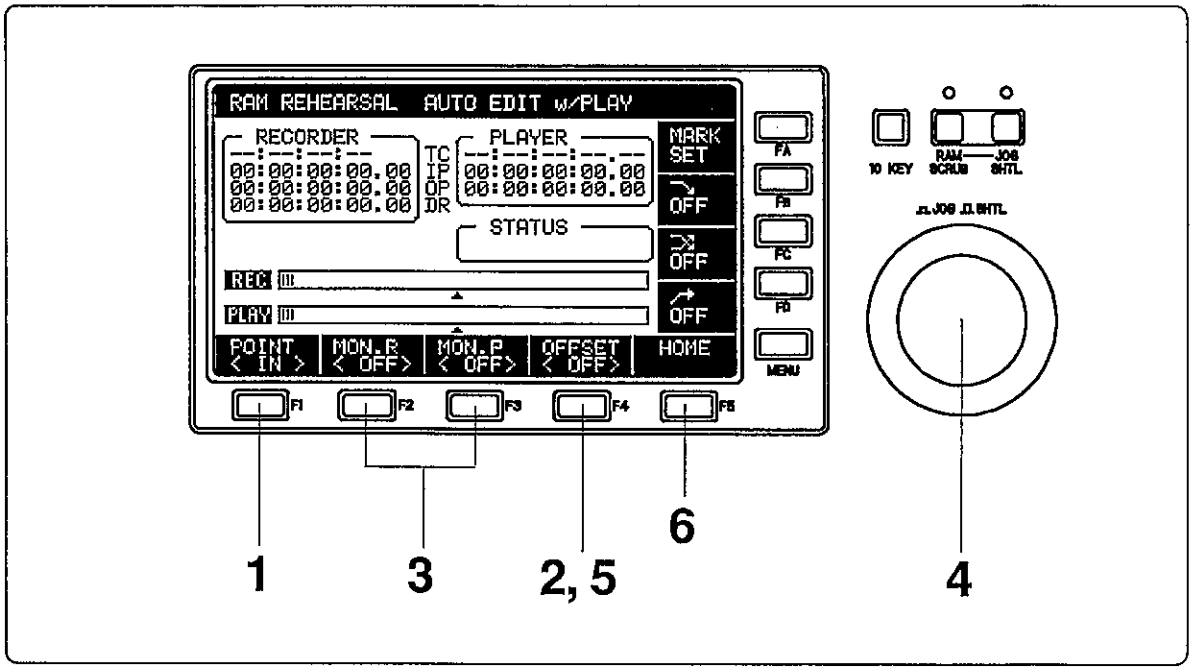
5. On completion of alteration, turn F4 (OFFSET) key <OFF>.

6. Press the F5 (HOME) key to finish all procedures here.

*The procedure here may be performed during rehearsal (in particular, during repeating) with FB, FC or FD key.

*REAL-TIME ALTERATION OF IN AND OUT POINTS - 2

Unlike the previous procedure, ALTERATION -1, the one here allows simultaneous alteration of IN and OUT points of both the recorder and player on a real-time basis. Duration will also be altered upon alteration of the points.



Operating procedure

1. Press the F1 (POINT) key to select <IN> or <OUT>.
   Pressing IN or OUT key makes alteration of IN or OUT point of the recorder or player, respectively.

2. Press the F4 (OFFSET) key to turn <ON>.

3. Turn both F2 (MON.R) and F3 (MON.P) keys <ON>.
   Turning both keys ON makes it possible to simultaneously alter IN and OUT points of both the recorder and player.

4. Alter the data with JOG dial.
   Use of JOG dial will allow simultaneous real-time alteration of IN and OUT points of both the recorder and player as selected at steps a and 3 above.
   At this time, duration will also be altered.

5. On completion of alteration, turn F4 (OFFSET) key OFF.

6. Press the F5 (HOME) to finish all procedures here.

*The procedure here may be performed during rehearsal (in particular, during repeating) with FB, FC or FD key.

9-3-4. Rehearsal with F2 (PREVIEW) Key

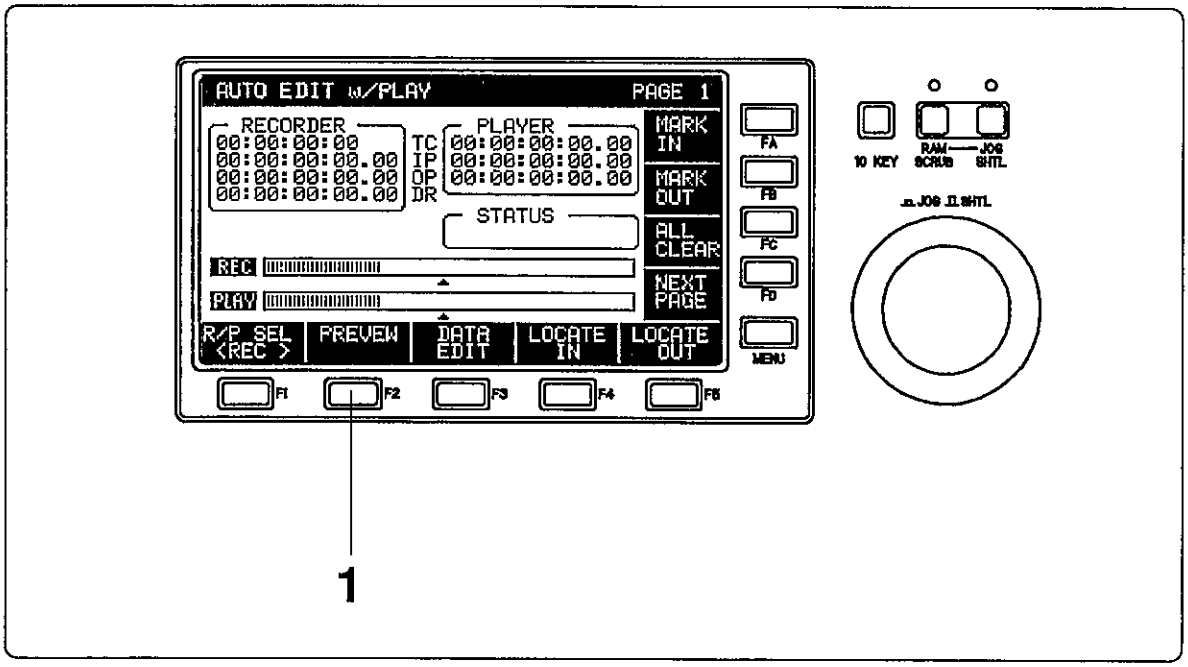
Rehearsal may be executed using F2 (PREVIEW) key after subtle adjustment on RAM of IN and OUT points.

Rehearsal operation between set IN and OUT points will be performed identically to that of the actual take, making it possible to monitor the timing of insert editing as the entire image. No recording will be made.

<NOTE>

RAM rehearsal is not possible unless the memory board which is available seperately is utilized. Rehearsal should then be executed using F2 (PREVIEW) key.

*REHEARSAL



Operating procedure

1. Press the F2 (PREVIEW) key when on PAGE 1.

   [PREVIEW] will be displayed at [STATUS] and rehearsal will start.

   Rehearsal starts after pre-rolling(*) from the set IN point, and ends at OUT point after post-rolling.

   Under rehearsal mode, the RECORD button will flash from the IN point through the OUT point, and the sound of the player will be inserted and monitored.

   No sound will be recorded.

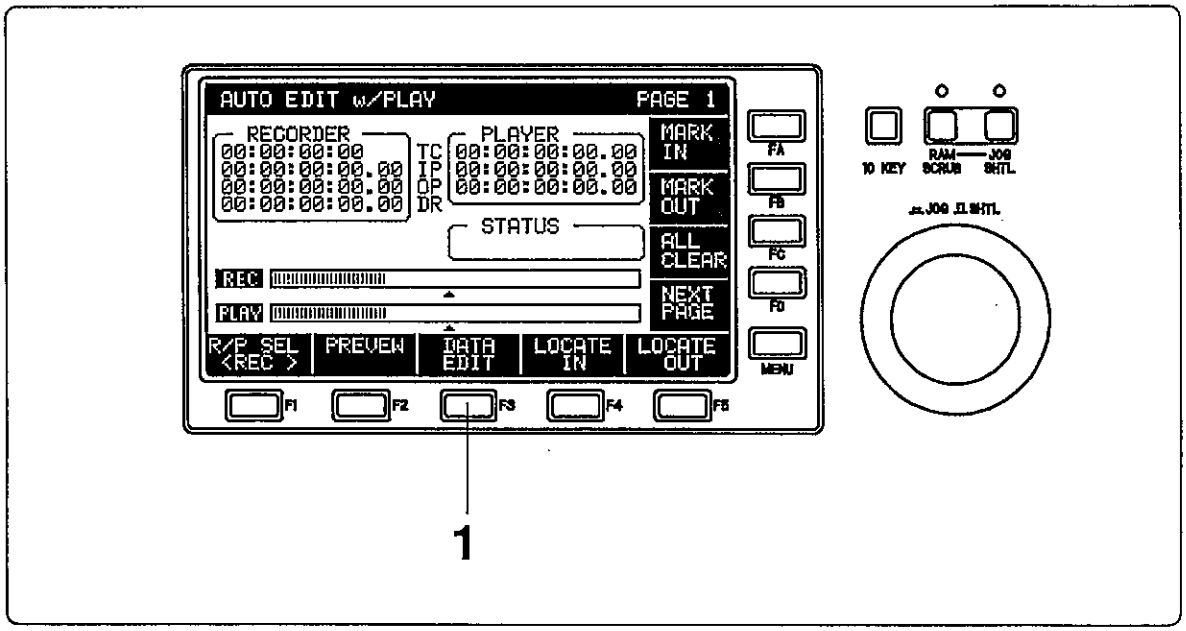
   (*) Preroll

   Preroll value of this recorder may be altered on SETUP MODE menu. Refer to Chapter 14, SETUP MODE MENU, for details.

*ALTERATION OF IN AND OUT POINTS

Set IN and OUT points again after rehearsal.

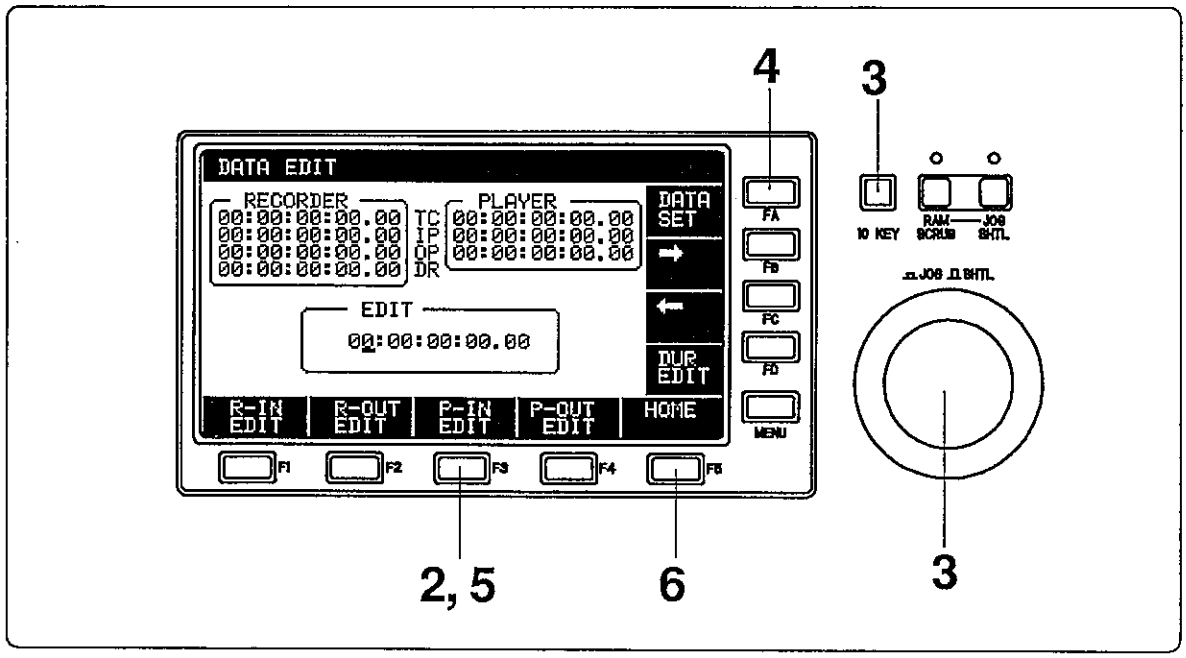
The tutorial here alters IN point of the player.



Operating procedure

1. Press the F3 (DATA EDIT) key when on PAGE 1.

   Data edit mode display will be activated and [EDIT] will be shown in the display.

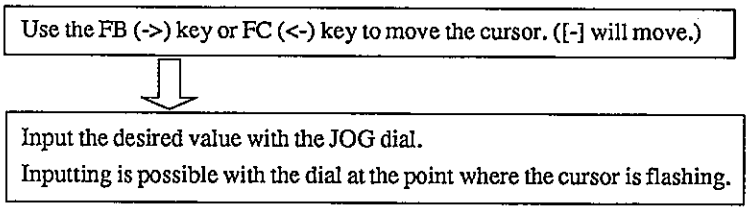


2. Press the F3 (P-IN EDIT) key.

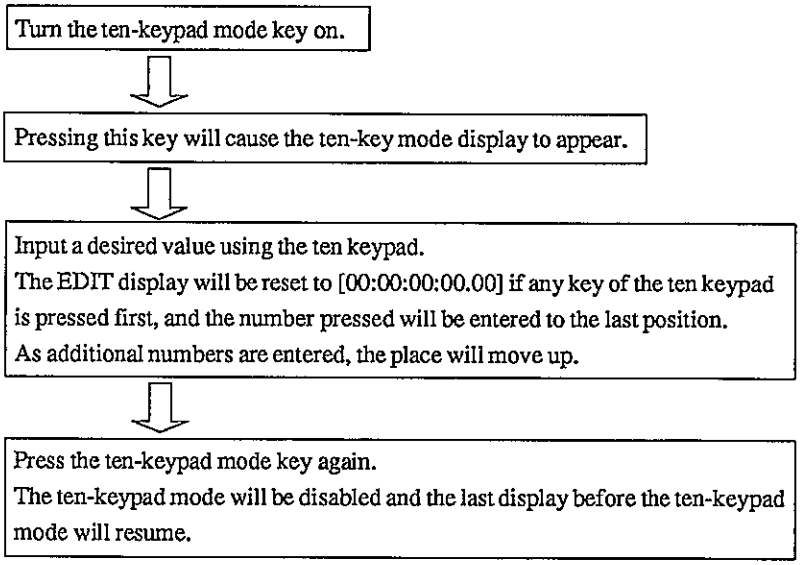
   The currently set IN point data of the player will appear at [EDIT], indicating that editing is possible.

3. Put new data in via the JOG dial or the ten keypad.

Inputting with JOG dial



Input with the TEN KEYPAD



4. Press the FA (DATA SET) key.
   The display will show [PLEASE SELECT POINT].

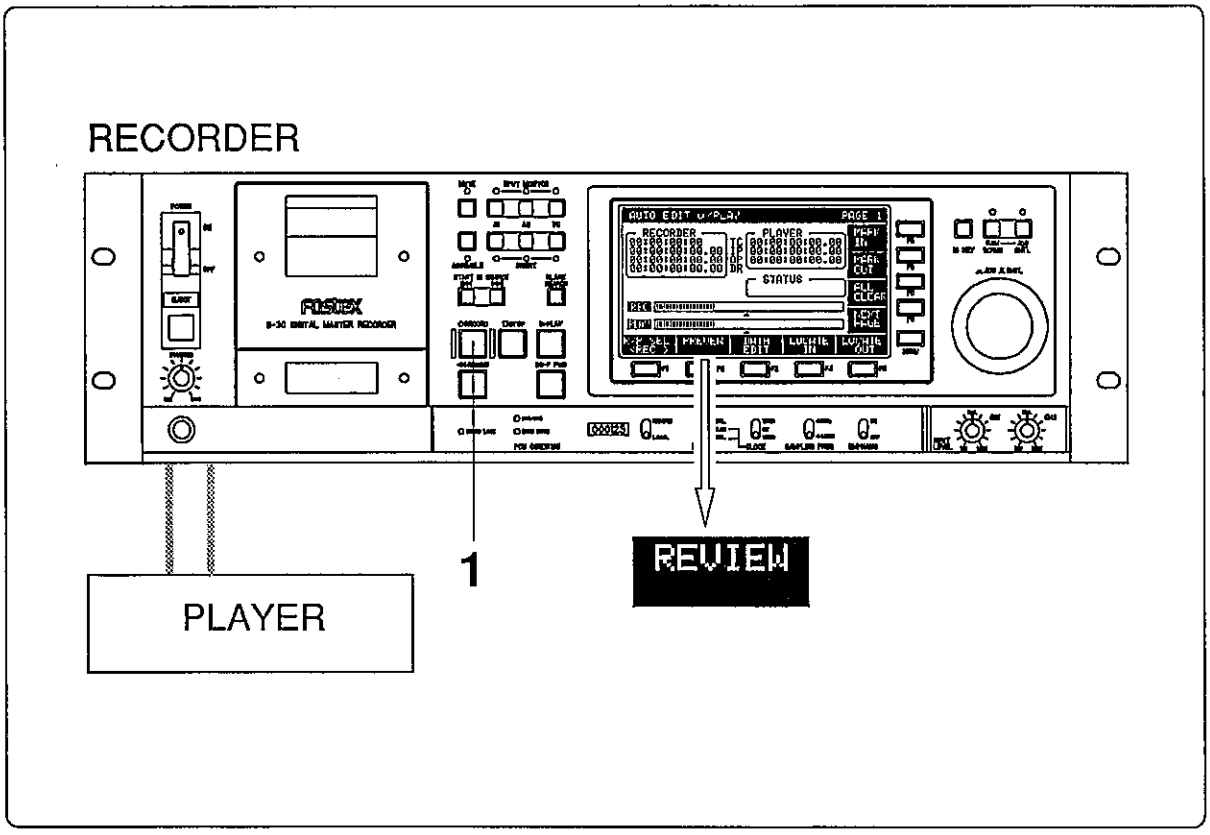
5. Press the F3 (P-IN EDIT) key.
   The newly edited IN point of the player will be registered.
   Concurrently with the change of IN point of the player, the OUT point of the player will be automatically computed and changed accordingly.

   IN and OUT points may be altered this way.

6. Press the F5 (HOME) key to finish.

9-3-5. Insert-Editing

After completion of alteration of each IN and OUT points through rehearsal, insert editing will be performed.



Operating procedure

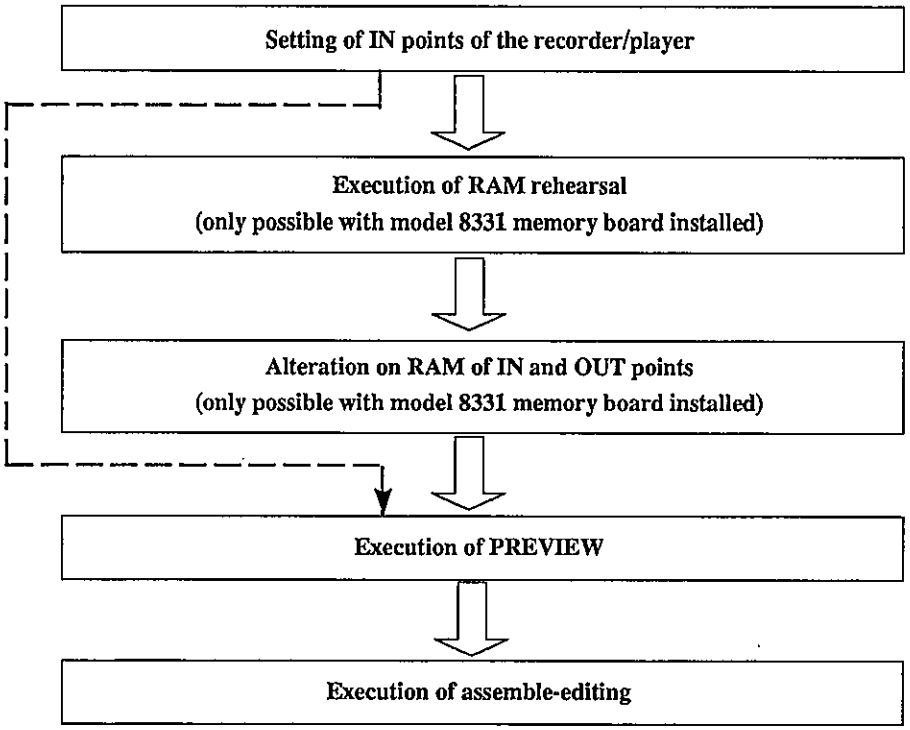
1. Press the RECORD button of the recorder.

   The light of the RECORD button will turn on at the IN point, and insertion (AUTO EDIT) will be executed. The light will turn off as soon as the OUT point is reached.

   AUTO EDIT will be executed. At the same time, the display of [PREVIEW] will change to [REVIEW]. This [REVIEW] display will stay until new IN and OUT points are set. As soon as the points are set, [PREVIEW] will take over.

9-4. Assemble-Editing

All data, sub-areas inclusive, can be recorded on assemble editing, unlike insert editing.
Assemble editing can be performed simply by setting each IN point.
One example may be illustrated as follows:



<NOTES>

* For execution of a series of assemble-editing, TC must be provided.

* The broken line above shows the flow of process when no optional source RAM (model 8331) is available.

ITEMS TO VERIFY BEFORE STARTING OPERATION

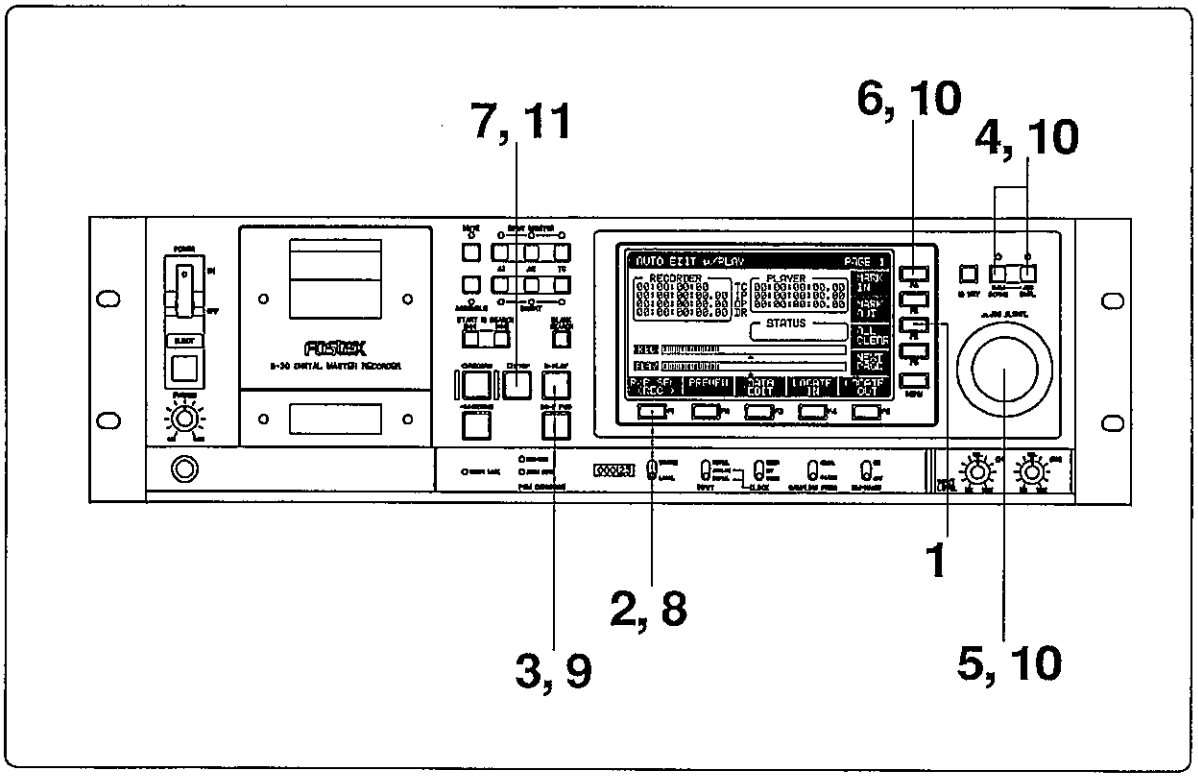
1. Items to be verified are common to those for insert editing. Here, however, ASSEMBLE key is pressed to activate assemble mode. (All insert keys of audio/time code will become on.)

2. When use of unrecorded tape is intended, record time code first of all for a minute or two, with RUN MODE of the internal generator set to [FREE RUN].

3. After time code has been recorded, switch to AUTO EDIT with PLAYER menu following setting RUN MODE of the internal generator to [REC RUN]. Time code has now been continuously recorded.

9-4-1. Setting of IN Points of Recorder/Player

This tutorial is to set 『 IN point 』 of the recorder and player.



Operating procedure

1. Press the FC (ALL CLEAR) key to clear old data away.

2. F1 (R/P SEL) key to select <RECORDER>.

3. Press the PLAY button of the recorder.
   The recorder starts playback of the tape.

4. Press the JOG/SHTL mode key or RAM SCRUB key at the desired I Npoint during monitoring played-back sound of tape.
   Pressing this key will cause the mode to change to JOG/SHTL or RAM SCRUB, and STILL will be activated at the point where the key is pressed.

5. Locate the accurate IN point using JOG dial.

6. Press the FA (MARK SET) key.
   The time of the point where this key is pressed will be registered and indicated as IN point of the recorder.

<NOTE>
Direct registration is possible by pressing the FA (MARK SET) key, skipping steps 4 and 5.

7. Stop tape travel of the recorder by pressing the STOP button.

8. Press the F1 (R/P SEL) to select <PLAYER>.
   INPUT MONITOR keys, A1/A2 of the recorder will automatically move to INPUT MONITOR, and monitoring of the player sound becomes possible.

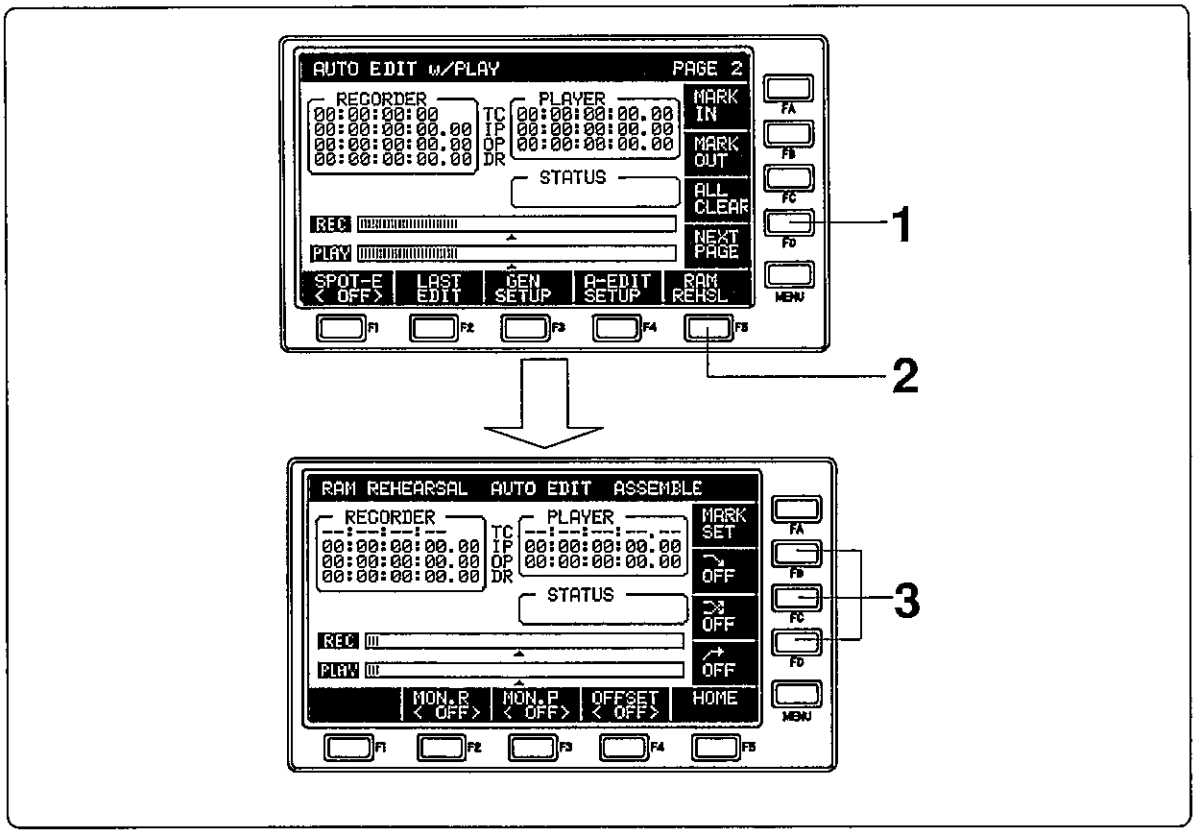
9. Press the PLAY button of the recorder.
   The tape of the player will start to be played back.

10. Set IN point of the player in the same manner as was used when IN point of the recorder is set.

11. Stop tape travel by pressing the STOP button after completion of setting.

9-4-2. RAM Rehearsal

*RECORDING ON RAM OF DATA AT IN AND OUT POINTS



Operating procedure

1. Press the FD (NEXT PAGE) key to have PAGE 2 displayed.

2. Press the F5 (RAM REHSL) key.
   [RAM RECORDING] will be shown at [STATUS] on the display. IN point data of the recorder and player will be recorded on RAM.
   Upon completion of recording, the display will change from [RAM RECORDING] to RAM REHEARSAL MODE.

3. Press the FB (↘), FC (⇉) or FD (↗) key.
   FADE IN, FADE OUT or CROSS FADE, respectively, at IN point can rehearsed.
   While rehearsing, [RAM REHEARSAL] will be seen at [STATUS] display.

   The function of each key may be illustrated as follows:

   FB (↘)key:
   Pressing this key once will turn <OFF> to <ON>, play back the faded OUT condition at IN point of the recorder, and then turn off.
   Pressing this key once during operation will turn <ON> to <RPT>, and playback will be repeated until <OFF> is executed.

FD ( )key:

Pressing this key once will turn <OFF> to <ON>, play back the faded IN condition at IN point of the player, and then turn off.

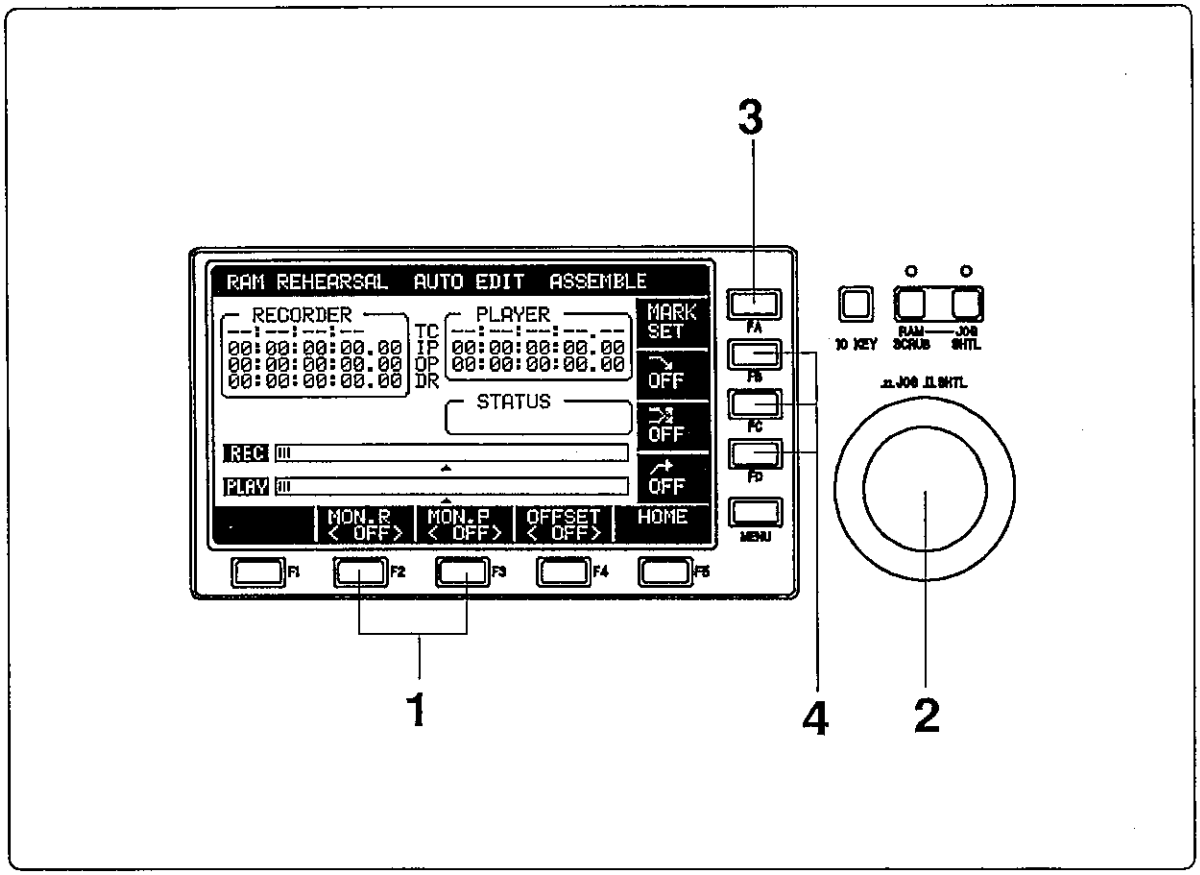
Pressing this key once during operation will turn <ON> to <RPT>, and playback will be repeated until <OFF> is executed.

FC ( )key:

Pressing this key once will turn <OFF> to <ON>, the crossfade conditions at IN point of both the recorder and player, and then turn off.

Pressing this key once during operation will turn <ON> to <RPT>, and playback will be repeated until <OFF> is executed.

*ALTERATION ON RAM OF IN POINT



Operating procedure

1. Press the F2 (MON.R) or F3 (MON.P) key to select <ON>.
   Turning F2 (MON.R) key <ON> will allow RUM SCRUB in the vicinity of IN and OUT points recorded on RAM of the recorder.
   Similarly, if F3 (MON.P) key is turned <ON>, RAM SCRUB of the vicinity of IN and OUT points recorded on RAM of the player will be possible.

2. Alter IN and OUT points using JOG or SHUTTLE dial.
   With JOG or SHUTTLE dial, IN point of the recorder or player, whichever is selected at step 1 above, may be altered.

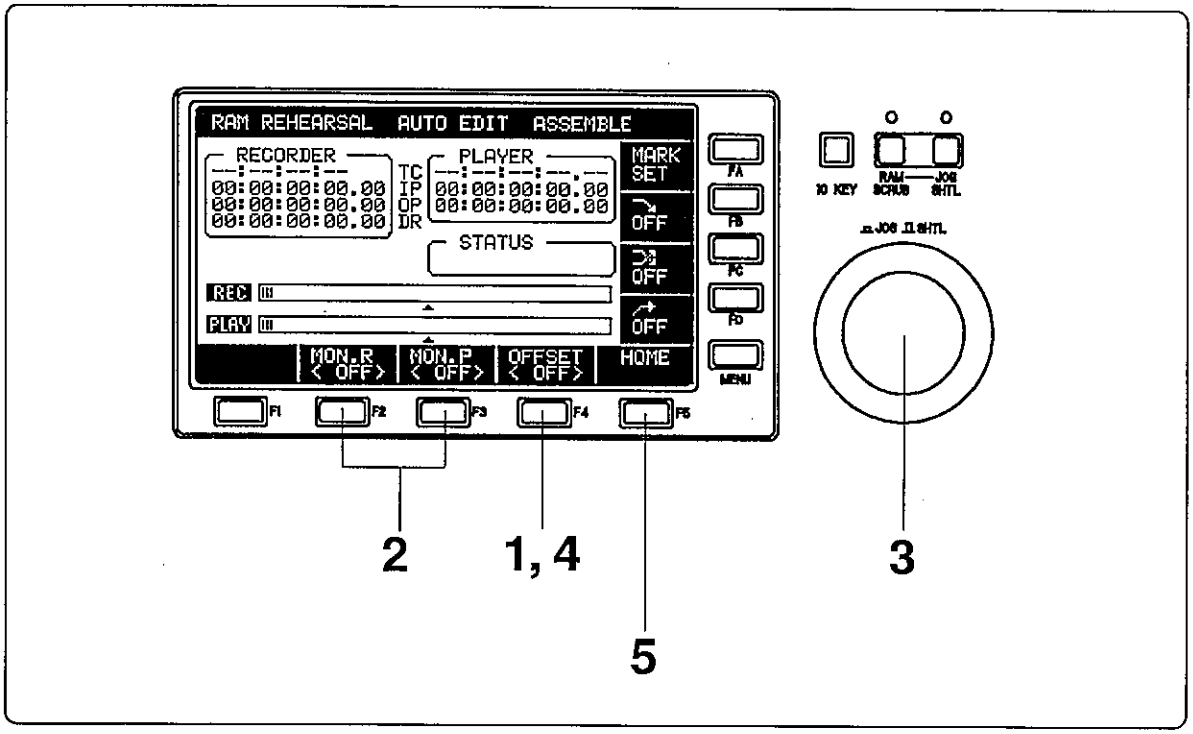
3. Press the FA (MARK SET) key.
   The new data after alteration made with JOG/SHUTTLE will be defined and new IN and OUT points are set.

4. Rehearse again at each point.

*REAL-TIME ALTERATION OF OFFSET VALUE

During rehearsal as mentioned before or when standing by, IN and OUT points may be altered on a real-time basis.

Through the tutorial here, it is possible to individually alter IN and OUT points of the recorder or player, or those points of the recorder/player simultaneously.



Operating Procedure

1. Press the F4 (OFFSET) key for <ON>.

2. Press the F2 (MON.R) or F3 (MON.P) key to select the data to alter.
   Turning F2 (MON.R) key <ON> will allow to alter IN and OUT points of the recorder, and turning F3 (MON.P) key <ON> allows those points of the player to be individually altered.
   If both F2 (MON.R) and F3 (MON.P) keys are switched <ON>, then IN and OUT points of both the recorder and player can be altered at the same time.

3. Alter the data with JOG.
   Use of JOG will enable real-time change of the selected IN and OUT points of the recorder or player, or both.

4. Turn the F4 (OFFSET) key <OFF> after alteration is completed.

5. Press the F5 (HOME) key to finish.

9-4-3. Rehearsal with F2 (PREVIEW) Key

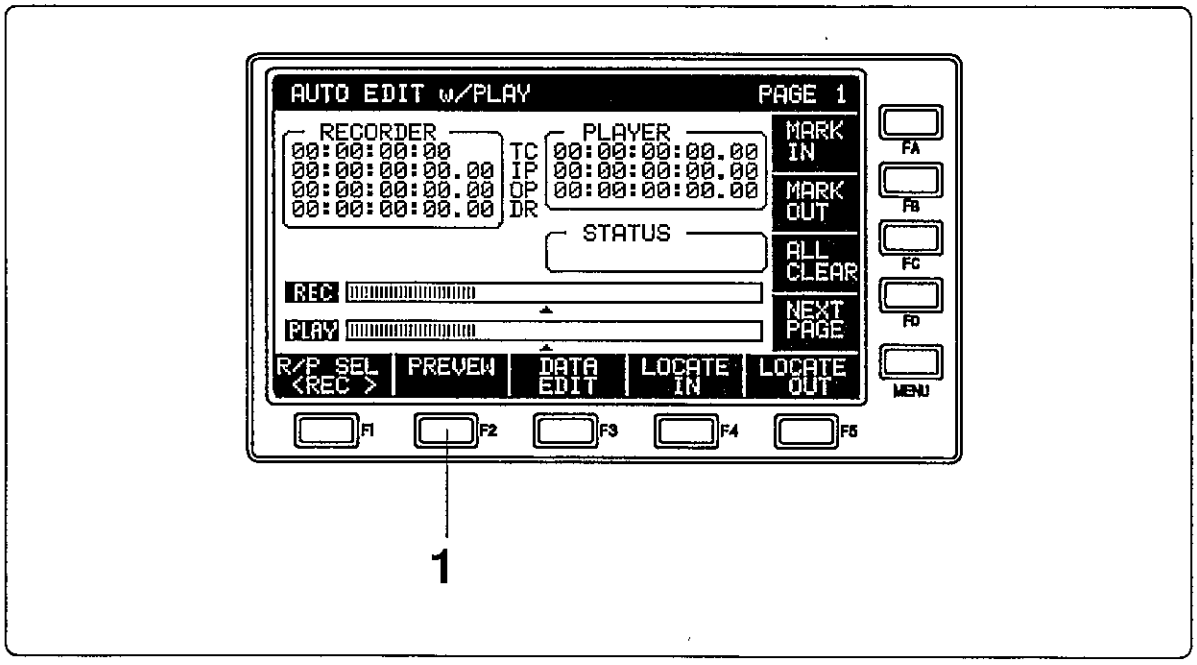
Rehearsal may be executed using F2 (PREVIEW) key after fine adjustment on RAM of IN and OUT points.

Rehearsal operation between set IN and OUT points may be performed identically to that of the actual take, making it possible to monitor the timing of assemble editing as the entire image. No recording will be made.

<NOTE>

RAM rehearsal is not possible without the memory board which is separately available. Rehearsal should then be executed with F2 (PREVIEW) key.

*REHEARSAL



Operating procedure

1. Press the F2 (PREVIEW) key when on PAGE 1.

   [PREVIEW] will be displayed at [STATUS] and rehearsal will start.

   Rehearsal will be performed after pre-rolling(*) from the set IN point.

   During rehearsal, RECORD button will flash but nothing will be recorded.

   (*) Preroll

   Preroll time of this recorder may be changed on SETUP MODE menu.

   Refer to chapter 14, SETUP MODE MENU, for details.

2. Press the STOP button to leave from rehearsal mode.

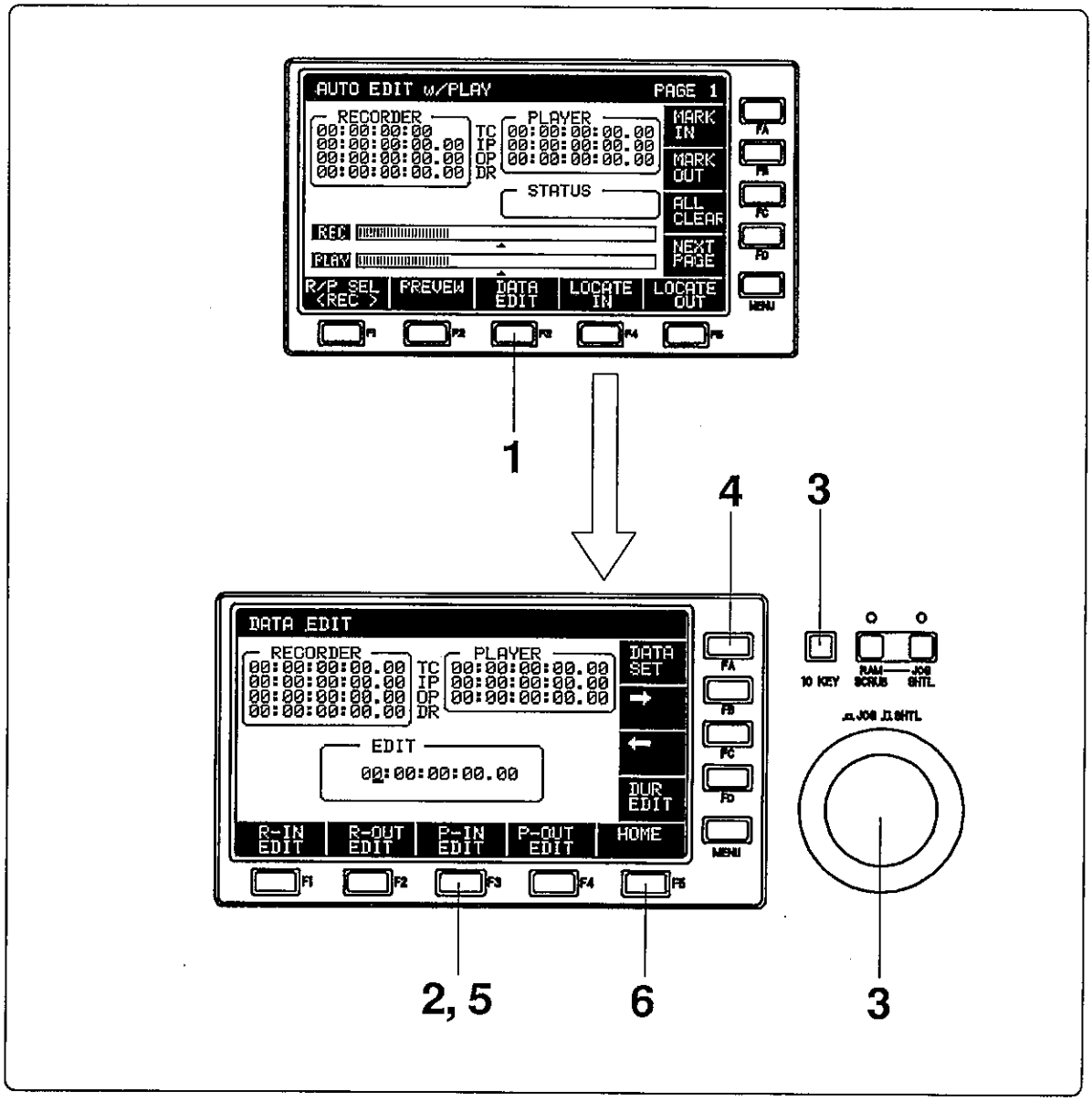
   STOP button must be pressed especially when set only to IN point.

   In the event, however, OUT point is already set, terminate rehearsal at that OUT point and stop.

*ALTERATION OF IN AND OUT POINTS

Set again IN and OUT points after performing rehearsal.

In the following example, IN point of the player will be altered.



Operating procedure

1. Press the F3 (DATA EDIT) key when on PAGE 1.

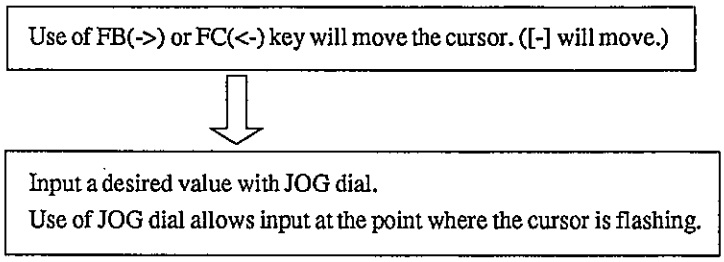
   Data edit mode display mode will be on, and the display will read [EDIT].

2. Press the F3 (P-IN EDIT) key.

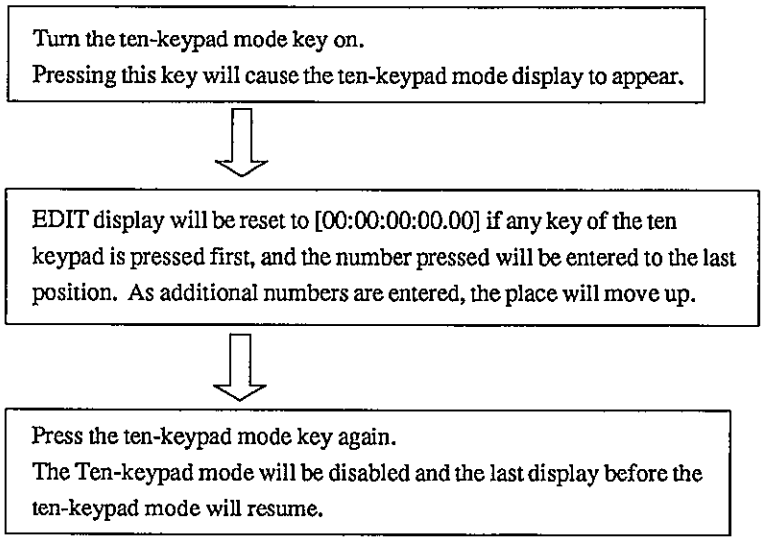
   The data of IN point currently set on the player will be displayed at [EDIT], indicating that editing is possible.

3. Input new data using JOG dial or the ten key pad.

Input with JOG dial



Input with the TEN KEYPAD



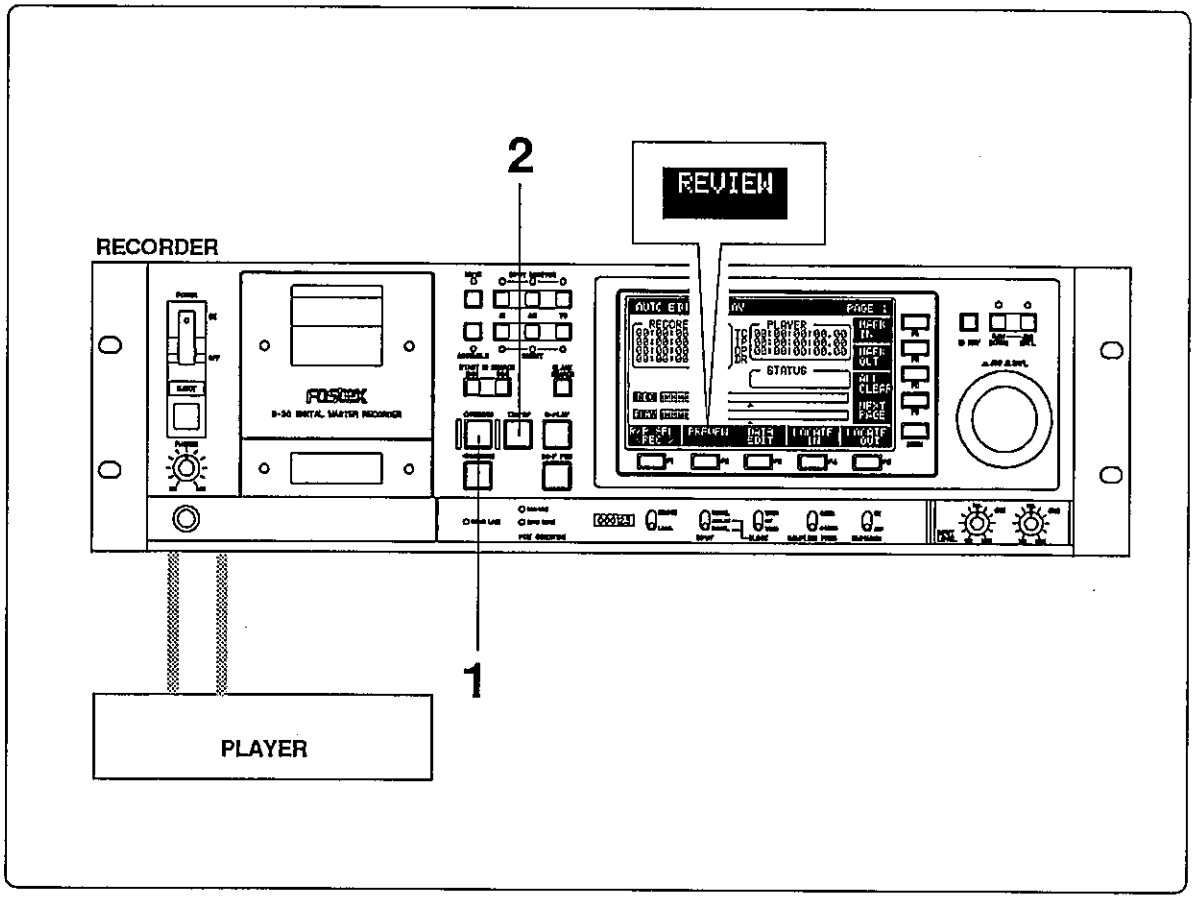
4. Press the FA (DATA SET) key.
   The display will read [PLEASE SELECT POINT].

5. Press the F3 (P-IN EDIT) key.
   Newly edited IN point of the player will be registered. Similarly, other IN and OUT points may be altered.

6. Press the F5 (HOME) key when finished.

9-4-4. Assemble-Editing

The next stage after completion of alteration of each IN and OUT points through execution of rehearsal is assemble-editing (AUTO EDIT). Have PAGE 1 resume on the display.



Operating procedure

1. Press the RECORD button of the recorder.

   The light of the RECORD button will be lit at IN point, and assemble-editing (AUTO EDIT) is executed. As soon as AUTO EDIT is executed, the display will change from [PREVIEW] to [REVIEW]. [REVIEW] display will remain until a new IN and OUT points is set. [PREVIEW] will be present upon completion of setting of the point.

2. Press the STOP button to finish assemble-editing.

   STOP button must be pressed especially when only IN point is set.
   In the event, however, OUT point is already set, terminate at that OUT point and stop.

<NOTE>
Recording for more than 5 seconds is recommended for the next assemble-editing.

9-5. *Spot Erase (Erasure of Noise of Short Duration)*

Noise partially recorded on the tape may be erased. The area of the tape to be spot erased will be mute-recorded.
This operation is only possible when audio insert editing is going on. Therefore, it is necessary to keep the recording mode standing at insert mode. This operation needs no player to be involved.

Operating procedure

1. While in PAGE 1, press the F1 (R/P SEL) key to select <RECORDER>.

2. Press the FD (NEXT PAGE) key to open PAGE 2.

3. Press the F1 (SPOT-E) key to turn <ON>.

4. Press the PLAY button of the recorder.

5. Press the FA (MARK IN) key at the point which needs spot-erasure, while playing back the tape.

6. Press the STOP button to stop tape movement.

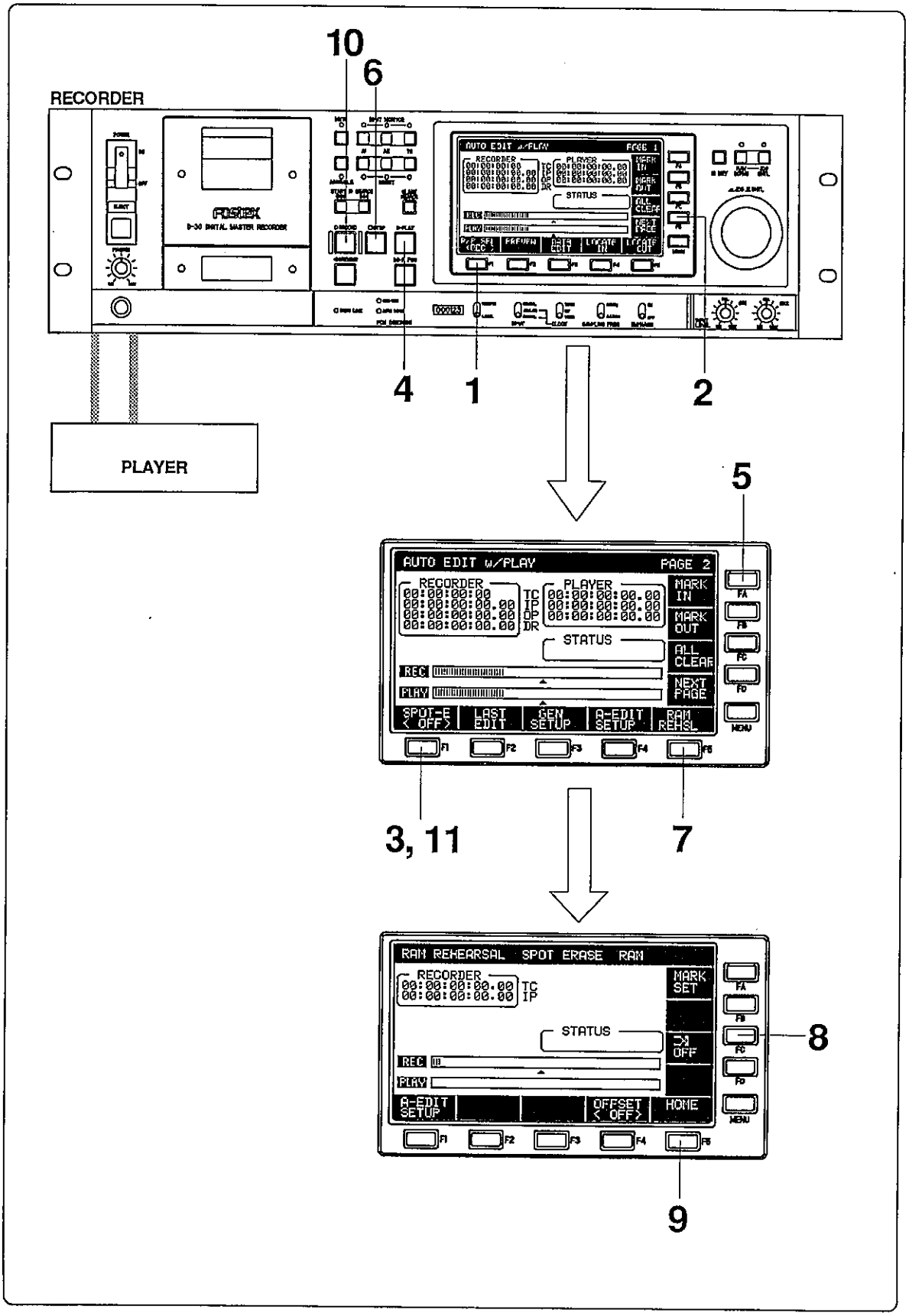
7. Press the F5 (RAM REHSL) key.
   Data of the point where marked IN will be recorded on RAM, and the display will show RAM REHEARSAL SPOT ERASE.

8. Press the FC (⊐⤭) key to verify the existence of noise.
   While rehearsing, using JOG dial, locate the point where the noise is recorded.

9. Press the F5 (HOME) key after rehearsal is completed.
   PAGE 2 of the first level display will show up which was displayed before RAM REHEARSAL SPOT ERASE display was entered.

10. Press the RECORD button.
    Spot-erasing will be performed and unwanted sound will be erased.

11. Press the F1 (SPOT-E) key in PAGE 2 to turn <OFF> when spot erasure is finished.


10
6
RECORDER
4
1
2
PLAYER
5
AUTO EDIT w/PLAY
PAGE 2
RECORDER
PLAYER
MARK IN
MARK OUT
ALL CLEAR
NEXT PAGE
STATUS
REC
PLAY
SPOT-E OFF
LAST EDIT
GEN SETUP
A-EDIT SETUP
RAM REHSL
3, 11
7
RAM REHEARSAL SPOT ERASE RAM
MARK SET
OFF
8
A-EDIT SETUP
OFFSET OFF
HOME
9

CHAPTER 10

Auto Edit with RAM Mode Menu

This chapter describes the functions available in the AUTO EDIT with RAM MODE menu. Please note, however, that this menu is only available when the optional source RAM board (Memory Board Model 8331) is installed.

With this menu installed, audio data of up to ten seconds can be recorded in the source RAM, and with this data as the source, insert editing of audio only can be done.

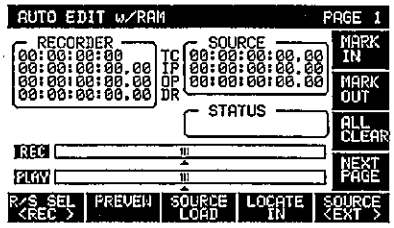
<NOTE>
Neither assemble editing nor insert editing of time code can be performed using this menu.

CHAPTER 10
TABLE OF CONTENTS

10-1. Operating functions of the menu

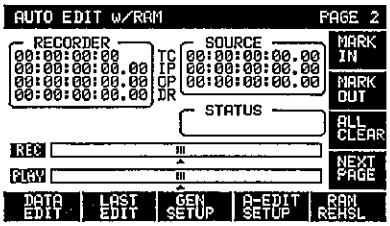
The operations menu here consists of 2 pages, PAGE 1 and 2, in the first level display. Operations available on each page are as follows:

1st level PAGE 1



1. Selecting RECORDER-SOURCE function
2. PREVIEW-REVIEW function
3. SOURCE LOAD function
4. LOCATE IN function
5. SOURCE selection function

1st level PAGE 2

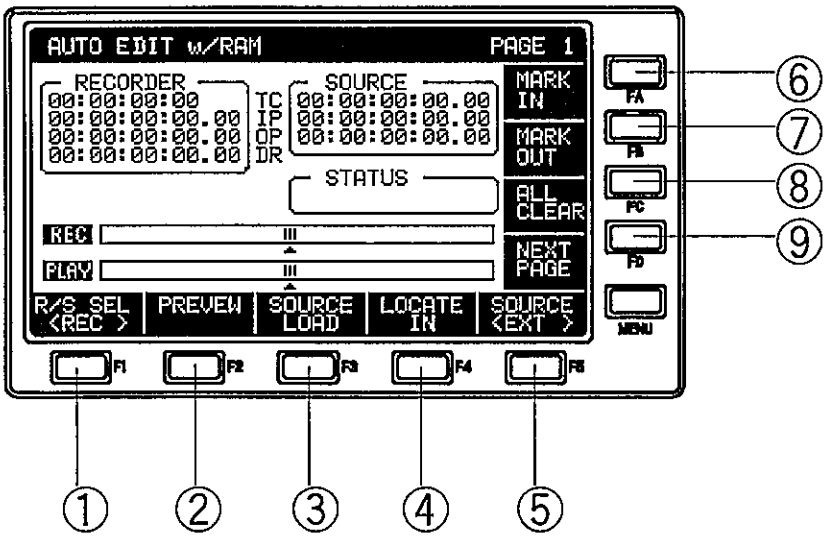


1. Editing function of EDIT POINT
2. LAST EDIT function
3. GENERATOR SETUP function
(Refer to Chapter 12.)
4. AUTO EDIT SETUP function (Refer to Chapter 13.)
5. RAM REHEARSAL function

10-1-1. Display and Functions of the Function Keys

PAGE 1:

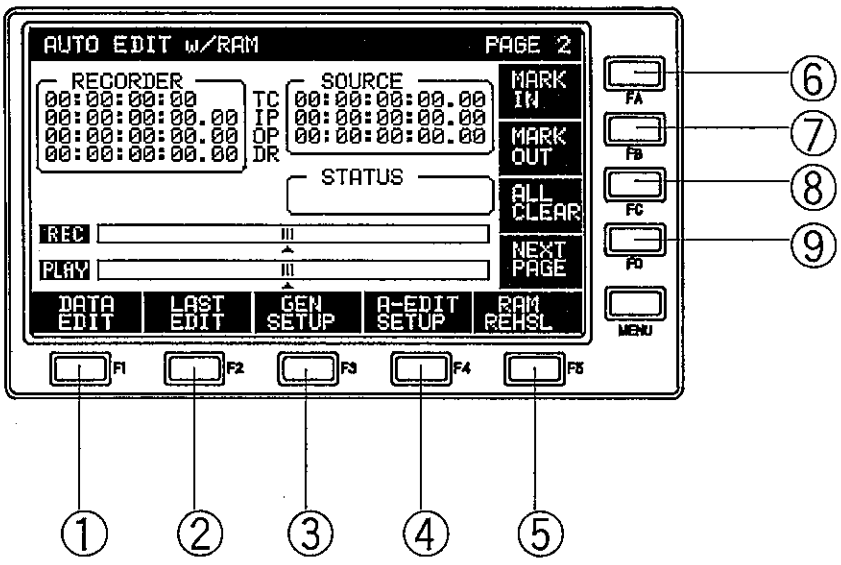
Displays and functions of the function keys on PAGE 1 of the first level display are described below:



No.		Display	Function
①	F1	R/S SEL (REC/SRC)	This key will determine which to control from the front panel of the D-30, the RECORDER or internal SOURCE RAM.
②	F2	PREVIEW	Pressing this key with the edit point set will execute rehearsal at that point. This key will turn into the REVIEW key after AUTO EDIT has been executed. Thus, pressing this key at this stage will make it possible to review the edited material. The status of this key will remain the same until another edit point is set, and as soon as this setting has been completed, it will become the PREVIEW function key.
③	F3	SOURCE LOAD	Pressing this key will initiate recording into the RAM information from the pressed point onward.
④	F4	LOCATE IN	Pressing this key will locate the MARK IN or DATA SET IN point.
⑤	F5	SOURCE (EXT/TAPE)	This key will determine which to assign as the source of the data to be recorded in SOURCE RAM, the tape of the recorder itself or an external supply.
⑥	FA	MARK IN	Pressing this key when loading audio data on SOURCE RAM will cause the loading to finish after audio data necessary for editing has been recorded in the RAM. This key is to be pressed when setting as the IN point the currently displayed CURRENT TIME of RECORDER or SOURCE.
⑦	FB	MARK OUT	Pressing this key during loading of audio data on SOURCE RAM will cause the loading to finish after audio data necessary for editingh has been recorded in the RAM. Press this key to set the currently displayed CURRENT TIME of RECORDER or SOURCE as OUT point.
⑧	FC	ALL CLEAR	Pressing this key will clear away all currently displayed data of SOURCE/ RECORDER.
⑨	FD	NEXT PAGE	Pressing this key will cycle the pages within the same mode or display level.

PAGE 2:

Displays and functions of the PAGE 2 function keys of the first level display are described below:

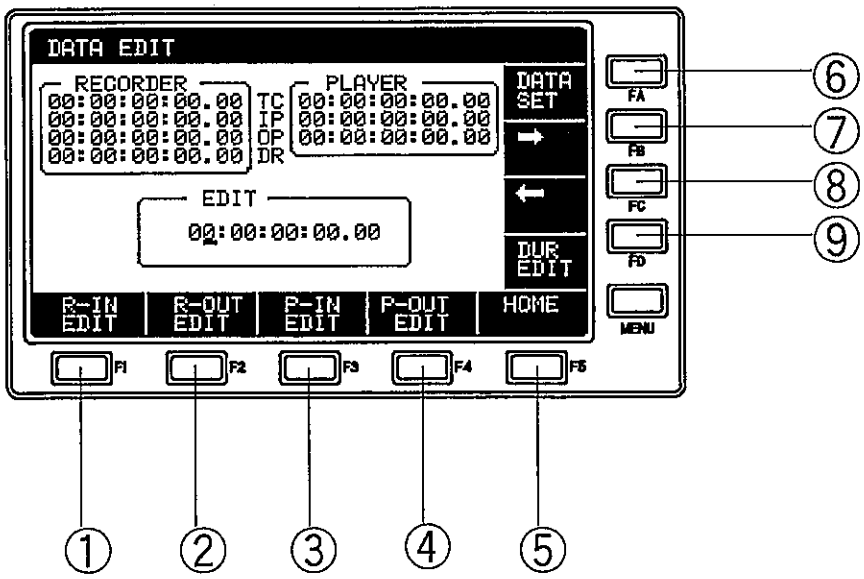


No.		Display	Function
①	F1	DATA EDIT	Pressing this key will enable DATA EDIT MODE (the second level display) where MEMORY DATA of edit point may be edited.
②	F2	LAST EDIT	Pressing this key will restore on the display the data of the last auto edited EDIT point.
③	F3	GEN SETUP	Pressing this key will enable GENERATOR SETUP MODE (the second level display)relating to control of INTERNAL GENERATOR. (Refer to Chapter 12 for details.)
④	F4	A-EDIT SETUP	Pressing this key will enable input mode (the second level display) of SETUP DATA necessary for AUTO EDIT. (Refer to Chapter 13 for details.)
⑤	F5	RAM REHSL	Pressing this key, after the recording of audio data on SOURCE RAM and setting of edit point of RECORDER and SOURCE, will cause edit point DATA of RECORDER to be recorded in the RAM and RAM REHEARSAL mode (the second level display) to be enabled.
⑥	FA	MARK IN	Function of this key is identical to that of PAGE 1.
⑦	FB	MARK OUT	Function of this key is identical to that of PAGE 1.
⑧	FC	ALL CLEAR	Function of this key is identical to that of PAGE 1.
⑨	FD	NEXT PAGE	Function of this key is identical to that of PAGE 1.

The second level display (Edit function of EDIT point)

Pressing the F1(DATA EDIT) key when on PAGE 2 of the first level display will cause the DATA EDIT mode display of the second level display to appear.

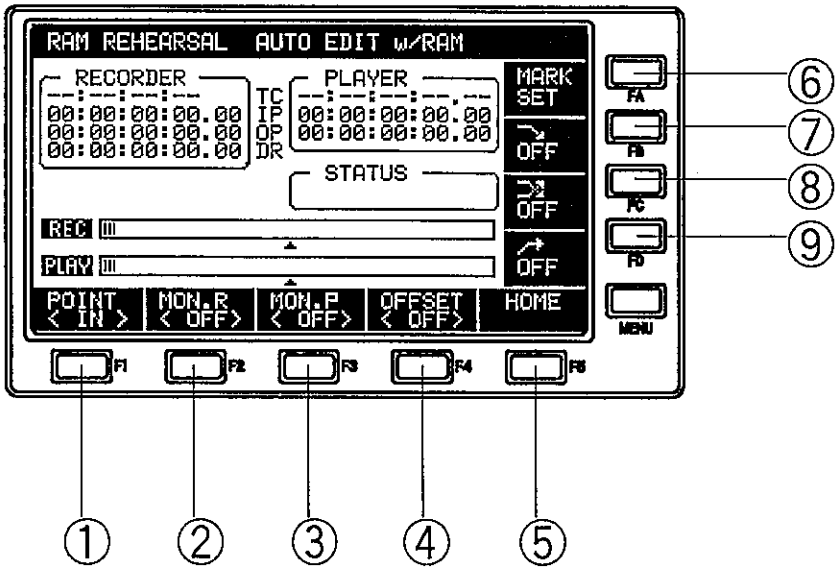
Displays and functions of function keys are described below:



No.		Display	Function
①	F1	R-IN EDIT	Pressing this key will allow editing the IN point of the RECORDER. Pressing this key after the FA (DATA SET) key when editing is finished will define the edited data as a new IN point of the RECORDER.
②	F2	R-OUT EDIT	Pressing this key will allow editing the OUT point of the RECORDER. Pressing this key after the FA (DATA SET) key when editing is finished will define the edited data as a new OUT point of the RECORDER.
③	F3	P-IN EDIT	Pressing this key will allow editing of the IN point of the PLAYER (SOURCE). Pressing this key after the FA (DATA SET) key when editing is finished will define the edited data as a new IN point of the PLAYER.
④	F4	P-OUT EDIT	Pressing this key will allow editing of the OUT point of the PLAYER (SOURCE). Pressing this key after FA (DATA SET) key when editing is finished will define the edited data as a new OUT point of the PLAYER.
⑤	F5	HOME	Pressing this key will restore the previous display, or disable the DATA EDIT function.
⑥	FA	DATA SET	Pressing this key will define the edited data.
⑦	FB	->	Pressing this key will move the edit point rightward.
⑧	FC	<-	Pressing this key will move the edit point leftward.
⑨	FD	DUR EDIT	Pressing this key will allow editing of the data of duration (edit zone). Pressing this key after FA (DATA SET) key when editing is finished will define the edited data as new duration data.

The second level display (RAM REHEARSAL function)

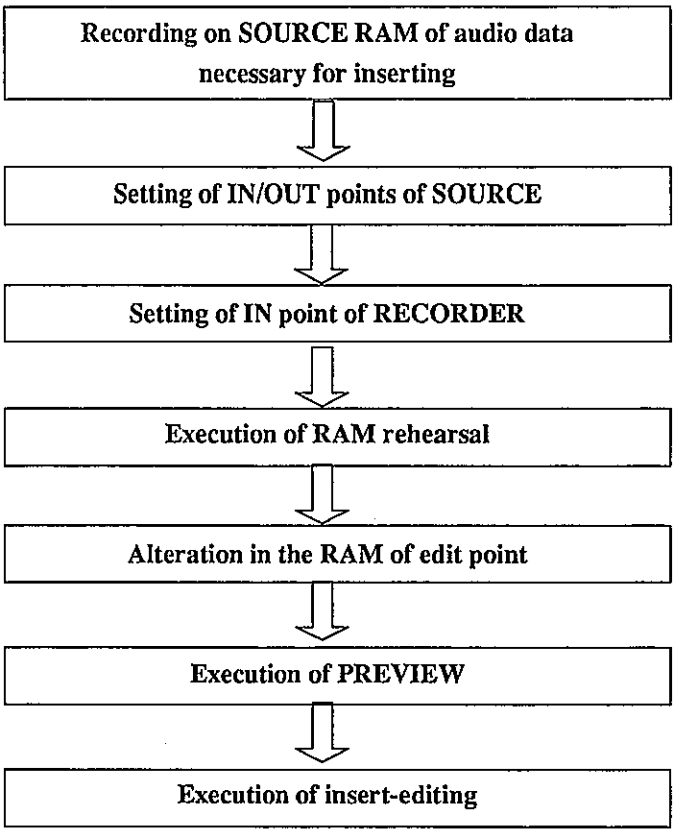
As soon as recording into the RAM of AUDIO data in the vicinity of the edit point of RECORDER is completed by pressing F5(RAM REHSL) when in PAGE 2 of the first level display,the display will change to the RAM REHEARSAL mode of the second level display.
Displays and functions of function keys are described below:



No.		Display	Function
①	F1	POINT (IN/OUT)	The point at which to perform RAM-rehearse IN or OUT point will be selected.
②	F2	MON.R (ON/OFF)	Turning this key ON will allow you to RAM-scrub the RECORDER. When ON, use of JOG/SHUTTLE will allow RAM-scrubbing. Further, with F4 (OFFSET) key also ON, real-time movement of the edit point of RECORDER is possible with JOG.
③	F3	MON.P (ON/OFF)	Turning this key ON will allow to RAM-scrub the PLAYER. When ON, use of JOG/SHUTTLE will allow RAM-scrubbing. Further, with the F4 (OFFSET) key also ON, real-time movement of the edit point of PLAYER is possible with JOG.
④	F4	OFFSET (ON/OFF)	Turning this key ON will allow, with use of JOG, real-time movement of the selected edit point.
⑤	F5	HOME	Pressing this key will restore the previous display or disable the RAM REHEARSAL function.
⑥	FA	MARK SET	Pressing this key will memorize the CURRENT TIME of RAM as IN/OUT points selected with MON.R or MON.P.
⑦	FB	(ON/OFF/RPT)	Switching this key from OFF to ON will execute RAM rehearsal of FADE OUT at IN or OUT point Pressing once more during rehearsal will activate <RPT> function causing RAM rehearsal to be repeated until turned OFF.
⑧	FC	(ON/OFF/RPT)	Switching this key from OFF to ON will execute RAM rehearsal of CROSS FADE at IN or OUT point. Pressing once more during rehearsal will activate <RPT> function causing RAM rehearsal to repeat until turned OFF.
⑨	FD	(ON/OFF/RPT)	Switching this key from OFF to ON will execute RAM rehearsal of FADE IN at IN or OUT point. Pressing once more during rehearsal will activate <RPT> function causing RAM rehearsal to repeat until turned OFF.

10-2. Insert Editing Using SOURCE RAM

Described here is a specific method for insert editing with the optional SOURCE RAM board (Memory Board Model 8331) installed and recording into the RAM the necessary audio data. The following is one example of insert editing using SOURCE RAM.



<NOTES>

* Execution of a series of insert-edits needs a time code supply.

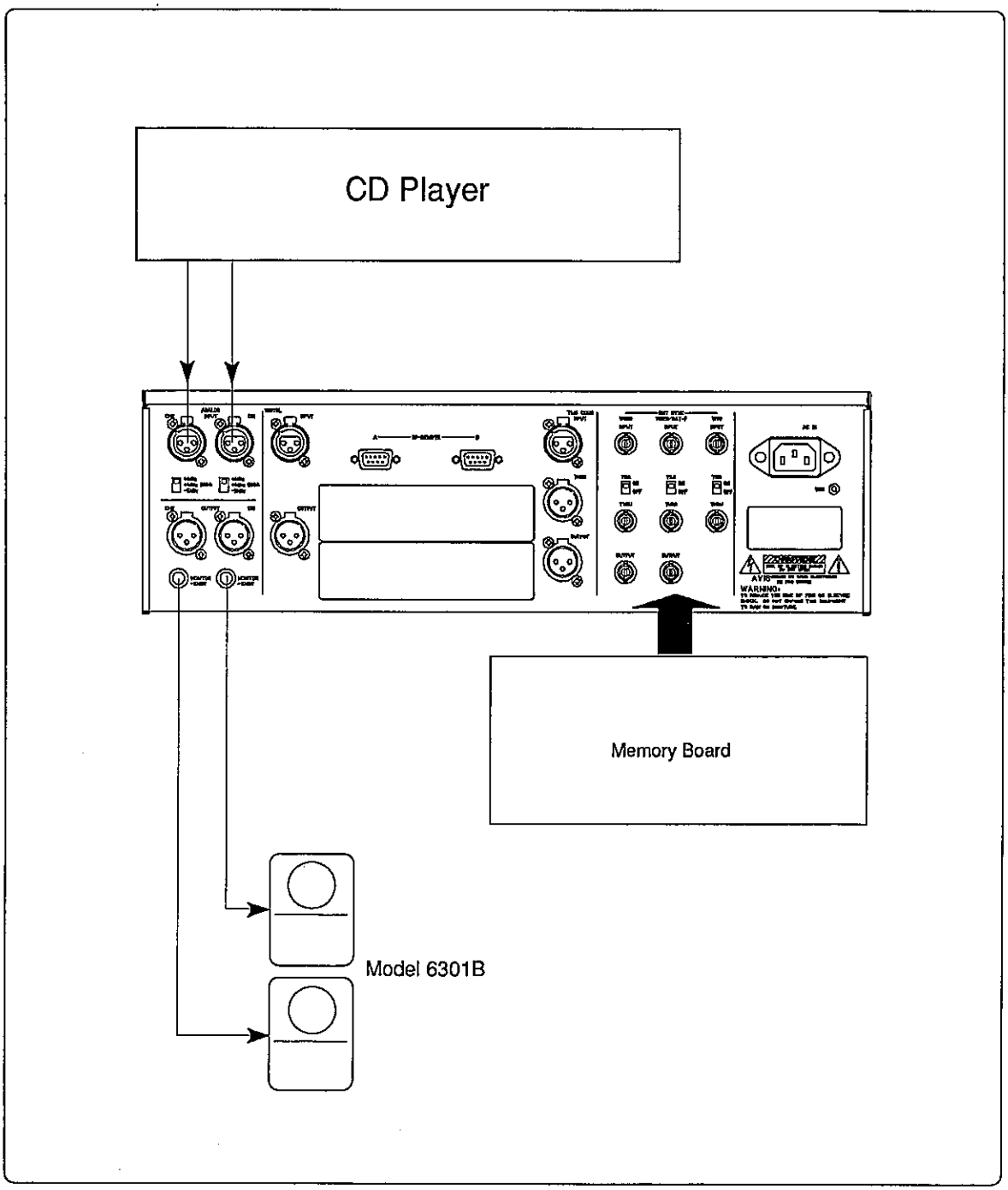
* Insert editing in this menu needs the duration (editing zone) to be 10 seconds maximum because the length of time of audio data recordable on SOURCE RAM is a maximum of 10 seconds.

* Cross fade time and cross fade level may be set using the AUTO EDIT SETUP function. In particular, depending on the cross fade level setting, editing by recording over the sound already recorded on the tape (overdub) may be done.
Refer to Chapter 13 AUTO EDIT SETUP for further information.

10-2-1. Connection of Equipment

Illustrated below is a basic connection setup.

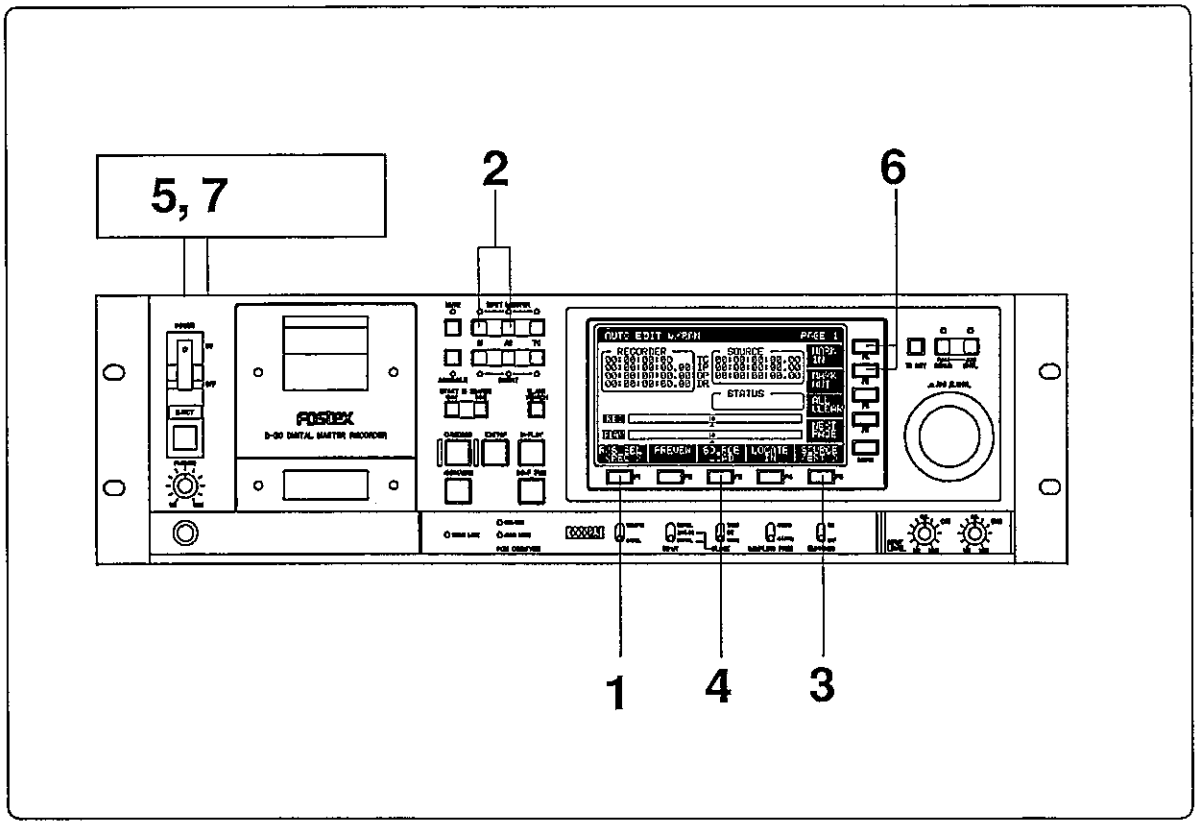
The source of audio data to be inserted may vary between the tape of the RECORDER itself and the external audio source depending on the situation.



10-3. Operation for INSERT-EDITING

10-3-1. Recording on SOURCE RAM of Audio Data

Necessary steps are explained here using as an example the recording of audio data supplied from an externally connected CD player.



Operating procedure

1. Press the F1 (R/S SEL) key to select <SRC> while on PAGE 1.
   Select REC if you wish to record from the tape on the RECORDER.

2. Turn INPUT MONITOR keys, A1 and A2 ON. (LED will light.)
   Audio from the SOURCE (CD) can be monitored now.

3. Press the F5 (SOURCE) key to select <EXT>.
   With EXT selected, the signal of an external source (the CD player) will be input. To input from the tape on the RECORDER, select <TAPE>.

4. Press the F3 (SOURCE LOAD) key.
   [LOAD TO MEMORY] will be displayed at STATUS, and audio data from CD player can now be recorded into the RAM. When input is coming from the tape on the RECORDER, the display will read [TAPE TO MEMORY] at STATUS.

5. Press the PLAY button of the CD player.

   The player will initiate playback and audio data will be recorded in the RAM. By doing this, new audio data is always recorded.

6. Press the FA (MARK IN) or FB (MARK OUT) key at a point where recording is intended.

   Pressing either key will cause [WAIT ・・・!] to be displayed at STATUS, and recording will continue into the RAM in the following manner:

   When the FA (MARK IN) key is pressed:

   The time when the key pressed will be input at IP portion of SOURCE. At the same time, recording in the RAM of audio data will be executed for a total of 10 seconds, 2.5 seconds before the point where pressed, and 7.5 seconds after the point, and then stop.

   When the FB (MARK OUT) key is pressed:

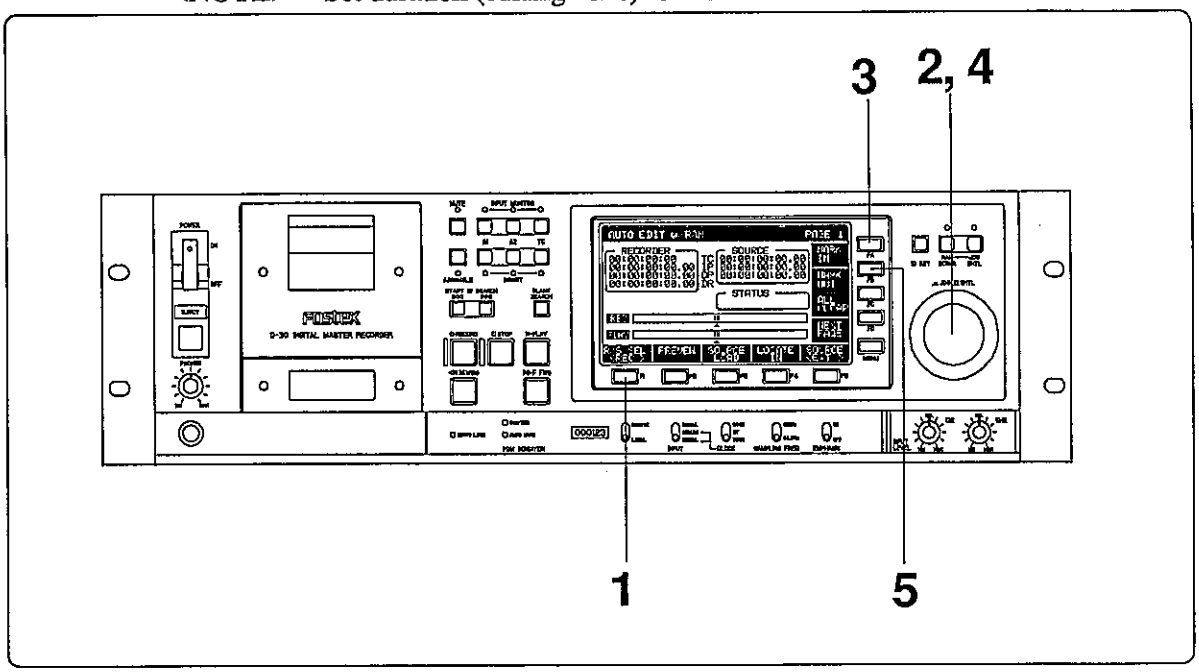
   The time when this key was pressed will be input at OP portion of SOURCE. At the same time, recording into the RAM of audio data will be executed for a total of 10 seconds, 7.5 seconds before when the key was pressed, and 2.5 seconds after the point, and then stop.

   The display at STATUS portion will disappear as soon as recording into the RAM is finished.

7. Press the stop button of the CD player to finish.

10-3-2. Setting of IN/OUT Points of SOURCE

<NOTE> Set duration (editing zone) for no more than 10 seconds.



Operating procedure

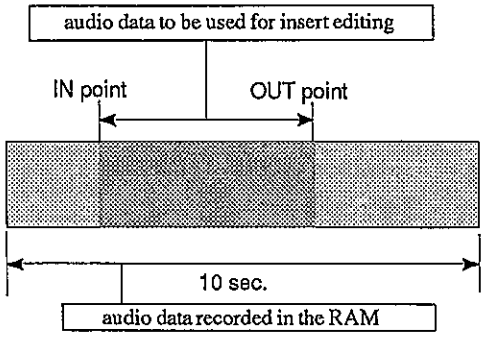
1. Press the F1 (R/S SEL) key to select <SOURCE>.

2. Locate the IN point using JOG/SHUTTLE.
   Use of JOG/SHUTTLE will make it possible to RAM-scrub audio data recorded at SOURCE.

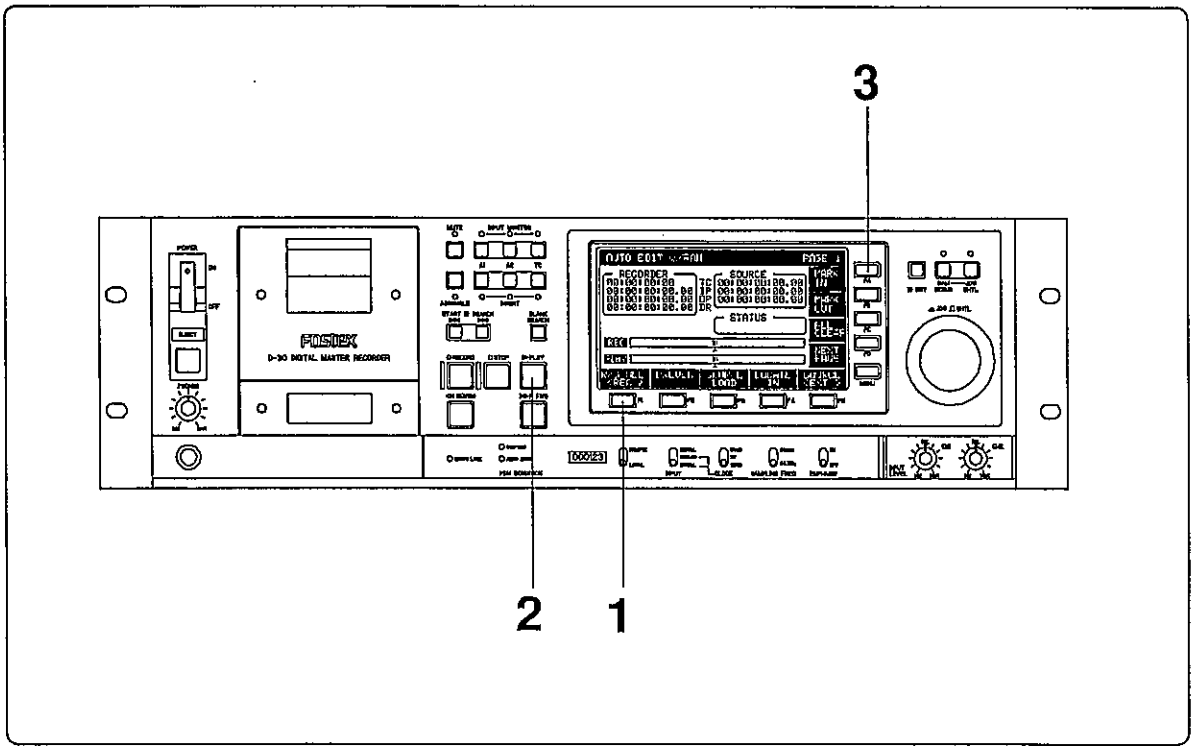
3. Press the FA (MARK IN) key at the desired IN point.
   The IN point of SOURCE will be defined, and the IP portion of the display will show the time as IN point.

4. Locate the OUT point using JOG/SHUTTLE.

5. Press the FB (MARK OUT) key at the desired OUT point.
   OUT point of SOURCE will be defined, and OP portion of the display will show the time as OUT point.



10-3-3. Setting of IN or OUT Point of RECORDER

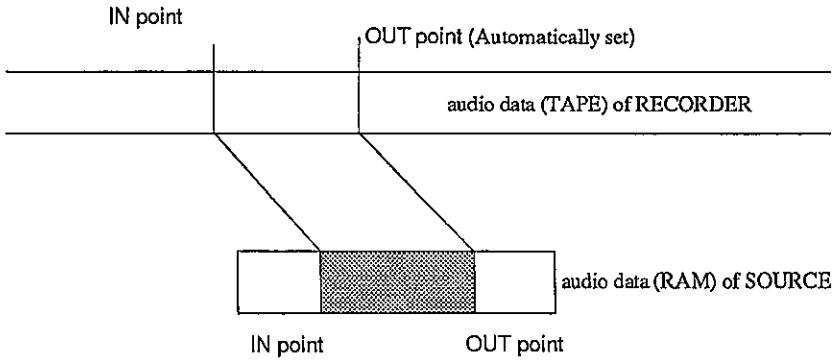


Operating procedure

1. Press the F1 (R/S SEL) key to select <RECORDER>.

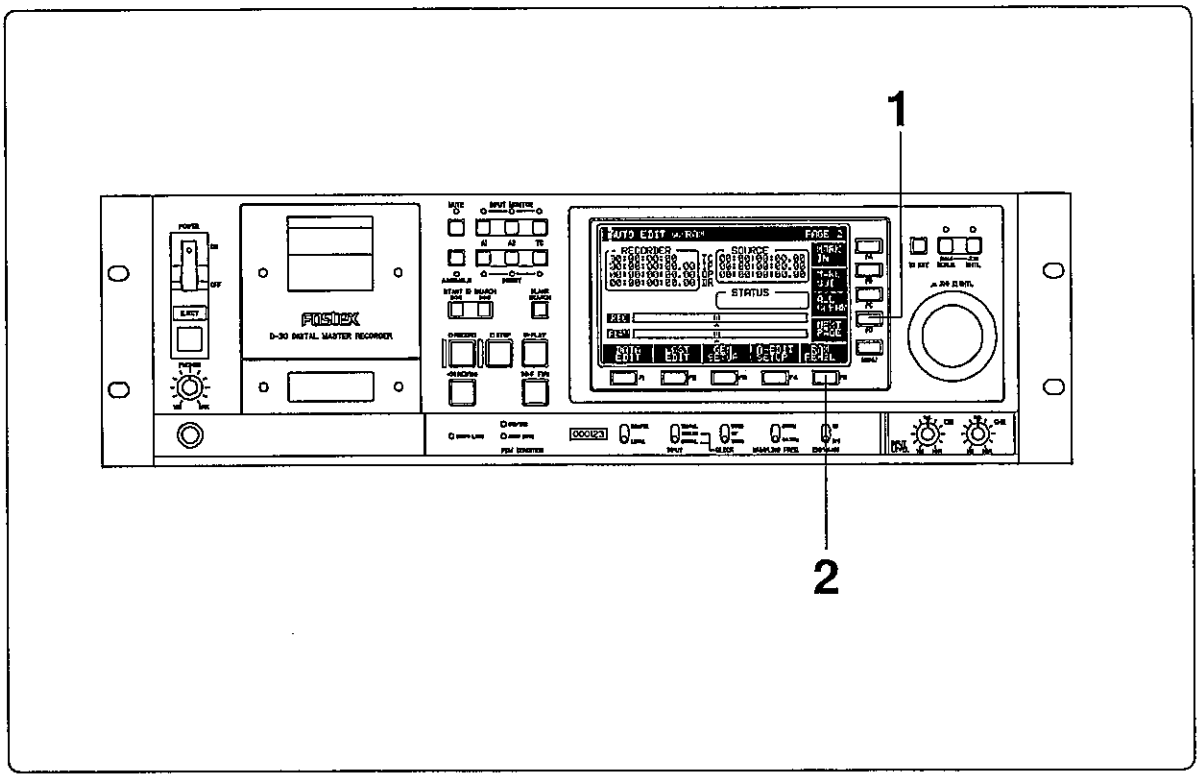
2. Press the PLAY button.
   The RECORDER will initiate playback of tape.

3. Press the FA (MARK IN) key at the desired IN point.
   Pressing this key will define the IN point of the RECORDER, which will be displayed on the IP portion of the display.
   When the IN point is defined, the OUT point of the RECORDER and duration will be automatically defined and displayed.



10-3-4. Execution of RAM REHEARSAL

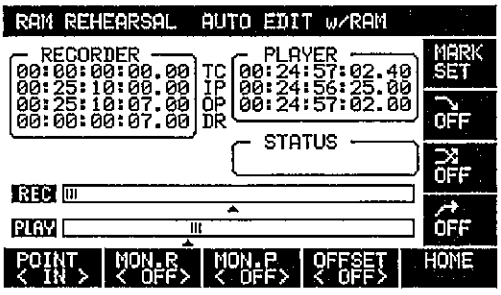
*RECORDING IN THE RAM OF EDIT POINT DATA



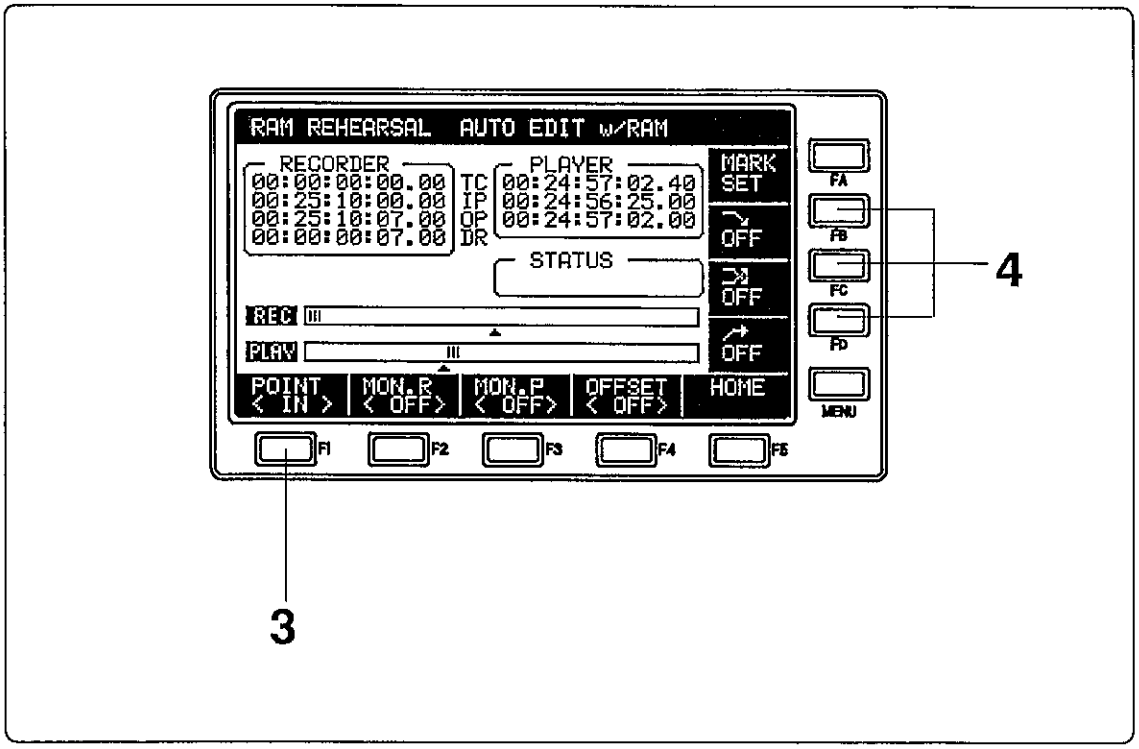
Operating procedure

1. Press the FD (NEXT PAGE) key to display PAGE 2.

2. Press the F5 (RAM REHSL) key.
   STATUS will display [RAM RECORDING], and audio data at IN/OUT points of the RECORDER will be recorded in the RAM.
   When recording is finished, the [RAM RECORDING] display will be replaced with the next RAM REHEARSAL MODE display. (Display shown is for reference only.)



3. Press the F1 (POINT) key to select <IN>.
   Selection of IN enables execution of IN point rehearsal.
   Select OUT for rehearsal at OUT point.



4. Press the FB (↘), FC (⇄) or FD (↗) key.
FADE IN, FADE OUT or CROSS FADE, respectively, will be executed.
During rehearsal, [RAM REHEARSAL] will be shown at STATUS.
The function of the respective keys is as follows:

FB (↘) key

Pressing this key once will turn <OFF> to <ON>, playback the fade out at IN point of the RECORDER or fade in at OUT point of SOURCE, and then turn <OFF>.
Pressing this key again during this operation will turn <ON> to <RPT>, and rehearsal will be repeated until <OFF> is executed.

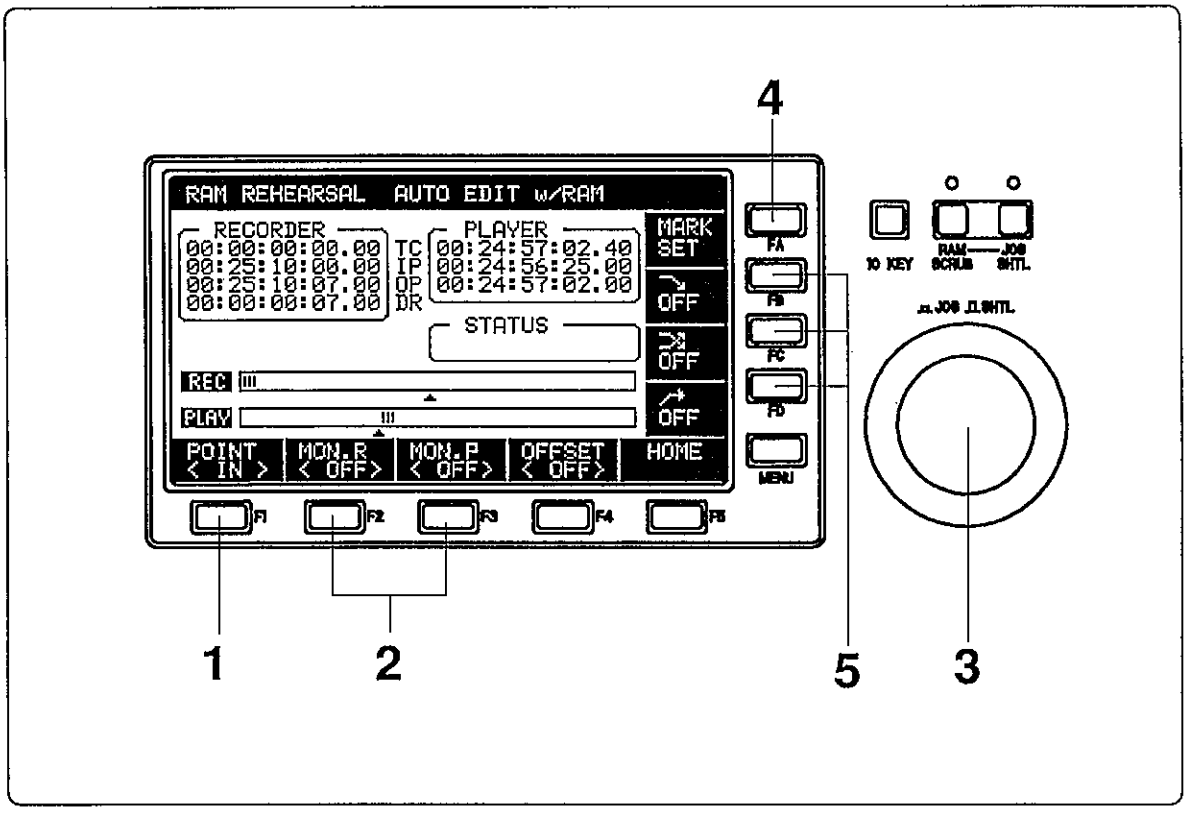
FD (↗) key

Pressing this key once will turn <OFF> to <ON>, playback the fade in at IN point of the SOURCE, or fade in at the OUT point of the RECORDER, and then turn <OFF>.
Pressing this key again during this operation will turn <ON> to <RPT>, and rehearsal will be repeated until <OFF> is executed.

FC (⇄) key

Pressing this key once will turn <OFF> to <ON> and playback the crossfade information of both the RECORDER and the SOURCE.
Pressing this key again during this operation will turn <ON> to <RPT>, and playback will be repeated until <OFF> is executed.

* ALTERATION IN THE RAM OF IN/OUT POINTS



Operating procedure

1. Press the F1 (POINT) key to select <IN> or <OUT>.
   Selection of IN will allow alteration of the IN point in the RAM.
   With <OUT> selected, the OUT point may be altered.

2. Press the F2 (MON.R) or F3 (MON.P) key to turn <ON>.
   Turning F2 (MON.R) or F3 (MON.P) <ON> enables RAM-scrub in the vicinity of the edit point recorded in the RAM of RECORDER or SOURCE, respectively.

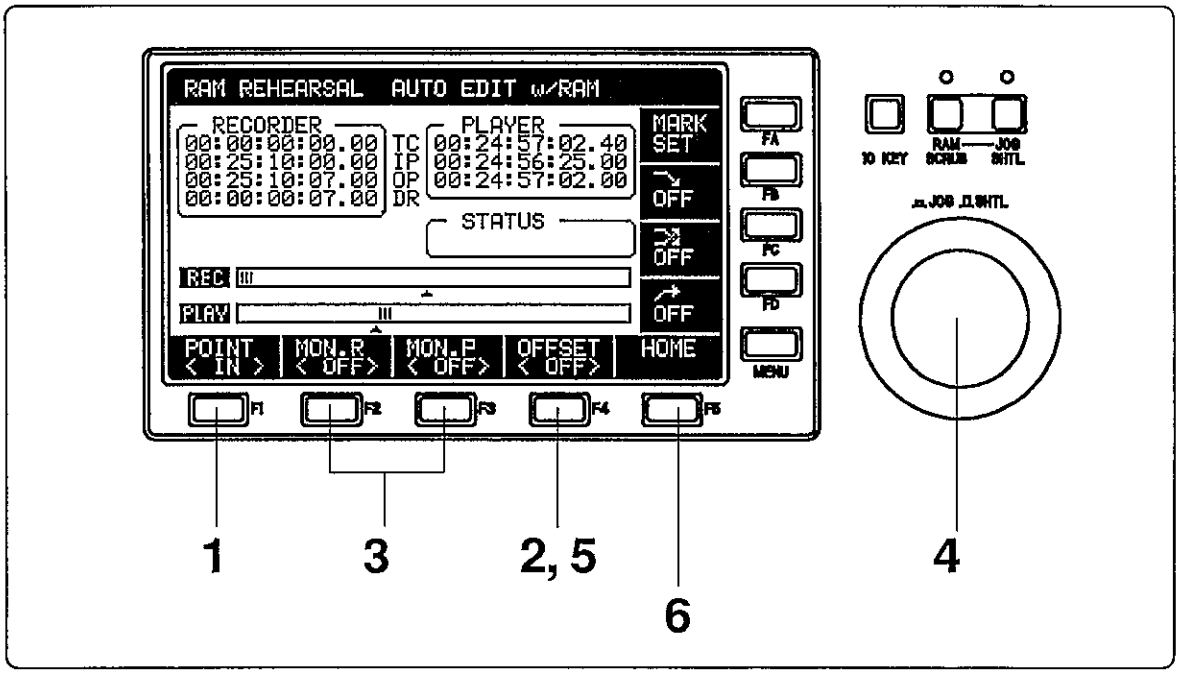
3. Alter edit point using JOG or SHUTTLE dial.
   With JOG or SHUTTLE, the edit point selected using steps 1 and 2 may be altered.

4. Press the FA (MARK SET) key.
   The new data altered with JOG/SHUTTLE will be defined, and a new edit point will be set.
   At the same time, the value of duration will be automatically computed, and renewed accordingly.

5. Repeat rehearsal at each point.

* REAL-TIME ALTERATION OF EDIT POINT

During the previous rehearsal or standing by, real-time alteration of edit point is possible. Use this procedure to make point-by-point alteration of edit points of the RECORDER or the SOURCE, or simultaneous alteration of edit points of both RECORDER and SOURCE.



Operating procedure

1. Press the F1 (POINT) key to select <IN> or <OUT>.
   Selecting <IN> or <OUT> allows alteration of the IN or OUT point, respectively, of the RECORDER or the PLAYER (SOURCE).

2. Press the F4 (OFFSET ON/OFF) key to turn <ON>.

3. Press the F2 (MON.R) or F3 (MON.P) key to turn <ON>.
   Turning F2 (MON.R) key <ON> will allow alteration of the edit point of the RECORDER. With the F3(MON.P) key <ON>, the edit point of the PLAYER (SOURCE) may be altered.
   When both F2 (MON.R) and F3 (MON.P) keys are turned <ON>, simultaneous alteration of edit points of both the RECORDER and PLAYER (SOURCE) is possible. (Duration may accordingly be altered.)

4. Altering the edit point with JOG.
   Using JOG will allow real-time alteration of the edit point of the RECORDER or PLAYER (SOURCE), or both together.

5. When you are finished altering the edit point, press the F4 (OFFSET) key to turn <OFF>.

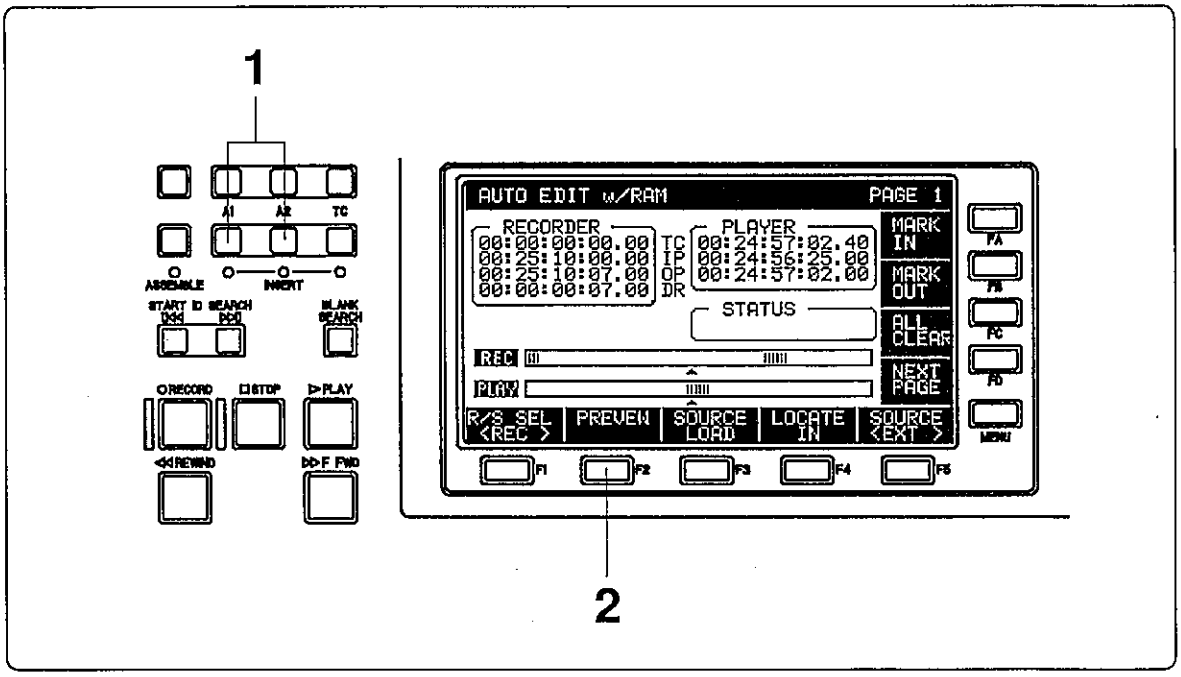
6. Press the F5 (HOME) key to finish the procedure here.

10-3-5. Rehearsal Using The F2 (PREVIEW) Key

Rehearsal may be executed using the F2 (PREVIEW) key for subtle adjustment in the RAM of the edit point.

The rehearsal operation will be performed between those set points (IN to OUT) of the actual take, making it possible to monitor the timing of insert editing as an entire image. No recording will be made.

* EXECUTION OF REHEARSAL



Operating procedure

1. Turn INSERT A1 and A2 keys on. (LED will light.)

2. Press the F2 (PREVIEW) key while PAGE 1 is enabled.

   The display will read [PREVIEW] on the [STATUS] indicator, and rehearsal will begin of the insert-edited part.

   Rehearsal will start after pre-rolling from the IN point and end after post-rolling at the OUT point.

   During rehearsal, the RECORD button will flash between IN and OUT points and audio from the PLAYER (SOURCE) will be inserted. No sound, however, will be recorded.

   Warning
   AUDIO TRACK NOT READY

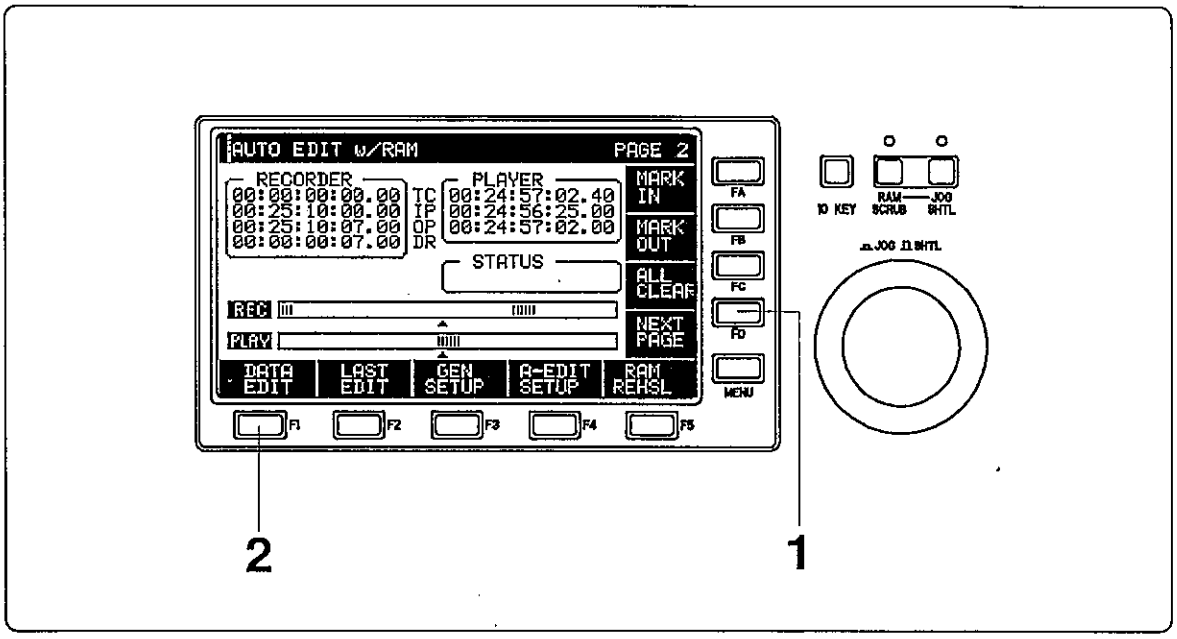
<NOTE>

Pressing the F2 (PREVIEW) key without the insert mode enabled will not execute rehearsal with the display as shown below. Should this happen, turn INSERT A1 and A2 keys ON.

* ALTERATION OF EDIT POINT

The edit point may be re-set after executing rehearsal.

The following example alters IN point of the PLAYER (SOURCE).

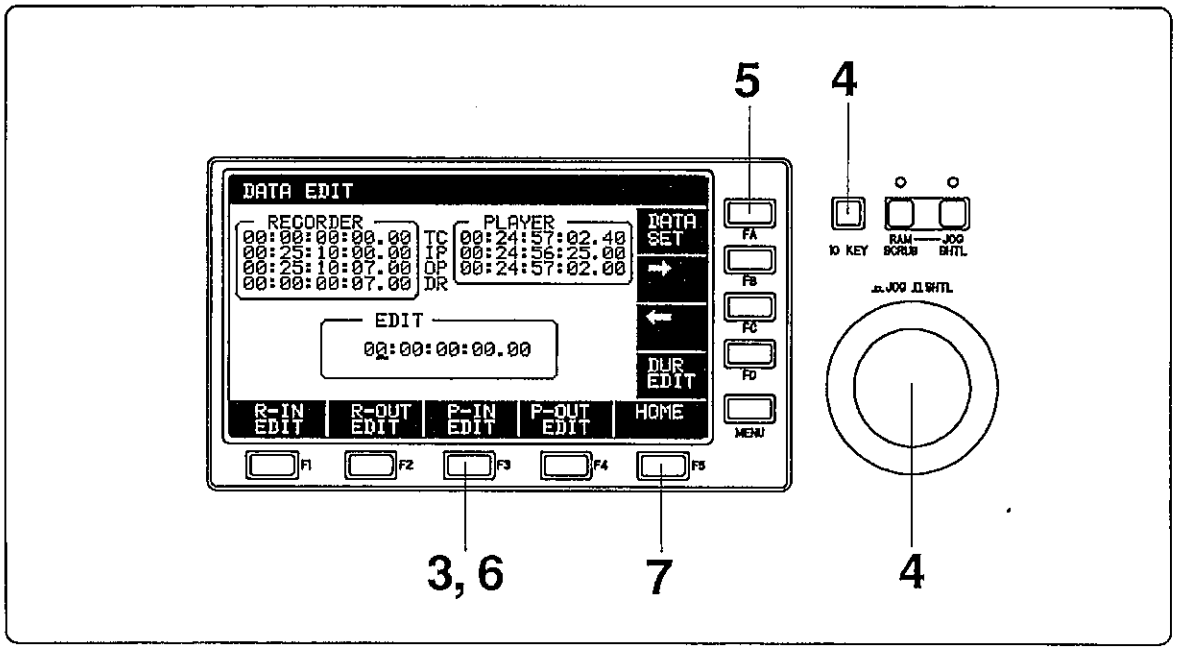


Operating procedure

1. Press the FD (NEXT PAGE) key to enable PAGE 2.

2. Press the F1 (DATA EDIT) key.

   The screen will display the data edit mode and [EDIT] within it.

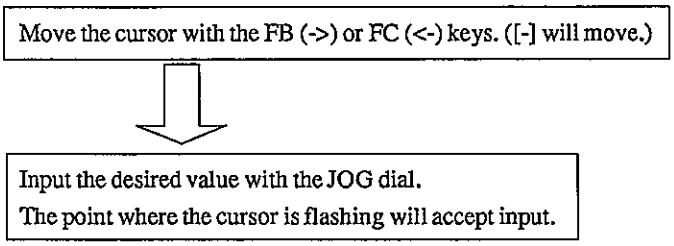


3. Press the F3 (P-IN EDIT) key.

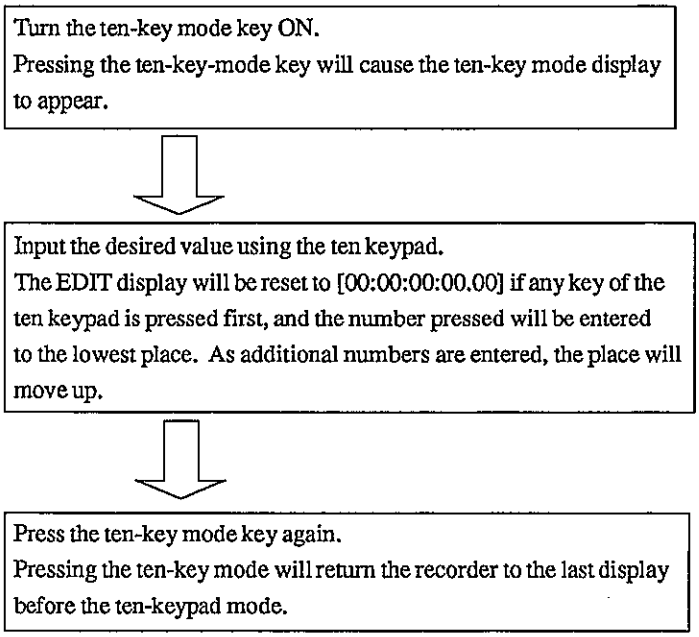
   The current IN point data of PLAYER (SOURCE) will display in [EDIT], allowing you to edit the contents.

4. Put new data in via the JOG dial or the ten keypad.

Inputting with the JOG dial



Input with the TEN KEYPAD



5. Press the FA (DATA SET) key.
   The display will read [Please select point].

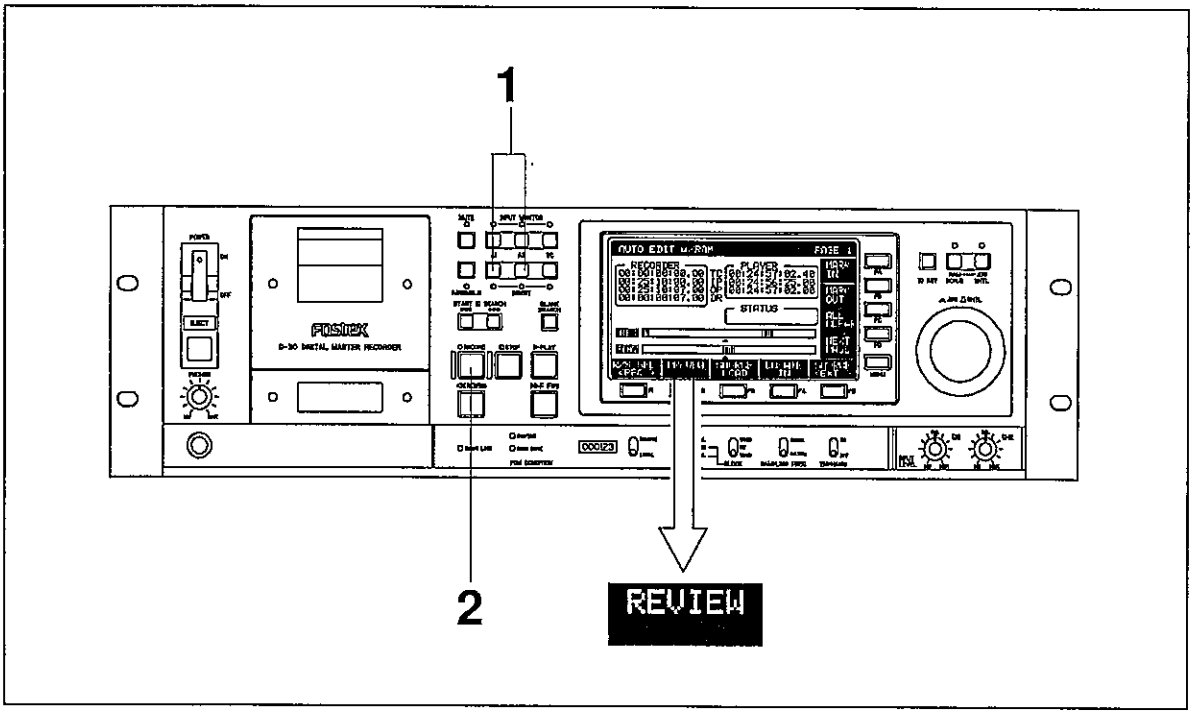
6. Press the F3 (P-IN EDIT) key.
   The newly edited IN point of the PLAYER (SOURCE) will be registered.
   Concurrent with the change of the IN point of the PLAYER (SOURCE), the OUT point of the PLAYER will be automatically computed, and changed accordingly.
   Other points may be altered in the same manner.

7. Press the F5 (HOME) key to finish.

10-3-6. Execution of Insert Editing

Rehearsal may accompany insert editing (AUTO EDIT).

Press the FD (NEXT PAGE) key to have the display restore PAGE 1.



Operating procedure

1. Turn INSERT A1 and A2 keys ON. (LED will light.)

2. Press the RECORD button of the RECORDER.

   The display will read [AUTO EDITING !] at [STATUS], and insert editing will be executed.

   The RECORD button will flash from IN to OUT.

   Finishing insert editing will turn off [AUTO EDITING !] along with the RECORD button.

   Concurrently with the finish of insert editing (AUTO EDIT), the function of F2 (PREVIEW) key will change to [REVIEW]. Pressing this key will review the inserted materials.

   Setting of a new edit point will disable this [REVIEW] function, and change the function of the button to [PREVIEW].

<NOTE>

Pressing the RECORD button without the insert mode enabled will not allow auto editing, when the display reading as follows. If this happens, press INSERT A1, A2 keys to ON.

Warning
AUDIO TRACK NOT READY

CHAPTER 11

Chase Setup Mode

Use this mode to set up the CHASE SETUP. CHASE SETUP is common to all of the recording modes.

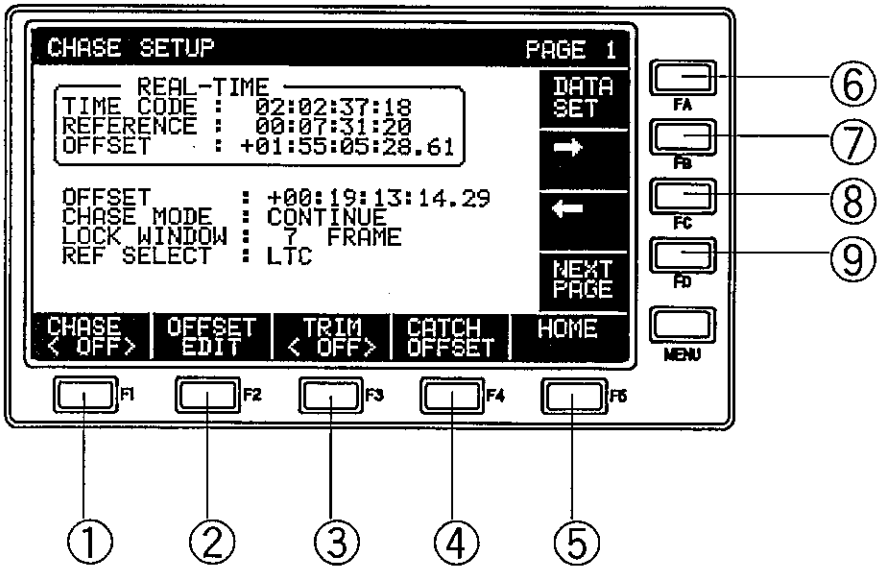
Play and Recording Mode

CHAPTER 11
TABLE OF CONTENTS

11-1. The Function of Chase Setup Mode

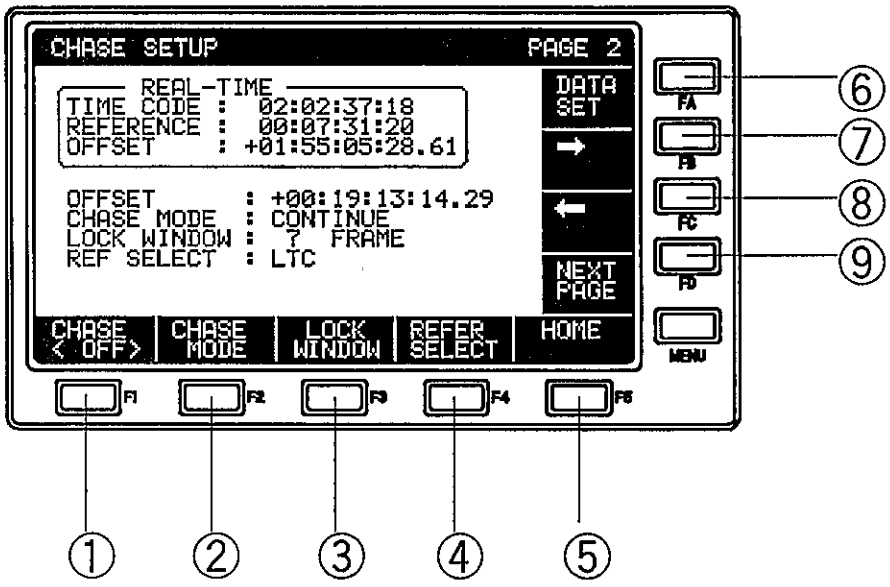
PAGE 1 of the second level display will be enabled and CHASE SETUP displayed when the F3(CHASE SETUP) key is pressed while in the PLAY and RECORDING MODE menu. This mode, consists of 2 pages of the following functions:

PAGE 1 of the SECOND LEVEL display



No.		Display	Function
①	F1	CHASE (ON/OFF)	Pressing this key will toggle CHASE mode between ON and OFF.
②	F2	OFFSET EDIT	Pressing this key will enable edit mode of CHASE OFFSET memory.
③	F3	TRIM (ON/OFF)	Pressing this key will toggle OFFSET TRIM mode between ON and OFF.
④	F4	CATCH OFFSET	Pressing this key will execute real-time setting of OFFSET time between the current TC on the tape and REFERENCE as CHASE OFFSET time.
⑤	F5	HOME	Pressing this key will restore the previously shown display before the current one.
⑥	FA	DATA SET	Pressing this key will cause the data being edited to be input and defined.
⑦	FB	->	Pressing this key will cause the data edit point to move rightward.
⑧	FC	<-	Pressing this key will cause the data edit point to move leftward.
⑨	FD	NEXT PAGE	Pressing this key will cause the pages within the same mode or level display to cycle.

PAGE 2 of the SECOND LEVEL display

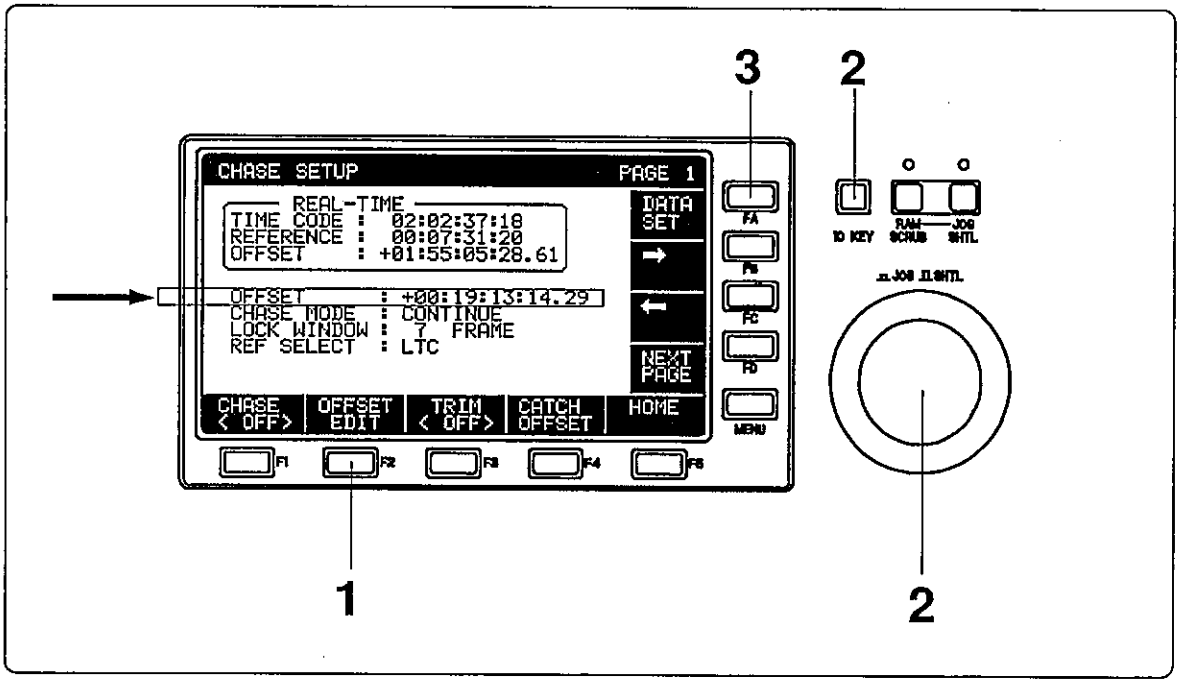


No.		Display	Function
①	F1	CHASE (ON/OFF)	This key has the same functions as that of PAGE 1.
②	F2	CHASE MODE	Pressing this key will enable the selection mode of CHASE MODE. Use of JOG dial will allow to select one of three options of ONE TIME/CONTINUE/FRAME SYNC.
③	F3	LOCK WINDOW	Pressing this key will enable the reference frame setting mode by which the UNLOCKcondition after CHASE LOCK may be judged. With the JOG dial, the number of FRAMEmay be set in a range of 1 to 20.
④	F4	REFER SELECT	Pressing this key to select the reference TC needed for CHASE SYNC. Three options ofAUTO, LTC, or VITC are available using the JOG dial.
⑤	F5	HOME	This key has the same functions as that of PAGE 1.
⑥	FA	DATA SET	This key has the same functions as that of PAGE 1.
⑦	FB	->	This key has the same functions as that of PAGE 1.
⑧	FC	<-	This key has the same functions as that of PAGE 1.
⑨	FD	NEXT PAGE	This key has the same functions as that of PAGE 1.

11-2. Setting of CHASE SETUP

11-2-1. Editing of CHASE OFFSET (PAGE 1)

This function is to set or change the CHASE OFFSET value.



Operating procedure

1. Press the F2 (OFFSET EDIT) key.

   The OFFSET edit mode activate and the currently displayed OFFSET value (arrowed area above) will be held. The display will show the OFFSET EDIT reading:

   OFFSET EDIT
   +00:19:13:14.29

2. Set or changing the OFFSET value.

   Setting or changing the OFFSET value may be executed by inputting with either the JOG dial or with the ten keypad after switching over to ten-key mode.

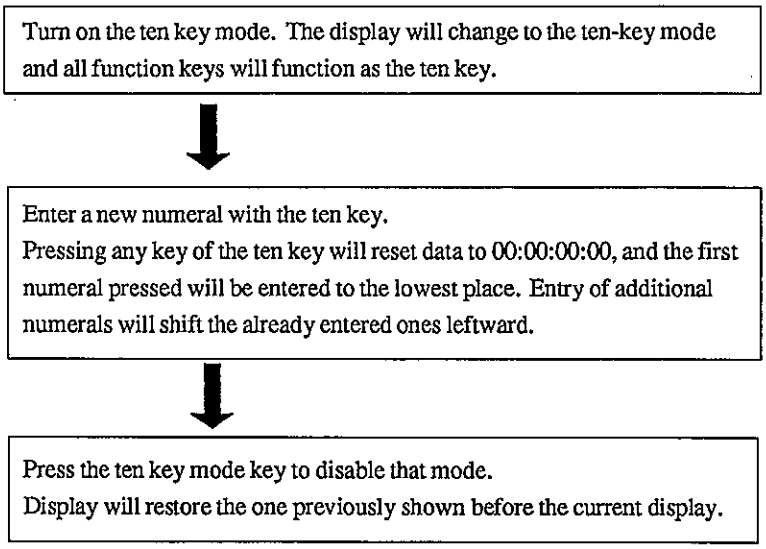
Inputting via the JOG dial:

Move edit point with the FB(->) or the FC (<-) key.

↓

Enter a new numeral at the edit point using the JOG dial.

Inputting with the ten keypad:



3. Press the FA (DATA SET) key.

   The OFFSET value entered will be defined, and simultaneously, the setting mode will be disabled.

   The newly set value will be registered in the [OFFSET] portion (arrowed) of the display.

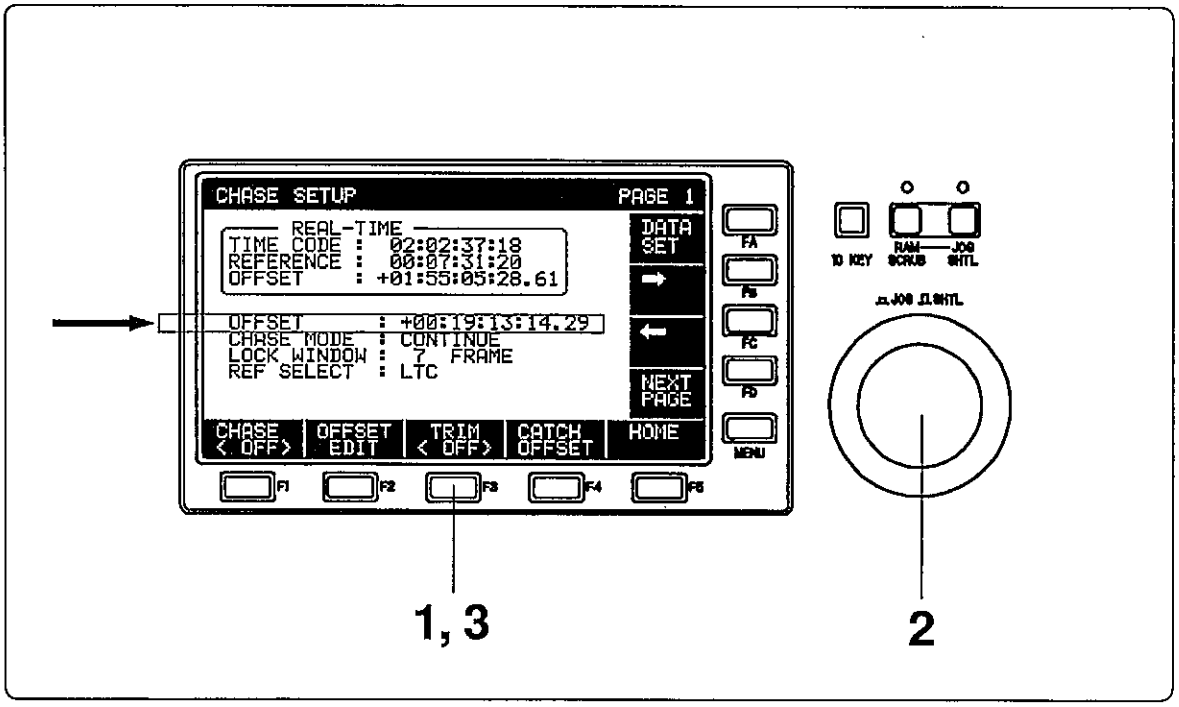
<NOTE>

OFFSET time may be changed up to the [-/+] range with JOG dial, but not with the ten keypad.

To quit, press the F2 (OFFSET EDIT) key again, and then the FA (DATA SET) key.

11-2-2. Real-Time Change of CHASE OFFSET (TRIM function) (PAGE 1)

This operation allows real-time change of the CHASE OFFSET value in 1/100 frame increments.



Operating procedure

1. Press the F3 (TRIM) key to turn <ON>.
   Real-time change of the OFFSET value (arrowed area) can be done.

2. Change OFFSET value with JOG dial.
   Use of JOG dial allows real-time change of the currently displayed OFFSET value (arrowed) in 1/100 frame increments.

3. When the offset value is correct, press the F3 (TRIM) key to turn <OFF>.

11-2-3. Setting of CHASE MODE (PAGE 2)

To set the CHASE MODE:
The CHASE MODE has three modes available:
ONE TIME / CONTINUE / FRAME SYNC.
Select one as appropriate.
The function of each CHASE MODE is as follows:

ONE TIME:

In this mode, this recorder will terminate CHASE as soon as one locking action has been accomplished to reference TC after chased ON. The recorder will self-run afterward. No re-chasing will be performed when locking is disengaged.

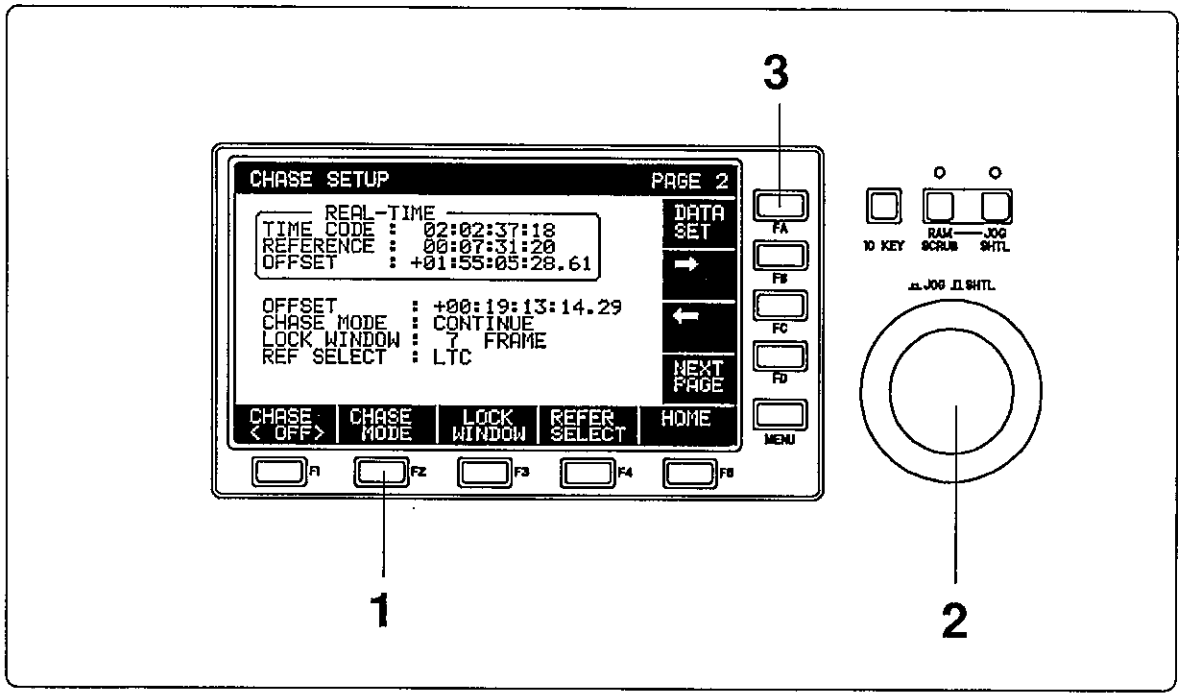
CONTINUE:

In this mode, the recorder will self-run upon locking to reference TC after chase ON. Disengagement of locking will automatically cause re-chasing operation to be performed.

FRAME SYNC:

In this mode, after locking to the reference TC following chase ON, the machine will continue to play, frame syncing, at variable speed such that the change of the speed may not be perceived, so that locking will not be disengaged. In the event locking is disengaged, re-chasing will be automatically performed.

<NOTE>
Long time operation may cause locking to disengage when the sample clock of the audio and the clock of the time code do not match. This mode is recommended for such a case.



Operating procedure

1. Press the F2 (CHASE MODE) key.

   The CHASE MODE will be enabled and the display will read as follows:(> designates the currently set mode.)

```
CHASE MODE
  ONE TIME
> CONTINUE
  FRAME SYNC
```

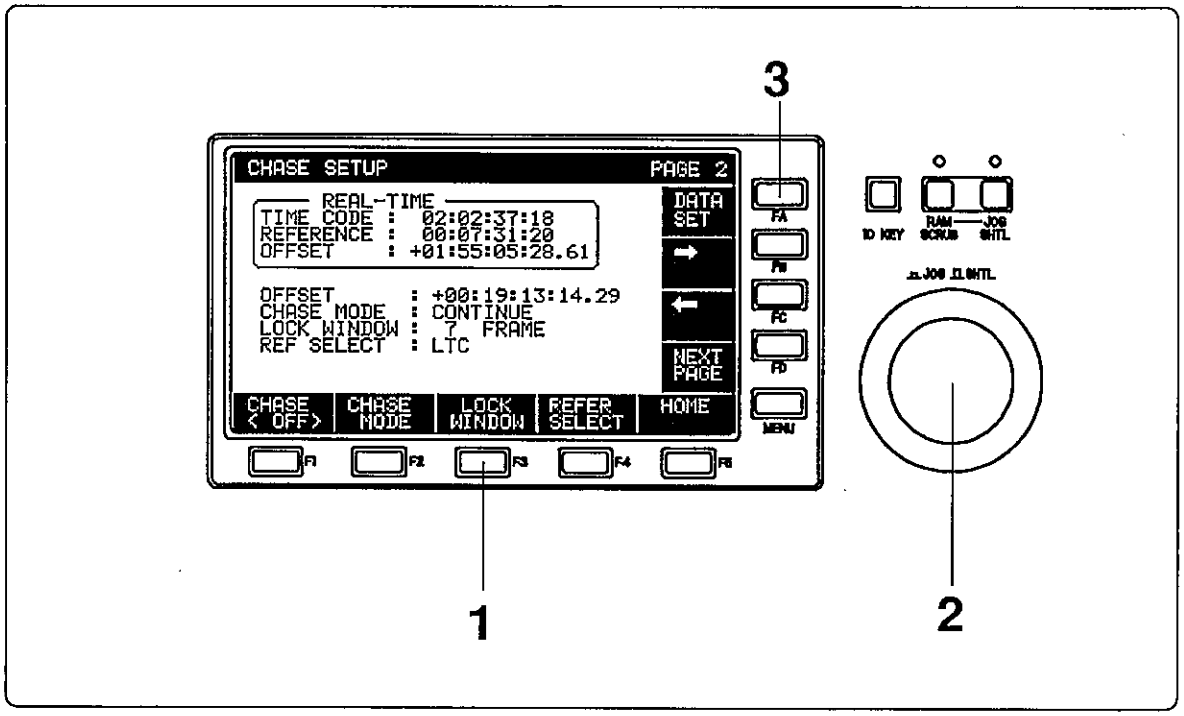
2. Select the desired CHASE MODE using the JOG dial. (Move >.)

3. Press the FA (DATA SET) key.

   The selected CHASE MODE will be registered, and the setting mode will be disabled. The display will show the newly set CHASE MODE.

11-2-4. Setting of LOCK WINDOW (PAGE 2)

This example sets the reference frame to use for judgment of UNLOCK condition after CHASE. The number of reference frame may be set in a range of 1 to 20. 1/100 frame or less will cause the locking condition to be judged.



Operating procedure

1. Press the F3 (LOCK WINDOW) key.

   The setting mode of LOCK WINDOW will be enabled, and the currently set frame value will be shown as follows:

2. Input the desired value via the JOG dial.

3. Press the FA (DATA SET) key.

   The input frame value of the LOCK WINDOW will be registered, and the setting mode will be disabled. The newly set frame value will be shown on the display.

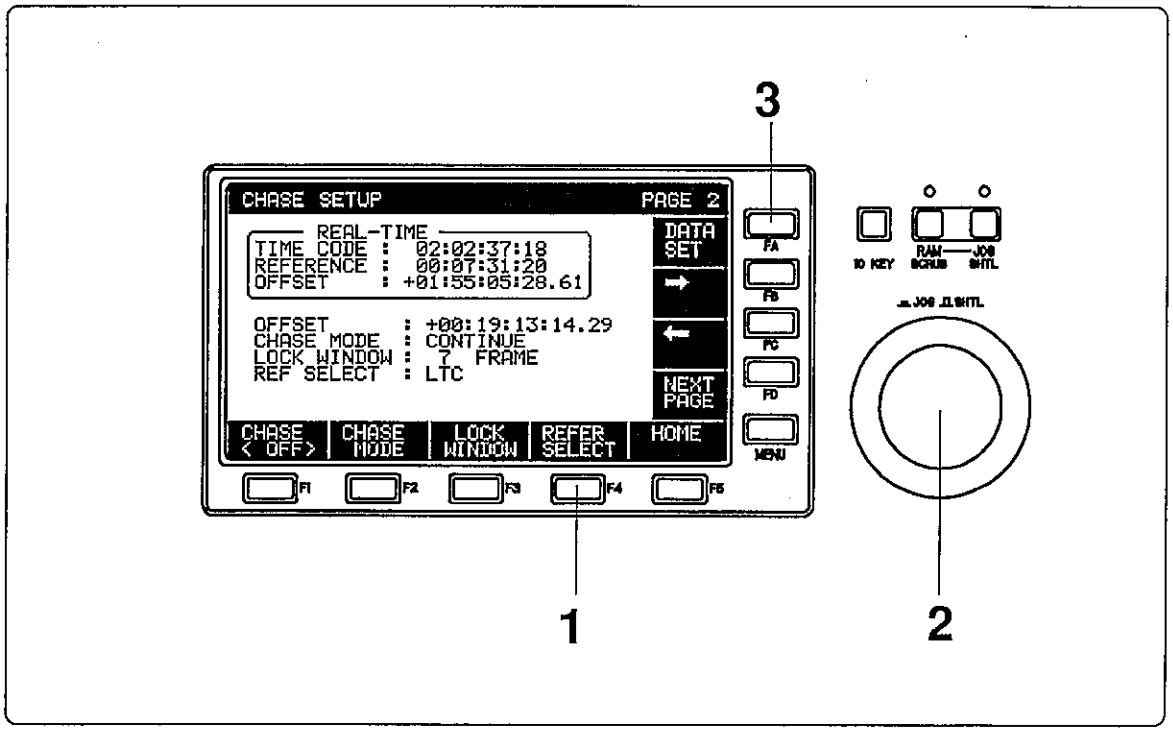
11-2-5. Setting of REFERENCE TC (PAGE 2)

This is for selecting reference TC for CHASE SYNC. Reference TC may be selected from AUTO, LTC, or VITC depending on the situation.

AUTO **:When AUTO is selected, LTC will dominate when it is valid. VITC will function when no LTC is available, or when TC may not be read by the master while in either of STILL, SLOW F FWD or SLOW RWD operation.**

LTC **:Only LTC will be taken as reference TC if LTC is selected. VITC will be ignored.**

VITC **:Currently, VITC does not function as reference.**



Operating procedure

1. Press the F4 (REFER SELECT) key.
   The setting mode of REFERENCE SELECT is enabled, and the currently set reference will be displayed as follows: (> designates the currently set reference.)

2. Select the desired REFERENCE TC via the JOG dial. (Move >.)
   Currently, VITC is not available for selection.

3. Press the FA (DATA SET) key.
   The selected reference will be registered and the setting mode will be disabled. The newly set reference will be shown on the display.

CHAPTER 12

Generator Setup Mode

Use this mode to set up items related to the internal generator.
This is common to all of the recording modes including:

Play and Recording Mode

Confidence Recording Mode

Auto Edit with Player Mode

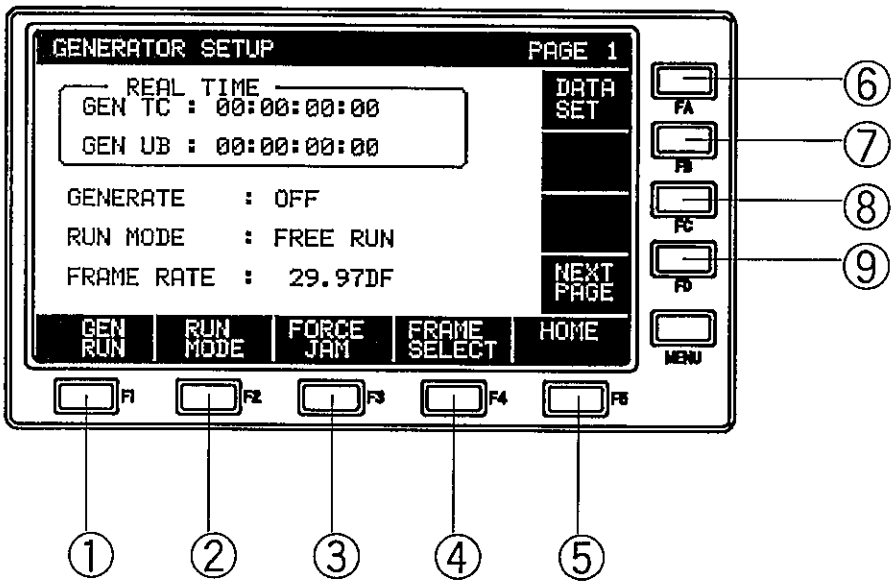
Auto Edit with RAM Mode

CHAPTER 12
TABLE OF CONTENTS

12-1. Functions of Generator Setup Mode

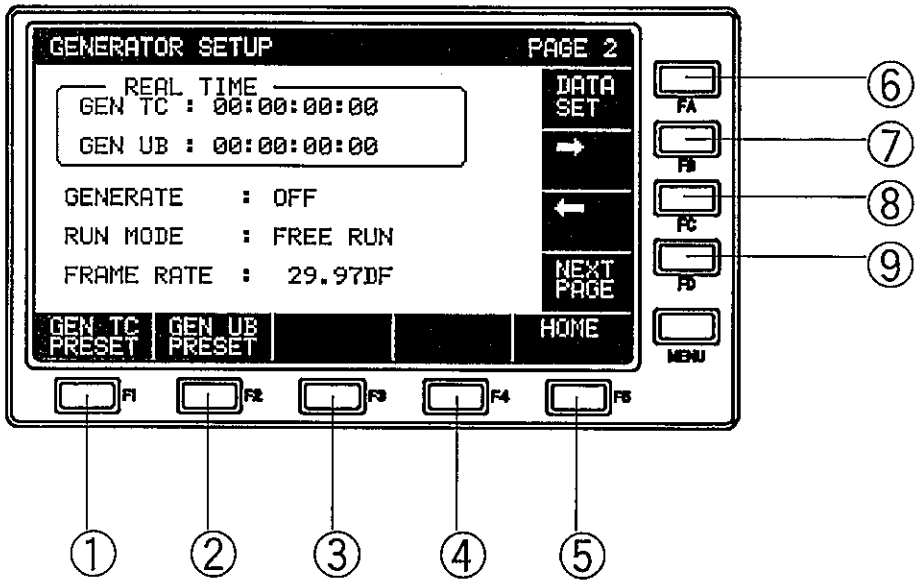
In each menu, pressing the GEN SETUP key will open PAGE 1 of the second level display as shown below. This will access the GENERATOR SETUP mode. This mode makes it possible to set internal generator related items and consists of PAGE 1 and 2 and functions as follows:

PAGE 1 of the SECOND LEVEL display



No.		Display	Function
①	F1	GEN RUN	Pressing this key will toggle the generator run mode ON and OFF. Turning the key on will start the internal generator, and when turned off, it will stop. When OFF, any external time code input will be automatically recorded.
②	F2	RUN MODE	Pressing this key will access the RUN MODE of GENERATOR for setup. Two run modes, FREE RUN and REC RUN are available for selection.
③	F3	FORCE JAM	When external time code is being supplied, pressing his key, while the generator is running, will force-jam the value of the external TC into the generator.
④	F4	FRAME SELECT	Pressing this key will access the mode where the frame rate of the internal time code generator and external video sync may be set. Frame rates 29.97DF, 29.97NDF, 30DF, 30NDF, 25 and 24 may be selected.
⑤	F5	HOME	Pressing this key to restore the previous display.
⑥	FA	DATA SET	Pressing this will input and define DATA currently being edited.
⑦	FB		No function at present.
⑧	FC		No function at present.
⑨	FD	NEXT PAGE	Pressing this key will cycle the pages within the same mode or level display. The first page follows the last one.

PAGE 2 of the SECOND LEVEL display



No.		Display	Function
①	F1	GEN TC PRESET	Pressing this key will enable edit mode of GENERATOR TC.
②	F2	GEN UB PRESET	Pressing this key will enable edit mode of GENERATOR UB.
③	F3		No function at present.
④	F4		No function at present.
⑤	F5	HOME	The function of this key is identical to that of PAGE 1.
⑥	FA	DATA SET	The function of this key is identical to that of PAGE 1.
⑦	FB	->	Pressing this key will move DATA edit point rightward.
⑧	FC	<-	Pressing this key will move DATA edit point leftward.
⑨	FD	NEXT PAGE	Functions identically to that of PAGE 1.

12-2. Setting of GENERATOR SETUP

12-2-1. Setting of RUN MODE (PAGE 1)

This is to set RUN MODE of internal generator. The RUN MODE has two modes available as follows. Select either one as appropriate.

FREE RUN:

When the generator is turned ON, it will generate time code in synchronization to the input sync reference. This mode may be used to record time code before executing insert editing.

REC RUN:

JAM will always be executed when playing and the generator will rest in any mode other than recording. In other words, continuous time code will be generated seamlessly from the time code which has been recorded before the recording of time code is initiated. This mode will stop functioning when in STOP, FORWARD or REWIND, with the exception of PLAY/RECORD. This mode is intended for use when recording on tape continuous time code, and in particular when assemble-editing.

<NOTES>

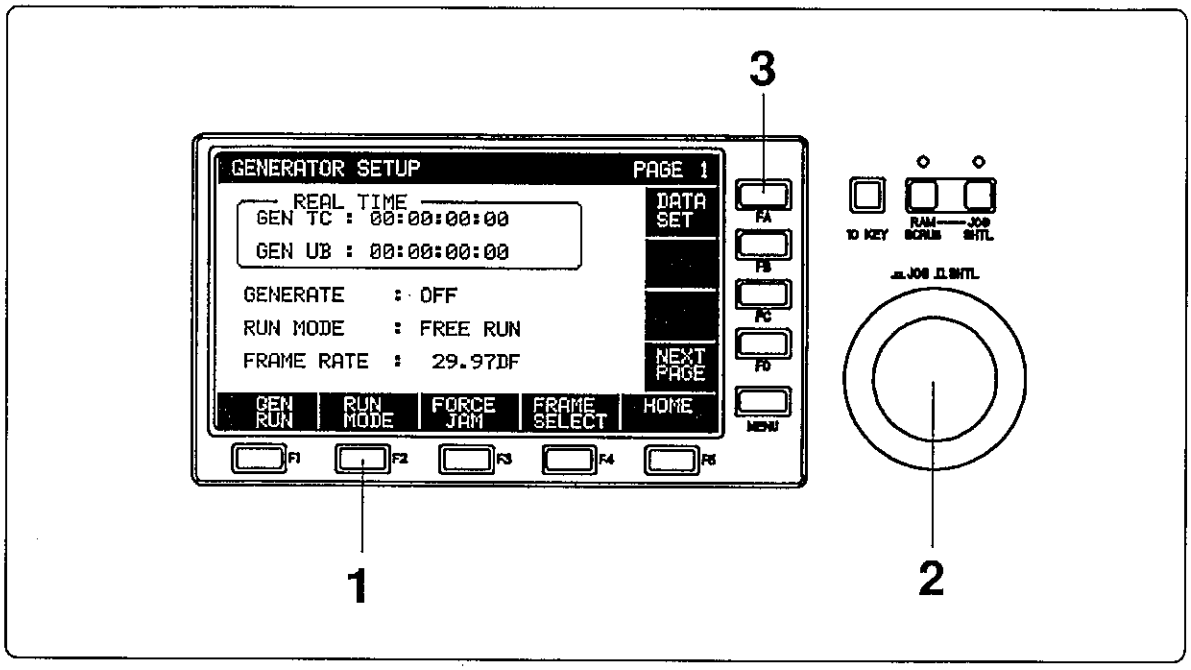
* In REC RUN mode, the phase of input video sync will not synchronize to the internal generator time code.

* When VARI PITCH is [ON], use of REC RUN mode will activate VARI SPEED function where GENERATOR TC is set to and internal GENERATOR TC will be recorded.
Therefore, playback at the normal speed of tape recorded with VARI PITCH will cause REPRO TC to be played back also at the speed.

* In FREE RUN mode, even if VARI PITCH is [ON], TC is being generated in synchronization to internal or external VIDEO FRAME.
Therefore, playback at the normal speed of tape recorded with VARI SPEED [ON] will cause REPRO TC to be played back at non-normal speed.

* Try as much as possible not to record IEC TIME CODE under the VARI SPEED condition. This is due to the structure of the code. Or, TC may not be properly played back depending on the equipment used.
On D-30, VARI SPEED function should be used within the range of +/- 2%.

<NOTE>
When SETUP MODE menu is set to TC OUT MODE, GENERATOR TC may be externally output. But, if VARI SPEED function of this machine is [ON], the TC may not be properly output.
Therefore, VARI SPEED of this machine should be used in [OFF] mode, when GENERATOR output is intended.



Operating procedure

1. Press the F2 (RUN MODE) key.
   The setting mode for the RUN MODE will be enabled, and the display will look as follows:
   (> designates the currently set mode.)

```
GEN MODE
> FREE RUN
  REC RUN
```

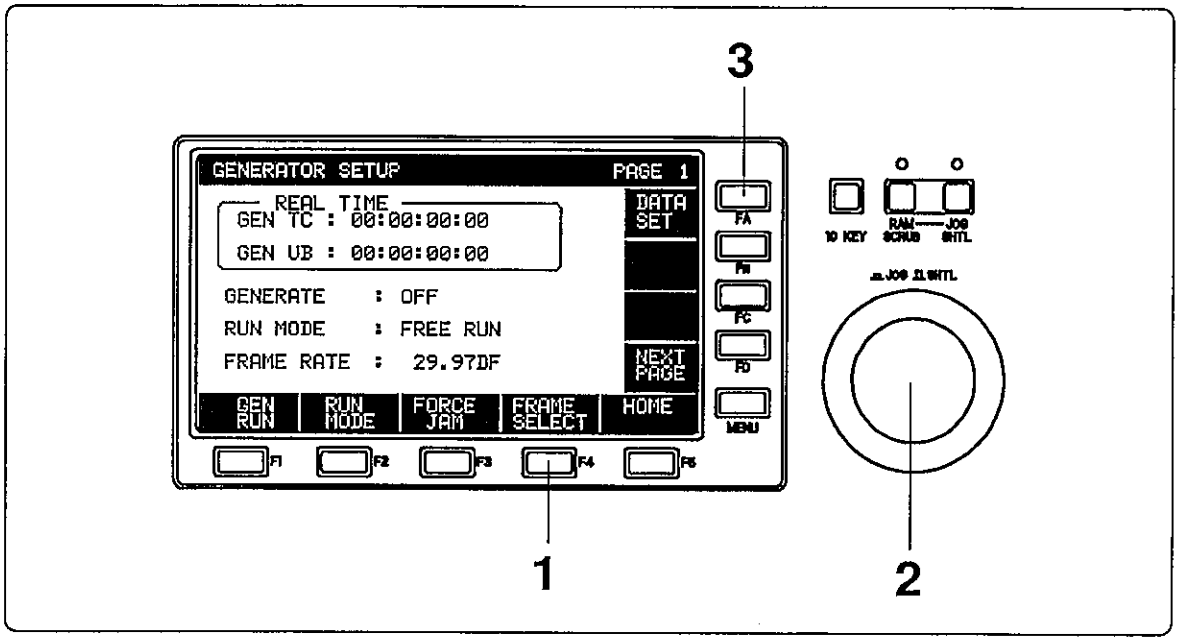
2. Select the desired RUN MODE via the JOG dial.(Move >.)

3. Press the FA (DATA SET) key.
   The selected RUN MODE will be set. At the same time, the setting mode will turn off. The newly set RUN MODE will be shown on the display.

12-2-2.Setting of FRAME RATE (PAGE 1)

Use this function to set the frame rate of both the internal generator and the external video sync. There are six frame rate selections:

- **29.97 DF** — **NTSC color with real time adjust (Default setting)**
- **29.97 NDF** — **NTSC color**
- **30 DF** — **NTSC video/film**
- **30 NDF** — **NTSC video/film**
- **25 FRAME** — **European film/PAL-SECAM video EBU**
- **24 FRAME** — **American motion picture**



Operating procedure

1. Press the F4 (FRAME SELECT) key.

   The frame select setting mode will be enabled with the display reading as follows. (> designates the currently set FRAME RATE.)

   ```
   FRAME SELECT
   > 29.97DF
     29.97NDF
     30 FRAME
     25 FRAME
     24 FRAME
     30 DF
   ```

2. Select the desired frame rate via the JOG dial. (Move >.)

3. Press the FA (DATA SET) key.

   The frame rate selected will be defined and the setting mode will be disabled. The newly set FRAME RATE will be shown on the display.

<NOTE>

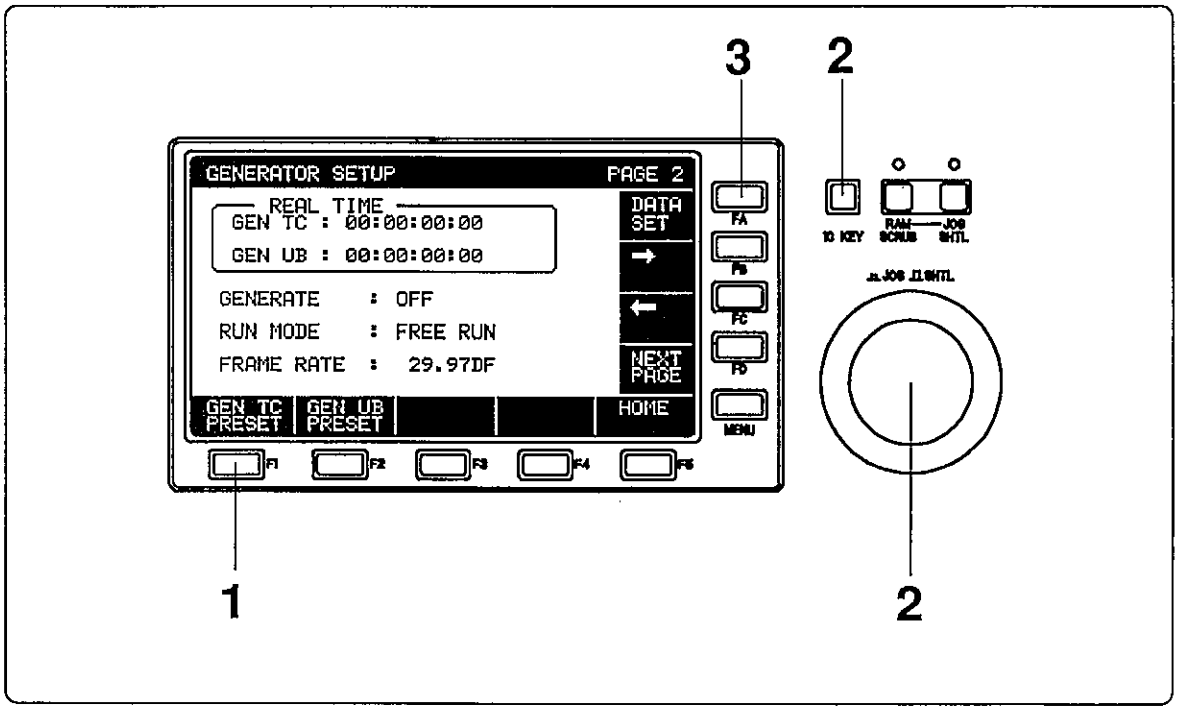
The frame rate selected here will be set in synchronization with TC FRAME SELECT of SETUP mode.

To quit, press the F4 (FRAME SELECT) key again, and then FA (DATA EDIT) key.

12-2-3. Presetting of GEN TC (PAGE 2)

A new GENERATOR TC may be set as follows:

<NOTE>
Presetting is only possible when in recording if RUN MODE is set to REC RUN.



Operating procedure

1. Press the F1 (GEN TC PRESET) key.

   The GEN TC PRESET setting mode will be enabled. The real time of the currently displayed generator time code will be held, and the display will look as follows:

   GEN TC SET
   11:40:23:01

2. Input the desired generator time code data using JOG dial or ten keypad.

   Use the JOG dial or the ten-keypad as follows:.

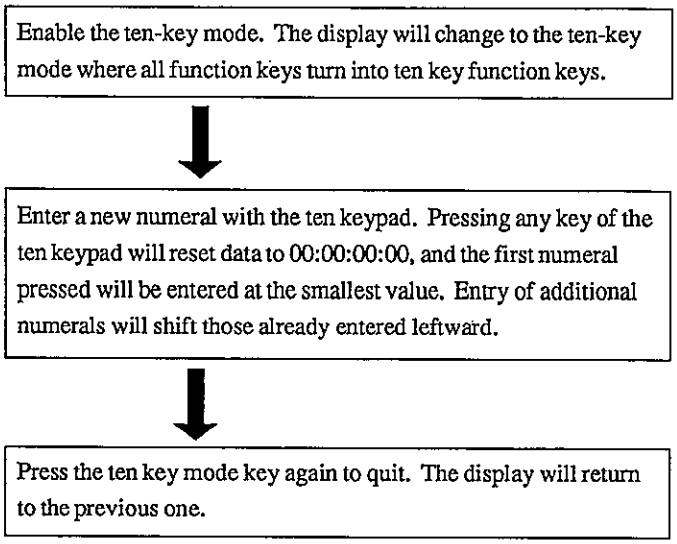
Inputting with JOG dial

Move the edit point with the FB(->) key or the FC(<-) key.

↓

Enter a numeral at the edit point with the JOG dial.

Inputting with the ten keypad



3. Press the FA (DATA SET) key.

   The value input of generator time code will be defined, and the setting mode will be disabled. The new value will be shown in the [REAL TIME] portion of the display.

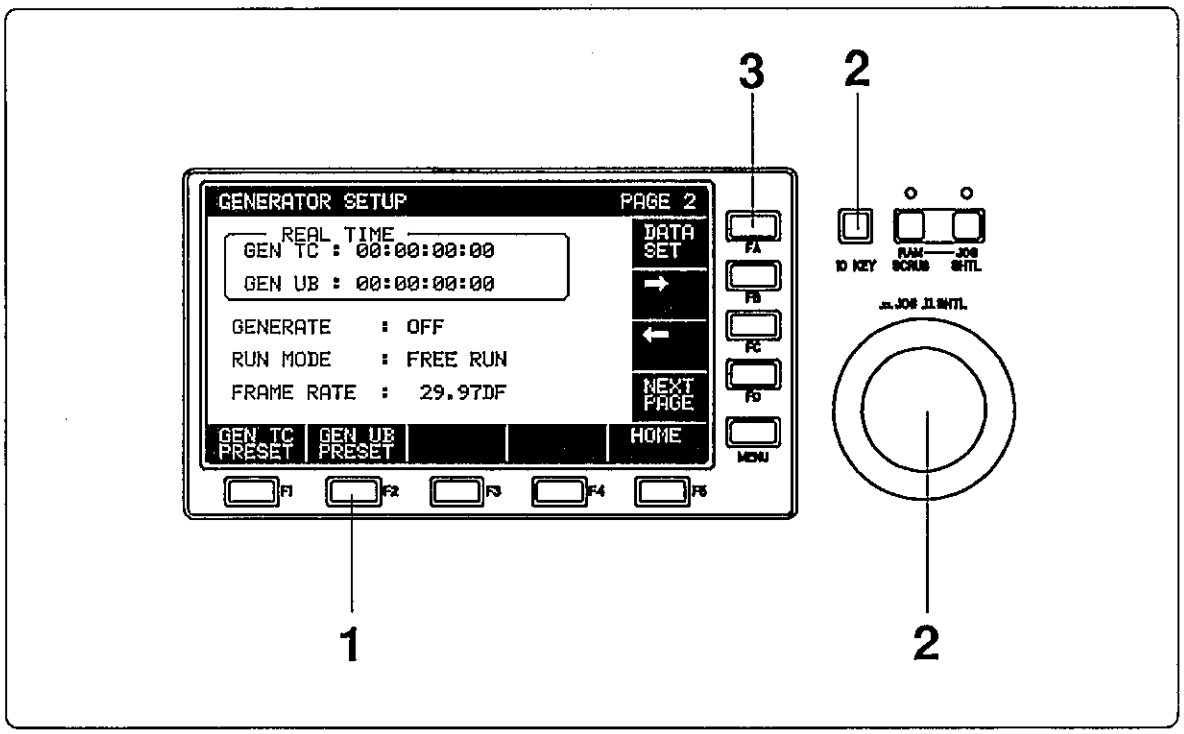
To quit, press the F1 (GEN TC PRESET) key again, and then the FA(DATA SET) key.

12-2-4. Presetting of GEN UB (USER BIT) (PAGE 2)

A new GENERATOR UB may be set here. BCD data (0 - 99) may be registered, but no HEX data may be input.

<NOTE>

Presetting is only possible when recording if RUN MODE is set to REC RUN.



Operating procedure

1. Press the F2 (GEN UB PRESET) key.

   The GEN UB PRESET mode will be enabled. The real time of the currently displayed GENERATOR UB will be held, with display reading as follows:

   GEN UB SET
   00:00:00:00

2. Input the desired GENERATOR UB via the JOG dial or the ten keypad.

   They can be used as follows:

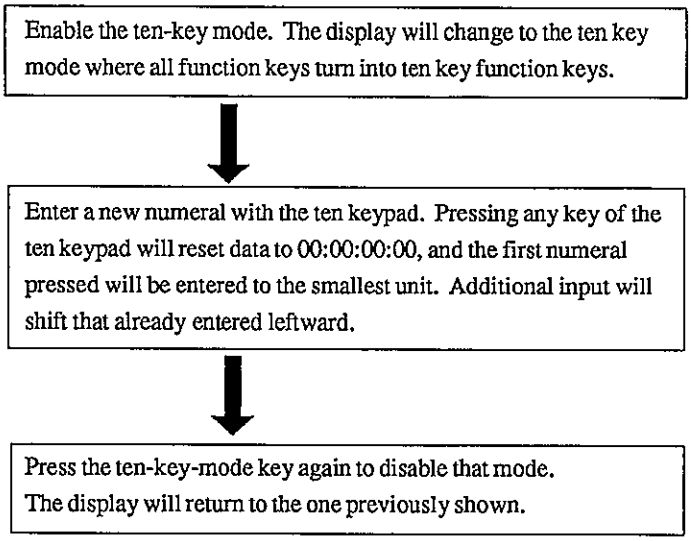
   With the JOG dial:

   Move the edit point with the FB(->) or FC(<-) key.

   ↓

   Enter a numeral at an edit point with the JOG dial.

With the ten keypad:



3. Press the FA (DATA SET) key.

The GENERATOR UB value input will be defined. At the same time, the setting mode will be disabled. The newly set value will be registered in the [REAL TIME] portion of the display. To quit, press the F1(GEN UB PRESET) key again, and then the FA(DATA SET) key.

12-3. Force Jam

Force Jam Function

With the force jam function enabled, once the internal generator is locked to both the time data and timing of time code externally provided and read by it, the generator will self-run even though the external time code is disconnected.

<NOTES>
When force jamming:

If RUN MODE is set to [FREE RUN]:

Time data will be jammed, but phase information will be synchronized to the incoming video input.
The incoming external time code needs to be in synchronization to VIDEO SYNC. If video input is not available, phase information also to be jammed.

If RUN MODE is set to [REC RUN]:

Force Jam will only work while in recording. The phase of VIDEO SYNC will be jammed concurrently with time code, irrespective of VIDEO input.

CHAPTER 13

Auto Edit Setup Mode

Use this mode to set items related to auto edit setup. This is the same for all recording modes. The menus in which the setting modes described here may be used include:

Play and Recording Mode

Auto Edit with Player Mode

Auto Edit with RAM Mode

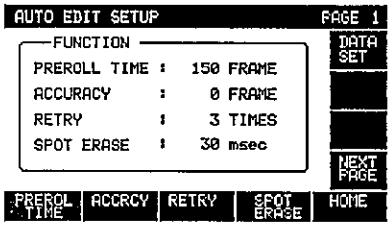
CHAPTER 13
TABLE OF CONTENTS

13-1. Functions of Auto Edit Setup Mode

In each menu, pressing the A-EDIT SETUP key will open PAGE 1 of the second level display. The Auto Edit Setup mode will be shown on the display.

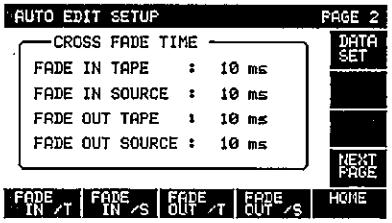
This mode consists of PAGES 1 through 4. Items as described below may be set in each PAGE.

PAGE 1 (Setting of FUNCTION)



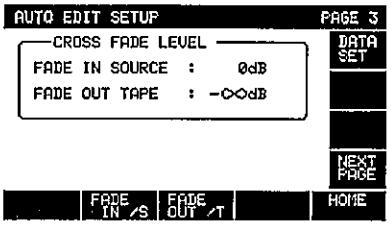
1. Setting of PREROLL TIME
2. Setting of ACCURACY
3. Setting of RETRY
4. Setting of SPOT ERASE

PAGE 2 (Setting of CROSS FADE TIME)



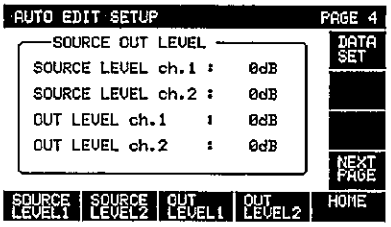
1. Setting of FADE IN TAPE
2. Setting of FADE IN SOURCE
3. Setting of FADE OUT TAPE
4. Setting of FADE OUT SOURCE

PAGE 3 (Setting of CROSS FADE LEVEL)



1. Setting of FADE IN SOURCE LEVEL
2. Setting of FADE OUT TAPE LEVEL

PAGE 4 (Setting of SOURCE OUT LEVEL)

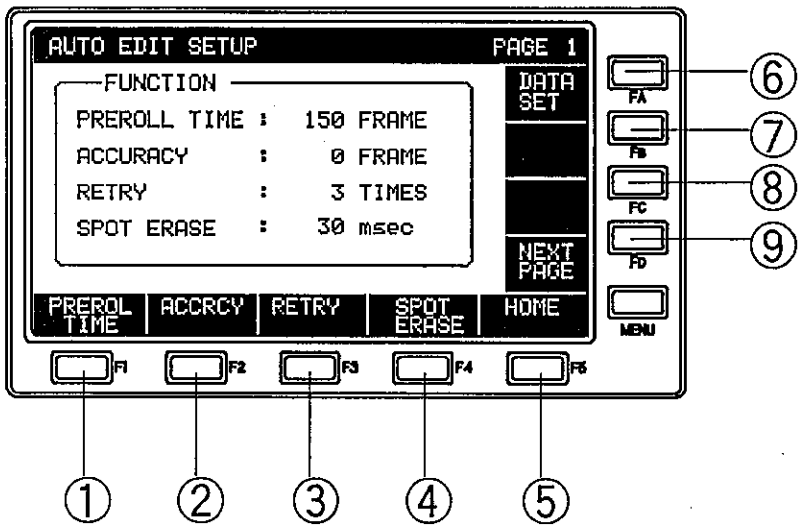


1. Setting of SOURCE LEVEL, channel 1
2. Setting of SOURCE LEVEL, channel 2
3. Setting of OUT LEVEL, channel 1
4. Setting of OUT LEVEL, channel 2

13-1-1. Display and Function Keys

PAGE 1:

Displays and functions of function keys of PAGE 1 of the second level display are described below:

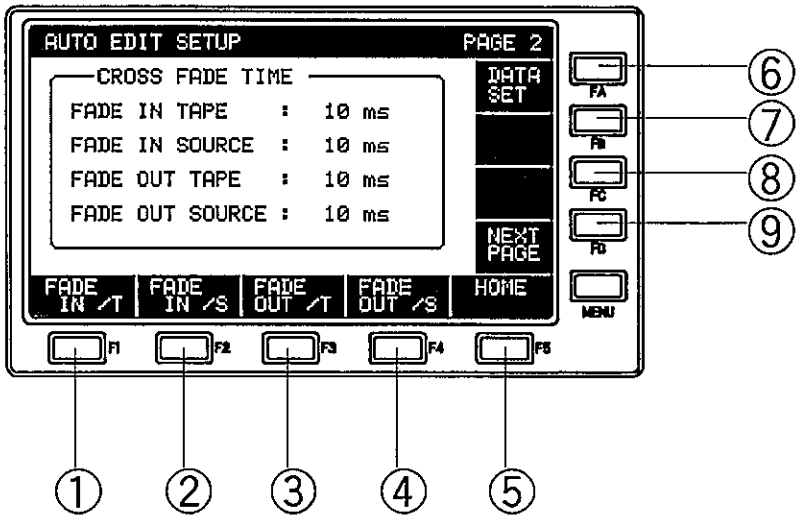


Default values are shown above.

No.		Display	Function
①	F1	PREROL TIME	Press this key to activate the setting mode of preroll time.
②	F2	ACCRCY	Pressing this key will activate the setting mode of accuracy of synchronization.
③	F3	RETRY	Press this key to activate the setting mode of the number of retry.
④	F4	SPOT ERASE	Pressing this key will enable the setting mode of SPOT ERASE TIME.
⑤	F5	HOME	Pressing this key will restore the previous display.
⑥	FA	DATA SET	Pressing this key after setting is completed will define the data set.
⑦	FB		No function at present.
⑧	FC		No function at present.
⑨	FD	NEXT PAGE	Pressing this key will cycle the pages within the same mode or level display.

PAGE 2:

Displays and functions of function keys of PAGE 2 of the second level display are described below:

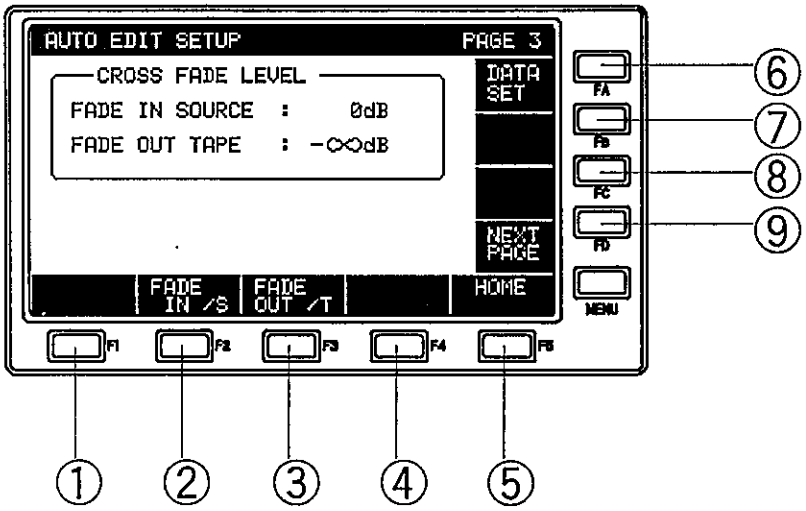


Default values are shown above.

No.		Display	Function
①	F1	FADE IN/T	Pressing this key will allow the fade in time when crossfading into TAPE to be set.
②	F2	FADE IN/S	Pressing this key will allow FADE IN TIME when crossfading into SOURCE to be set.
③	F3	FADE OUT/T	Pressing this key will allow FADE OUT TIME when crossfading out of TAPE to be set.
④	F4	FADE OUT/S	Pressing this key will allow FADE OUT TIME when crossfading out of SOURCE to be set.
⑤	F5	HOME	The function of this key is identical to that of PAGE 1.
⑥	FA	DATA SET	The function of this key is identical to that of PAGE 1.
⑦	FB		No function at present.
⑧	FC		No function at present.
⑨	FD	NEXT PAGE	The function of this key is identical to that of PAGE 1.

PAGE 3:

Displays and functions of function keys of PAGE 3 of the second level display are described below:

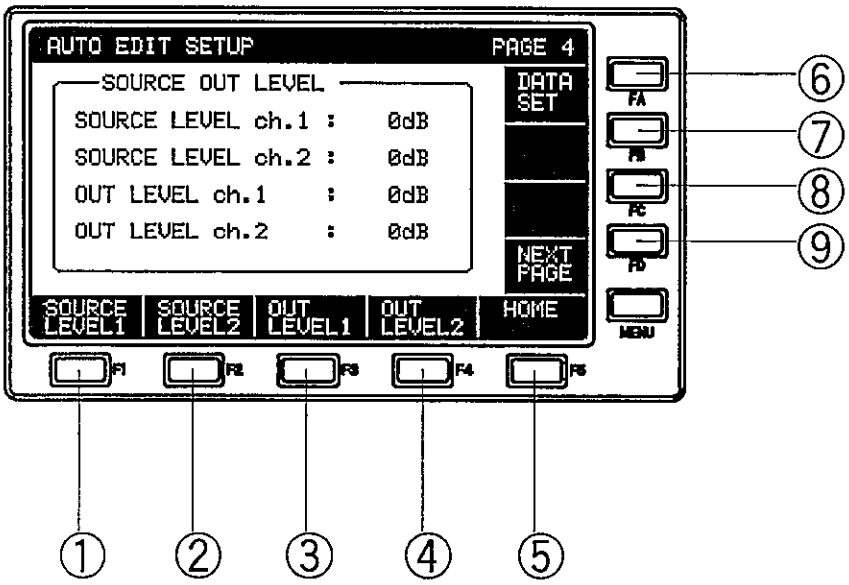


Default values are shown above.

No.		Display	Function
①	F1		No function at present.
②	F2	FADE IN/S	Pressing this key will allow FADE IN LEVEL at SOURCE side to be set.
③	F3	FADE OUT/T	Pressing this key will allow FADE OUT LEVEL at TAPE side to be set.
④	F4		No function at present.
⑤	F5	HOME	The function of this key is identical to that of PAGE 1.
⑥	FA	DATA SET	The function of this key is identical to that of PAGE 1.
⑦	FB		No function at present.
⑧	FC		No function at present.
⑨	FD	NEXT PAGE	The function of this key is identical to that of PAGE 1.

PAGE 4:

Displays and functions of function keys of PAGE 4 of the second level display are described below:



Default values are shown above.

No.		Display	Function
①	F1	SOURCE LEVEL 1	Pressing this key will allow the source digital level of CH1 to be set.
②	F2	SOURCE LEVEL 2	Pressing this key will allow the source digital level of CH2 to be set.
③	F3	OUT LEVEL 1	Pressing this key will allow the out digital level of CH1 to be set.
④	F4	OUT LEVEL 2	Pressing this key will allow the out digital level of CH2 to be set.
⑤	F5	HOME	The function of this key is identical to that of PAGE 1.
⑥	FA	DATA SET	The function of this key is identical to that of PAGE 1.
⑦	FB		No function at present.
⑧	FC		No function at present.
⑨	FD	NEXT PAGE	The function of this key is identical to that of PAGE 1.

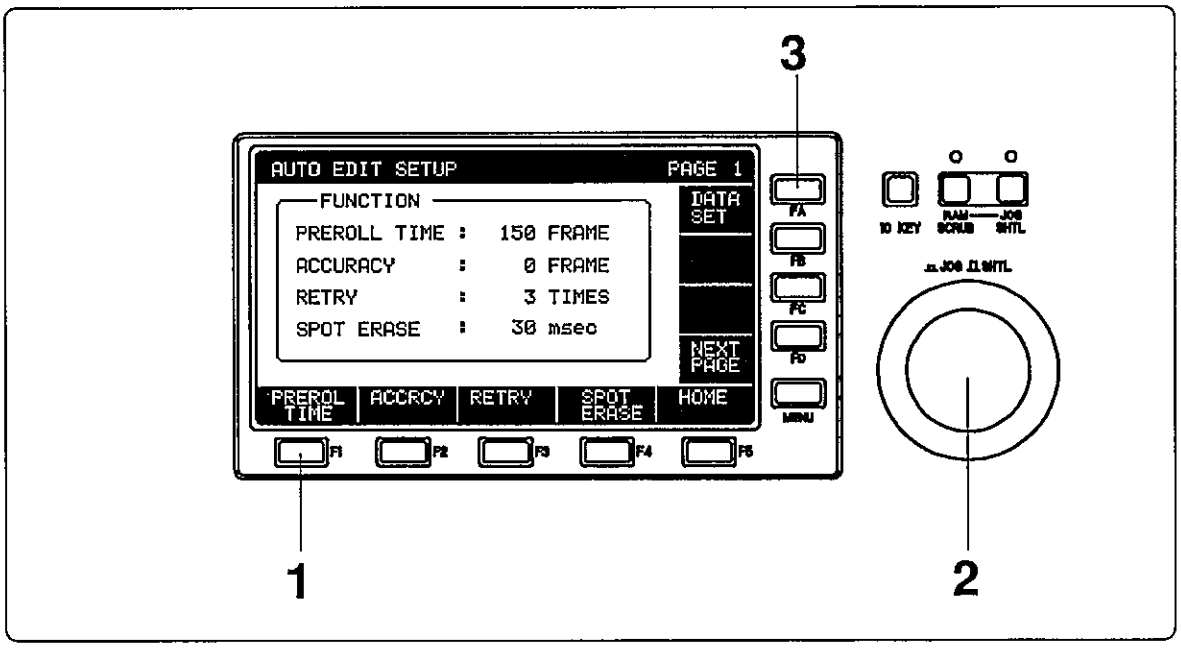
13-2. Setting of Various FUNCTIONS

13-2-1. PAGE 1 of the SECOND LEVEL display

Functions such as preroll time, accuracy of synchronization, number of retries, and spot erase time may be set in this page.

* SETTING OF PREROLL TIME

Preroll time may be selected from 0 through 300 frames in 1 frame increments (default value: 150 frames). Extend preroll time when desired synchronization of the D-30 with other equipment may not be obtained.



Operating procedure

1. Press the F1 (PREROL TIME) key.

   The preroll time setting mode will be enabled. The currently set data will be shown in the following manner and editing is now possible.

   PREROLL
   150 FRAME

2. Enter the desired value of preroll time via the JOG dial.

3. Press the FA (DATA SET) key after entry.

   The set preroll time will be registered. The setting mode display will be replaced with the new preroll time display. To quit, press the F1 (PREROL TIME) key again and then the FA (DATA SET) key.

<NOTE>

The new preroll time set will be battery-backed up.

* SETTING OF SYNCHRONIZATION ACCURACY

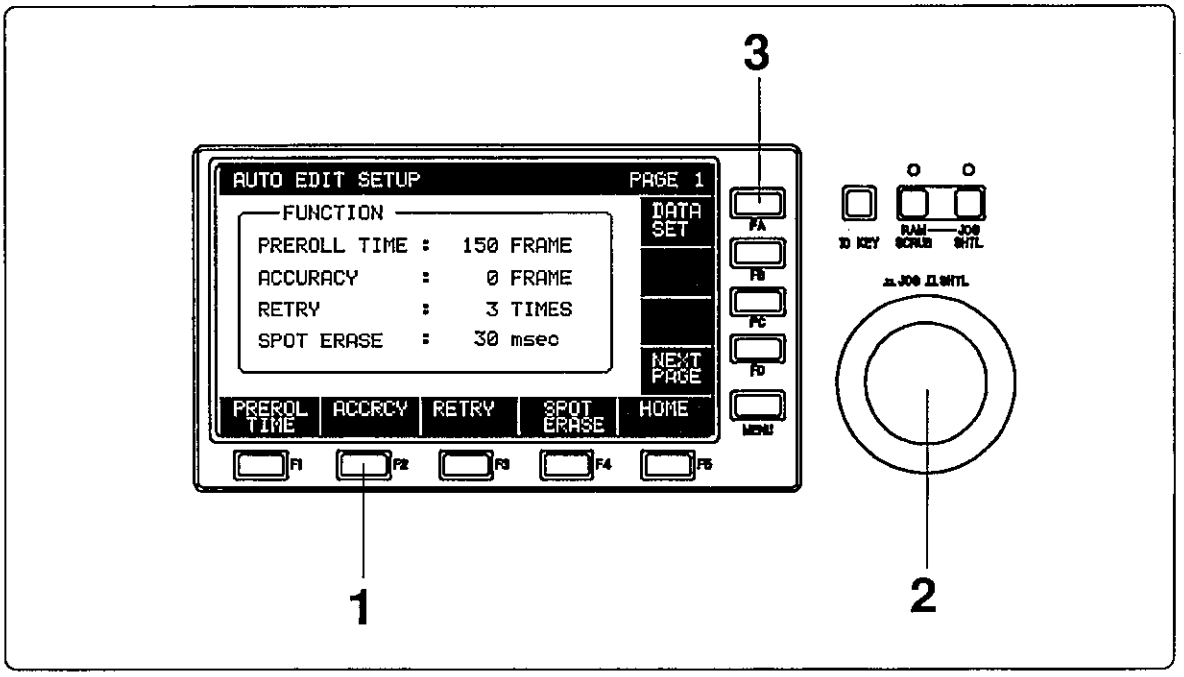
The accuracy of synchronization may be set in either way of [0 FRAME] or [ROUGH]. (Default setting is [0 FRAME].)

[0 FRAME]

With this setting, editing will not be initiated until locking is completely achieved. Editing is possible when synchronized within 1/100 frames. Accuracy is required in LTC.

[ROUGH]

This setting only controls the timing to start. Editing may be initiated irrespective of phase difference, executing no phase adjustment. These operations may be carried out with time data of RS-422, without involvement of LTC.



Operating procedure

1. Press the F2 (ACCRCY) key.

   The synchronization accuracy setting mode is enabled, and the appropriate display will appear. (> designates the currently set mode.)

   ```
   ACCURACY
   > 0 FRAME
     ROUGH
   ```

2. Select the desired ACCURACY using JOG dial. (Move >.)

3. Press the FA (DATA SET) key on finish of selection.

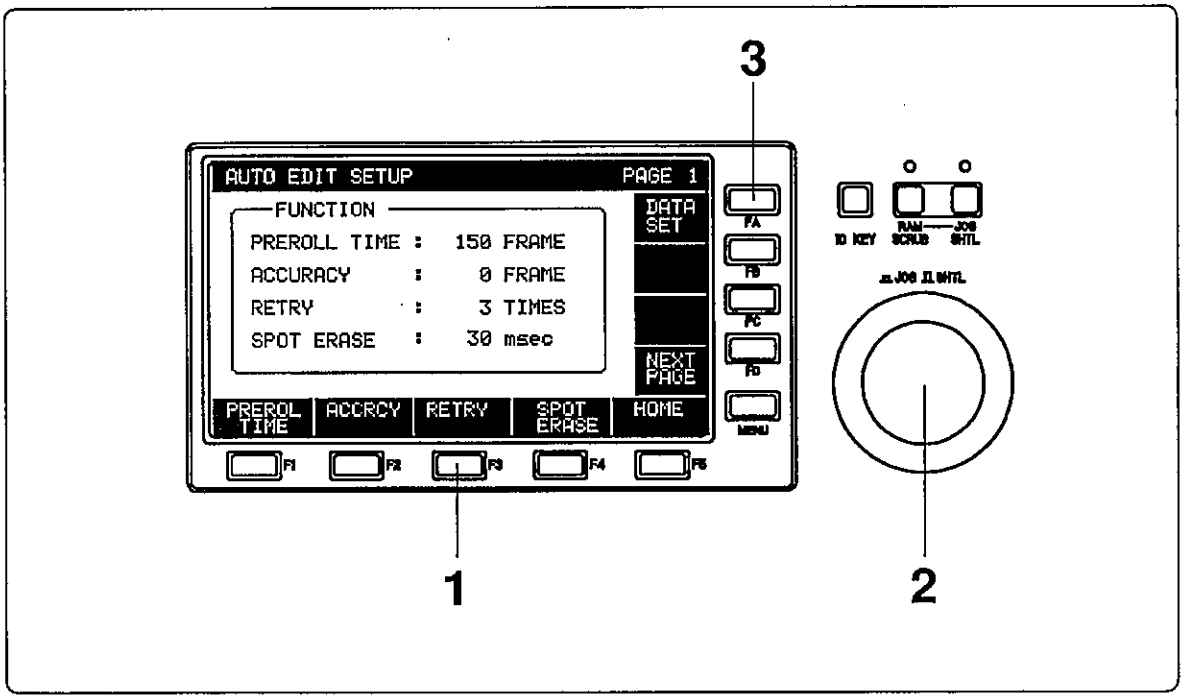
   The selected ACCURACY will be registered. At the same time, display of the setting mode will be gone, and the new ACCURACY will be displayed. To quit, press the F2(ACCRCY) key again and then the FA (DATA SET) key.

<NOTE>

The set ACCURACYwill be battery-backed up.

* SETTING OF NUMBER OF RETRY

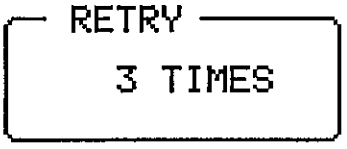
The number of retry will be set here which will be performed when desired accuracy was not available during execution of AUTO EDIT. The number of retry may be set within the range of 0 to 5. (Default setting is 3.)



Operating procedure

1. Press the F3 (RETRY) key.

   Setting mode of number of retry will be enabled. The currently set number will be shown in the display as follows where a new number of retry may be set.

2. Enter the desired number using the JOG dial.

3. Press the FA (DATA SET) key when inputting is finished.

   The newly input number will be registered. At the same time, the setting mode display will disappear, and the new number of retry will be displayed.

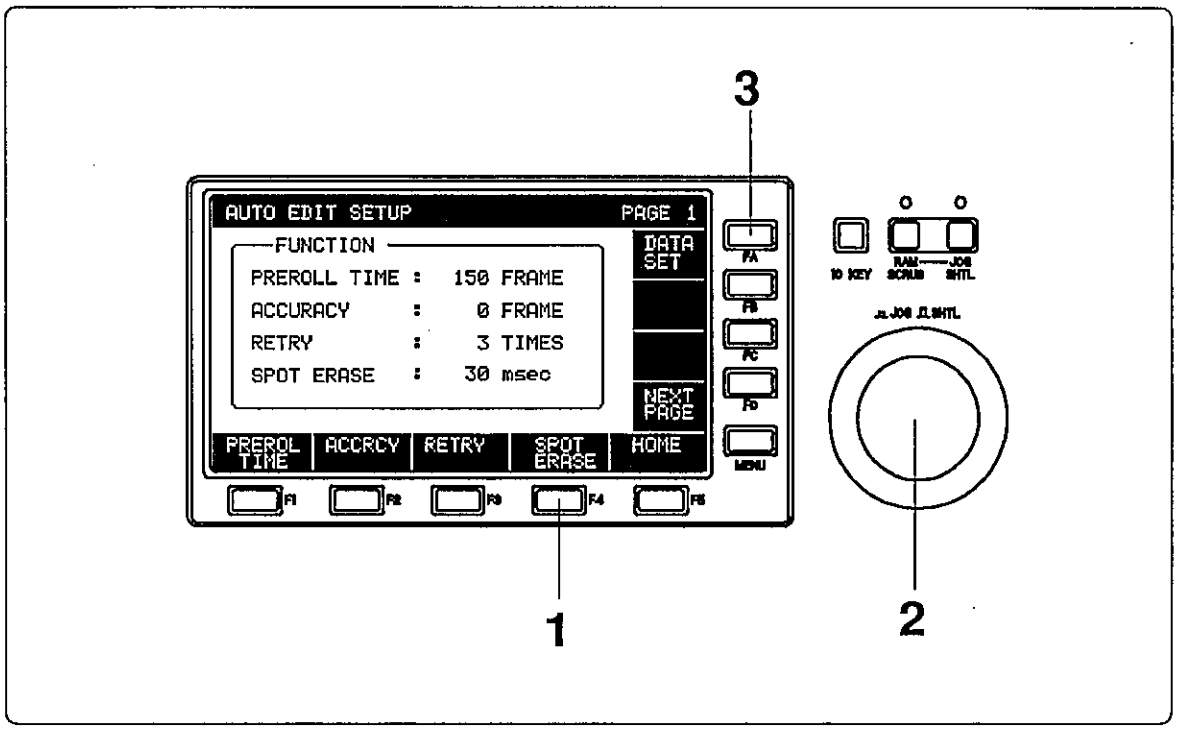
   To quit, press F3 (RETRY) key again, and then the FA (DATA SET) key.

<NOTE>

The set RETRY will be battery-backed up.

* SETTING OF SPOT ERASE TIME

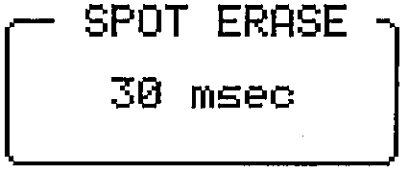
SPOT ERASE TIME may be set within a range of time of 10m through 100m seconds. (Default setting is 30m seconds.)



Operating procedure

1. Press the F4 (SPOT ERASE) key.

   SPOT ERASE TIME setting mode will be enabled. The currently set SPOT ERASE TIME will be shown as follows, and a new SPOT ERASE TIME may be set.



2. Input the desired SPOT ERASE TIME using the JOG dial.

3. Press the FA (DATA SET) key when inputting is finished.

   The input SPOT ERASE TIME will be registered. At the same time, the setting mode display will be replaced with the newly set SPOT ERASE TIME.

   To quit, press the F4 (SPOT ERASE) key again and then FA(DATA SET) key.

<NOTE>

The set SPOT ERASE TIME will be battery-backed up.

13-2-2. Setting of CROSS FADE TIME (PAGE 2 of the SECOND LEVEL display)

Four patterns of CROSS FADE TIME are available for setting.

* SETTING OF FADE IN TAPE

The FADE IN TIME for CROSS fading into TAPE at punch-out point when AUTO editing is set here. The FADE IN TIME may be set within a range of 0 through 5 seconds.
(Default setting is 10m seconds.)

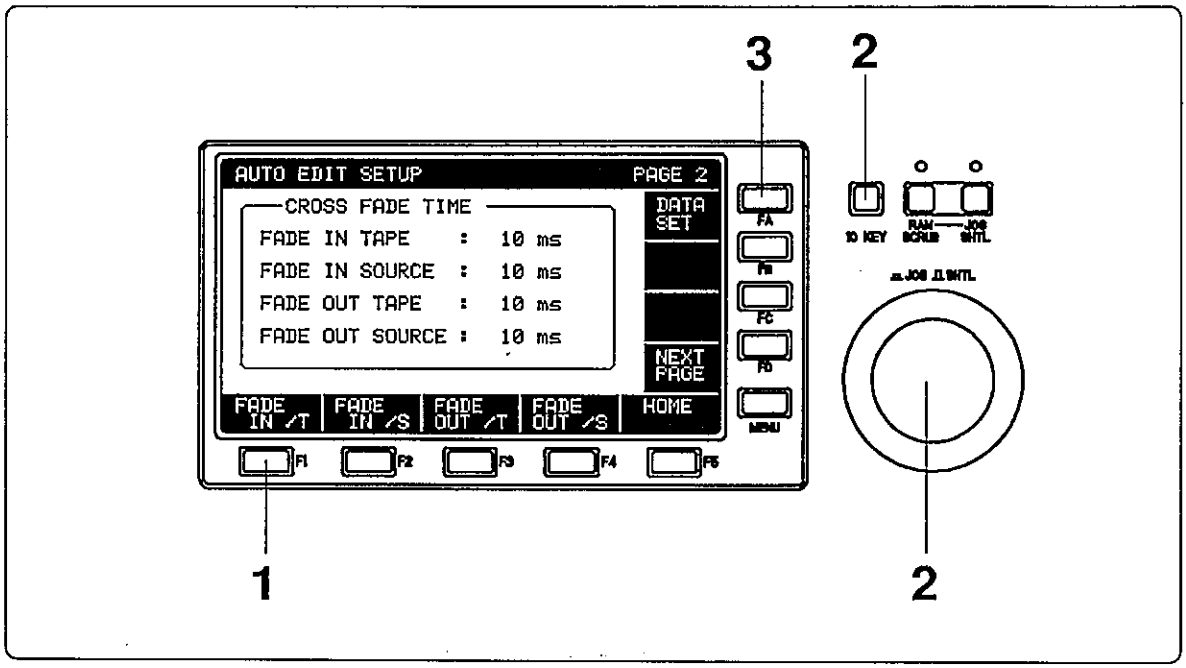
<NOTES>

*FADE IN TIME should be 300m seconds or less when editing with the AUTO EDIT MODE of this machine.

*CROSS fading with a different time setting between FADE IN TAPE and FADE OUT SOURCE TIME may cause overflow to take place in 16 bit Audio Data.

*The normal CROSS FADE recording time is 0 to 300m seconds at punch-out when AUTO editing with this machine.

*Punching out for a longer period of time needs punch-out control with either an RS-422 EDIT PRESET command or a SAFE/READY key



Operating procedure

1. Press the F1 (FADE IN/T) key.

   The FADE IN TAPE setting mode will be enabled. The currently set FADE IN TIME will be shown on the display as follows, allowing setting of the new FADE IN TIME.

2. Input the desired FADE IN TIME value using the JOG dial or ten keypad.

   Enable the ten key mode by turning the 10 key mode key on when use of ten keypad is intended. When using the ten keypad, initiate inputting after the ten key mode is turned on.

3. Press the FA (DATA SET) key upon finish of input.

   The input FADE IN TIME will be registered. At the same time, the setting mode display will be replaced with that of the new FADE IN TIME.

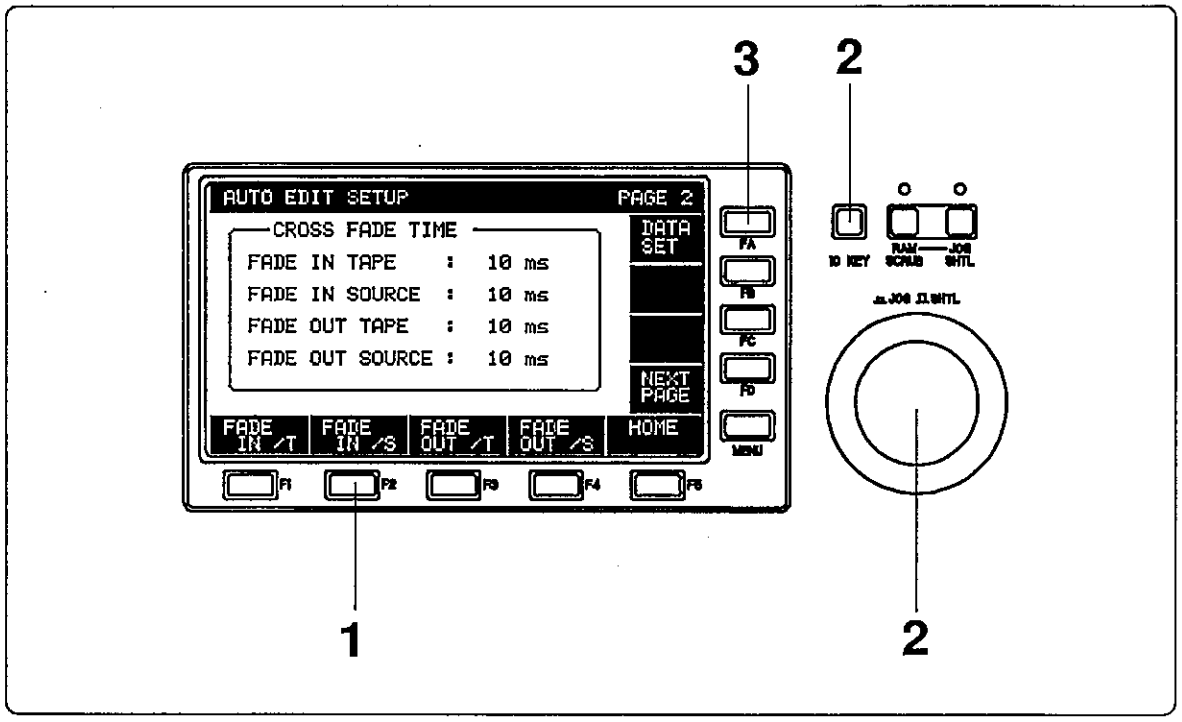
   To quit, press the F1 (FADE IN/T) key again and then the FA (DATA SET) key.

<NOTE>
This setting is not backed up. The value will default to 10m seconds when power is turned off.

* SETTING OF FADE IN SOURCE

The FADE IN TIME for CROSS fading into the SOURCE at the punch point when AUTO editing is set in the following way. This FADE IN TIME may be set in the range of 0 through 5 seconds. (Default setting: 10m seconds)

<NOTE>
CROSS fading with different a time setting between the FADE IN TAPE and FADE OUT SOURCE TIME may cause overflow to take place in the 16 bit Audio Data.



Operating procedure

1. Press the F2 (FADE IN/S) key.

   The FADE IN SOURCE setting mode will be enabled. The currently set FADE IN TIME will be displayed in the following manner allowing new a FADE IN TIME setting.

   ```
   CROSS FADE TIME
   SRC IN      10 msec
   ```

2. Input the desired FADE IN TIME value using the JOG dial or ten keypad.

   Initiate inputting after ten-key mode is enabled by turning the ten key mode key on.

3. Press the FA (DATA SET) key when inputting is finished.

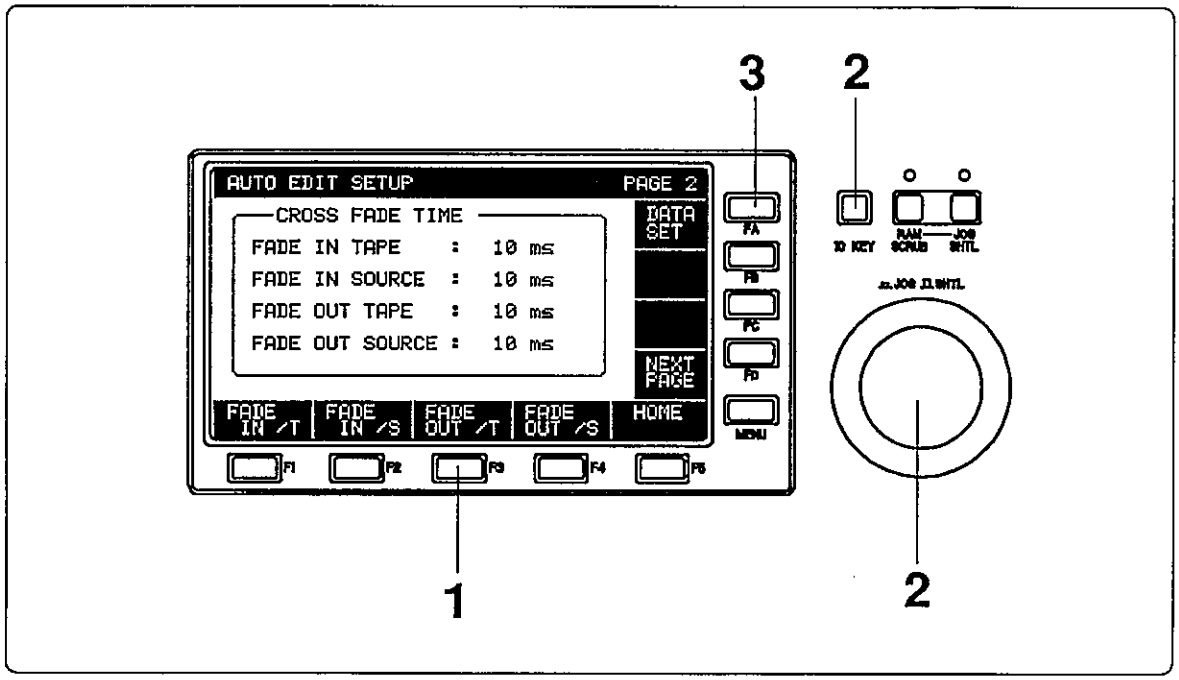
   The input FADE IN TIME will be registered. At the same time, the setting mode display will be replaced with that of the new FADE IN TIME. To quit, press the F2(FADE IN/S) key again and then the FA(DATA SET) key.

<NOTE>
This setting is not backed up. The value will return to the default value (10m seconds) when the power is turned off.

* SETTING OF FADE OUT TAPE

Set here is the FADE OUT TIME for CROSS fading out of TAPE at the punch point when AUDIO editing. This FADE OUT TIME may be set within a range of 0 to 5 seconds.
(Default setting: 10m seconds)

<NOTE>
CROSS fading with different a time setting between the FADE IN TAPE and the FADE OUT SOURCE TIME may cause overflow to take place in 16 bit Audio Data.



Operating procedure

1. Press the F3 (FADE OUT/T) key.
   The FADE OUT TAPE setting mode will be enabled. The currently set FADE OUT TIME will be displayed, allowing setting of a new FADE OUT TIME.

```
CROSS FADE TIME
TAPE OUT   10 msec
```

2. Input the desired FADE OUT TIME value using the JOG dial or ten keypad.
   Be sure to initiate inputting after the ten key mode is set by turning ten key mode key on.

3. Press the FA (DATA SET) key upon completion of input.
The input FADE OUT TIME will be registered. At the same time, the setting mode display will be replaced with that of the new FADE OUT TIME. To quit, press F3 (FADE OUT/T) key again, then FA (DATA SET) key.

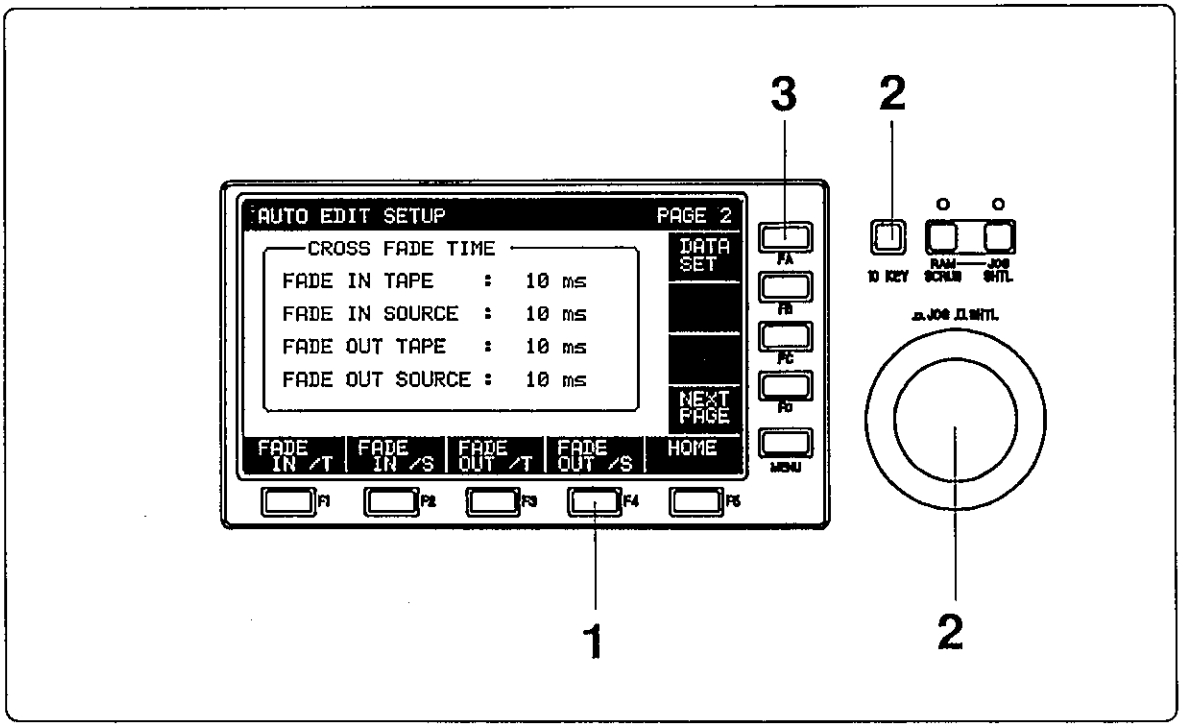
<NOTE>
This setting is not backed up. The value will return to the default value (10m seconds) when power is turned off.

* SETTING OF FADE OUT SOURCE

Set here is FADE OUT TIME for CROSS fading out of SOURCE at punch point when AUDIO editing. FADE OUT TIME may be set within a range of 0 to 5 seconds.
(Default setting: 10m seconds)

<NOTES>
* CROSS fading with different a time setting between FADE IN TAPE and FADE OUT SOURCE TIME may cause overflow to take place in 16 bit Audio Data.

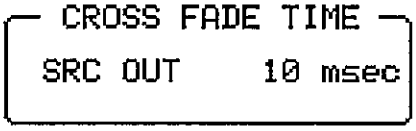
* Normal CROSS FADE recording time is 0 to 300m seconds at punch-out when AUTO editing with this machine. Fading in for a longer period of time needs punch-out control with either RS-422 EDIT PRESET command or SAFE/READY key.



Operating procedure

1. Press the F4 (FADE OUT/S) key.

   FADE OUT SOURCE setting mode will be enabled. The currently set FADE OUT TIME will be displayed in the following manner, allowing to set new FADE OUT TIME.



2. Input the desired FADE OUT TIME using JOG dial or ten keypad.

   Turn the ten keypad function on by pressing the 10 key button.

3. Press the FA (DATA SET) key after finishing input.

   The input FADE OUT TIME will be registered. At the same time, the setting mode display will be replaced with that of the new FADE OUT TIME.

   To quit, press F4 (FADE OUT/S) key again and then the FA (DATA SET) key.

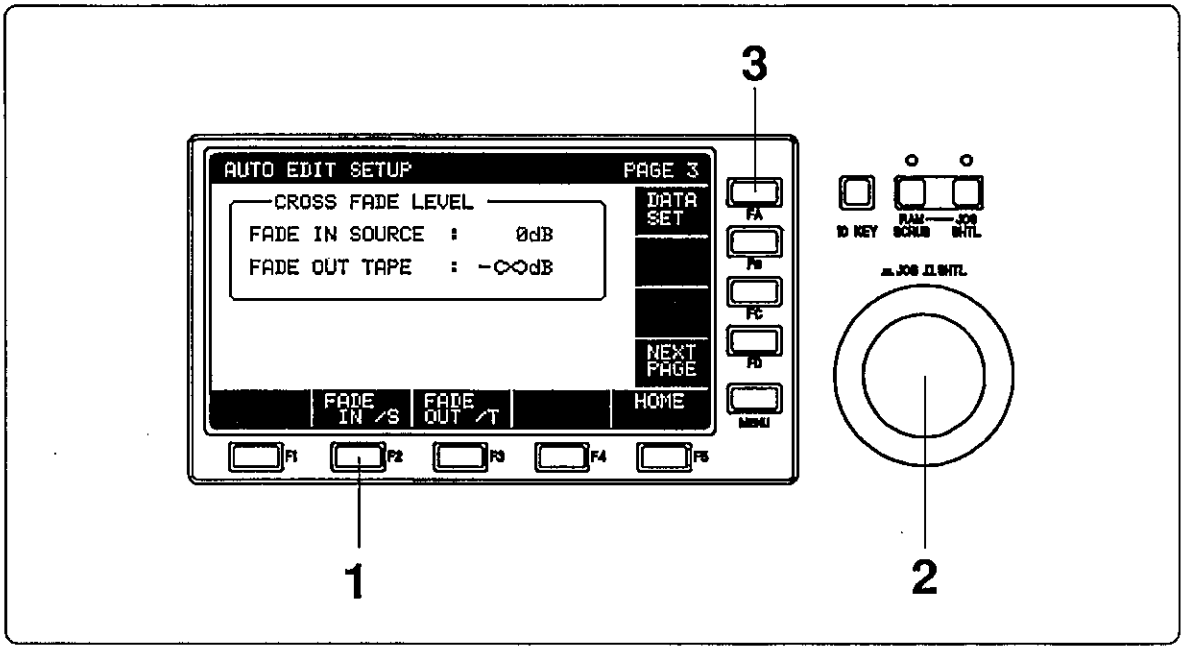
<NOTE>
This setting is not backed up. The value will return to the default value (10m seconds) when power is turned off.

13-2-3. Setting of CROSS FADE LEVEL (PAGE 3 of the SECOND LEVEL display)

This is to set CROSS FADE LEVEL of both SOURCE and TAPE sides.

* SETTING OF FADE IN LEVEL OF FADE IN SOURCE

Set here is the FADE IN LEVEL of the SOURCE side when AUDIO inserting at AUDIO EDIT LEVEL. This may be set within a range of -∞to 0dB in 1dB increments. (Default setting is 0dB).



Operating procedure

1. Press the F2 (FADE IN/S) key.

   The FADE IN SOURCE setting mode will be enabled. The currently set FADE IN LEVEL will be shown on the display as follows, allowing to set a new FADE IN LEVEL.

   FADE IN LEVEL
   0 dB

2. Input the desired FADE IN LEVEL value using the JOG dial.

3. Press the FA (DATA SET) key when input is finished.

   The input FADE IN LEVEL will be registered. At the same time, the setting mode display will be replaced with that of the new FADE IN LEVEL. To quit, press the F2(FADE IN/S) key again and then the FA(DATA SET) key.

<NOTE>

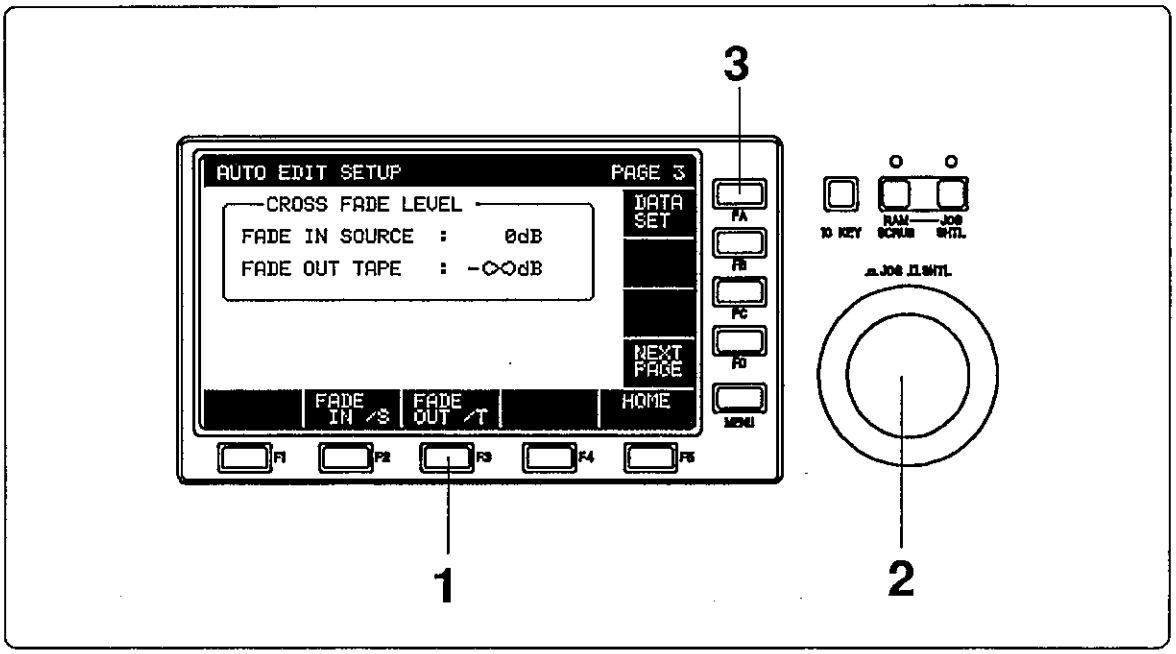
This setting is not backed up. The value will return to default value (0dB) when power is turned off.

* SETTING OF FADE OUT LEVEL OF FADE OUT TAPE

Set here is the FADE OUT LEVEL of the TAPE side when AUDIO inserting at AUDIO EDIT. The LEVEL may be set within a range from -∞to 0dB in 1dB increments. (Default setting is - ∞dB.) By increasing the LEVEL from -∞dB toward 0dB, new sound may be mixed in (overdubbed) without erasing any piece of the existing sound on tape.

<NOTES>

* -∞dB must be used for ASSEMBLE EDIT or RECORDING for noise-free recording.
* Mixing of SOURCE and TAPE, which is possible depending upon the setting, may cause overflow to take place in 16 bit Audio Data.



Operating procedure

1. Press the F3 (FADE OUT/T) key.

   FADE OUT TAPE setting mode will be enabled. The currently set FADE OUT LEVEL will be shown on the display as follows, allowing to set new FADE OUT LEVEL.

   FADE OUT LEVEL
   -∞ dB

2. Input the desired FADE OUT LEVEL value using JOG dial.

3. Press the FA (DATA SET) key upon finish of inputting.

   The input FADE OUT LEVEL will be registered. At the same time, the setting mode display will be replaced with that of the new FADE OUT LEVEL. To quit, press F3 (FADE OUT/T) key again and then the FA (DATA SET) key.

<NOTE>

This setting is not backed up. The value will return to the default value (-∞dB) when power is turned off.

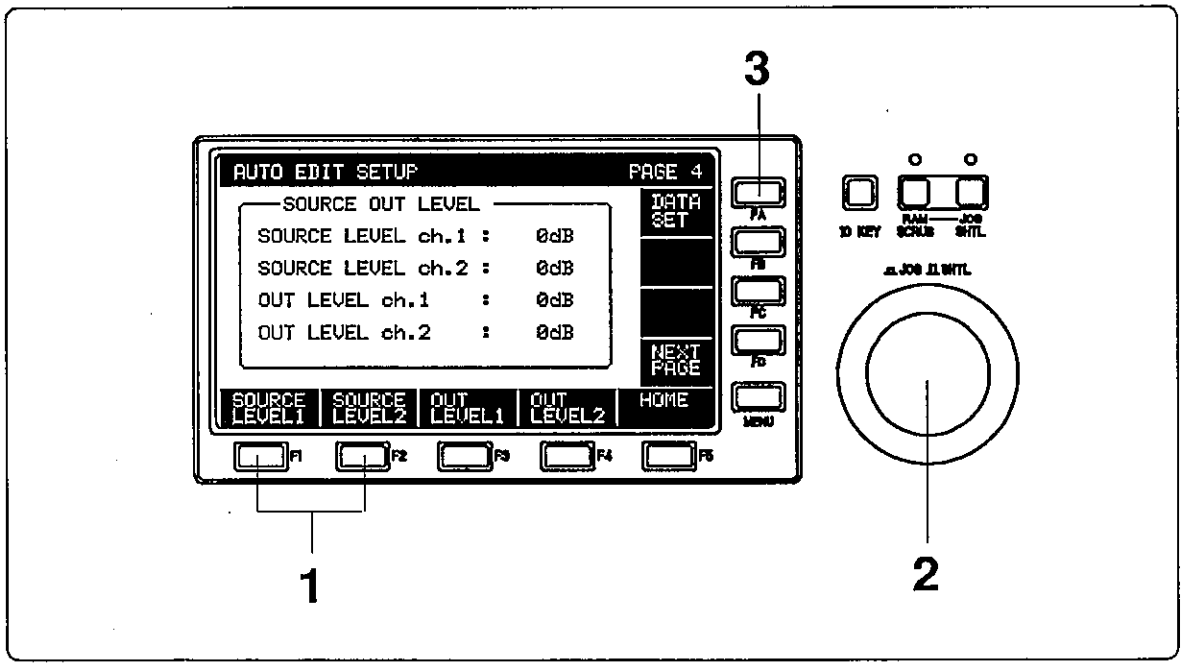
13-2-4. Setting of SOURCE/OUT LEVEL (PAGE 4 of the SECOND LEVEL display)

This PAGE is used to set both the SOURCE LEVEL and the OUT LEVEL of CHANNELS 1 and 2.

* SETTING OF SOURCE LEVEL, CH.1/CH.2

The SOURCE DIGITAL LEVEL of input channels of 1 and 2. SOURCE LEVEL is set here and may be set within a range of -∞ to + 6dB. (Default setting is 0dB.)

<NOTE>
Setting of other than -0dB may cause overflow/distortion. Do not leave this setting at -0dB unless doing so is really needed.



Operating procedure

1. Press the F1 (SOURCE LEVEL 1) key or the F2 (SOURCE LEVEL 2) key.

   Pressing the F1 or F2 key will respectively enable the setting mode of SOURCE LEVEL, channel 1 or 2. The current SOURCE LEVEL will be shown on the display in the following manner, allowing a new SOURCE LEVEL to be set.

   SOURCE LEVEL 1ch
   0 dB

   or

   SOURCE LEVEL 2ch
   0 dB

2. Input the desired SOURCE LEVEL value using the JOG dial.

3. Press the FA (DATA SET) key after finishing inputting.
The input SOURCE LEVEL will be registered. At the same time, the setting mode display will be replaced with that of the new SOURCE LEVEL.

To quit, press the F1 or F2 key again and then the FA (DATA SET) key.

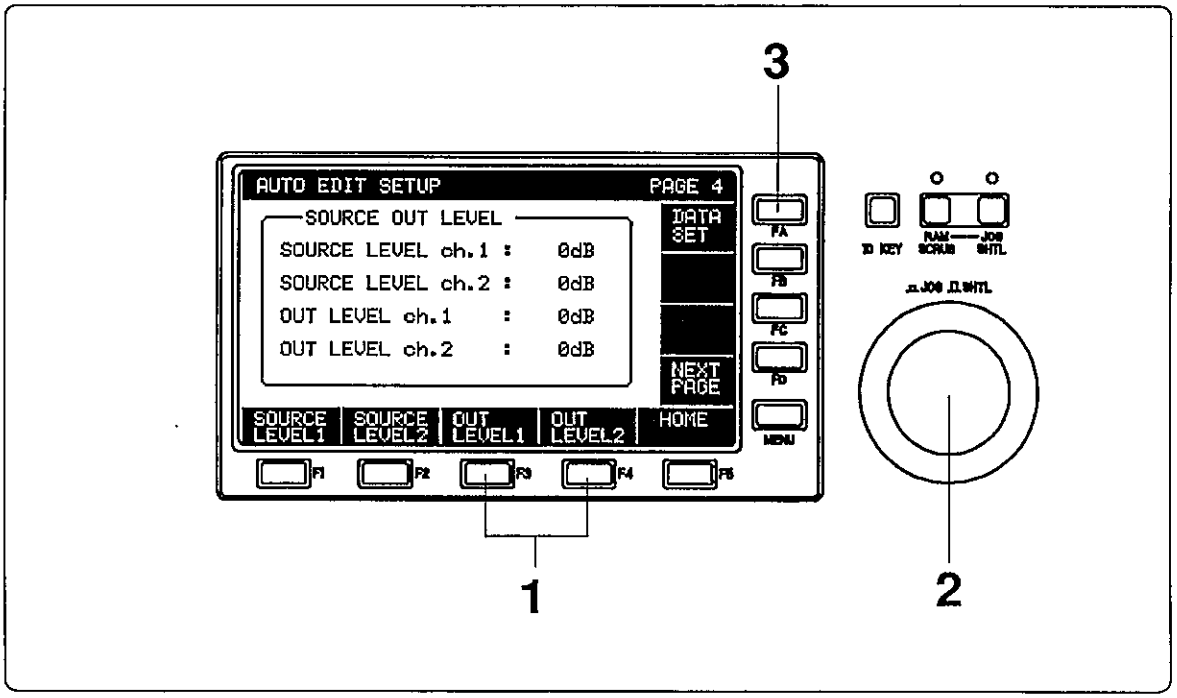
<NOTE>
This setting is not backed up. The value will return to the default value (0dB) when power is turned off.

* SETTING OF OUT LEVEL, CH.1/CH.2

Set here is OUT DIGITAL LEVEL of LINE IN, channels 1 and 2.OUT LEVEL. These may be set within a range of -∞ to + 6dB. (Default setting is 0dB.)

<NOTES>
* Setting of other than -0dB may cause overflow/distortion. Do not leave this setting at -0dB unless doing so is really needed.

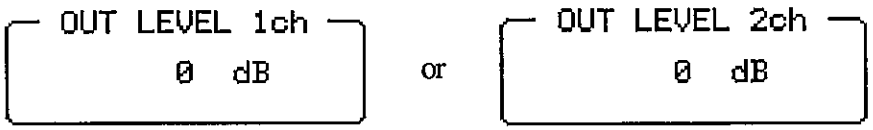
* Setting OUT LEVEL CH1/CH2 to lower than 0dB, the full scale level will accordingly shift dpwn. By way of example, if OUT LEVEL is set to -2dB, deflection of the level meter will hit the maximum at -2dB.
Please further note than no [OVER] will be indicated in this case. The allowable MARGIN will be limited to 2dB.



Operating procedure

1. Press the F3 (OUT LEVEL 1) key or the F4 (OUT LEVEL 2) key.

   Pressing F3 or F4 key will enable the setting mode of OUT LEVEL, CHANNEL 1 or 2, respectively. The currently set OUT LEVEL will be shown on the display in the following manner so that a new OUT LEVEL may be set.



2. Input the desired OUT LEVEL value via the JOG dial.

3. Press the FA (DATA SET) key upon finish of input.

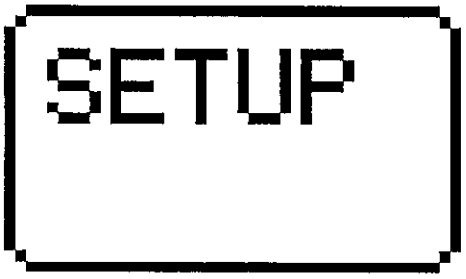
   The input OUT LEVEL will be registered. At the same time, the setting mode display will be replaced with that of the new OUT LEVEL. To quit, press the F3 or F4 key again, then the FA (DATA SET) key.

<NOTE>
This setting is not backed up. The value will return to the default value (0dB) when the power is turned off.

CHAPTER 14

Setup Mode Menu

This is the setup mode menu. You will find it very convenient in a variety of situations.

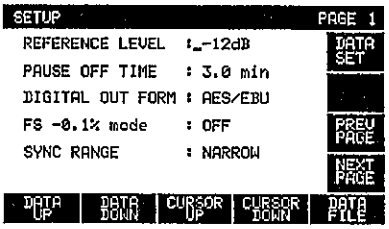


CHAPTER 14
TABLE OF CONTENTS

14-1. Setting of SETUP MODE menu

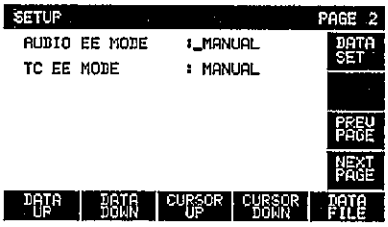
There are six menu pages available within this menu display.

PAGE 1



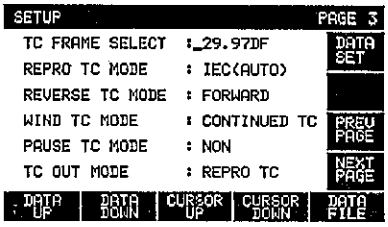
1. Setting of REFERENCE LEVEL
2. Setting of DISABLING TIME OF PAUSE MODE
3. Setting of FORMAT OF DIGITAL OUTPUT
4. Setting of [-0.1%] MODE OF SAMPLING FREQUENCY
5. Setting of SYNC RANGE

PAGE 2



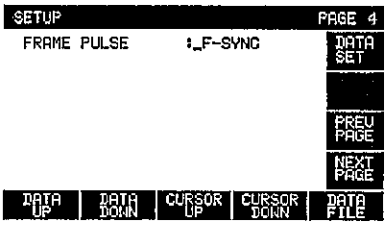
1. Setting of AUDIO EE MODE
2. Setting of TIME CODE EE MODE

PAGE 3



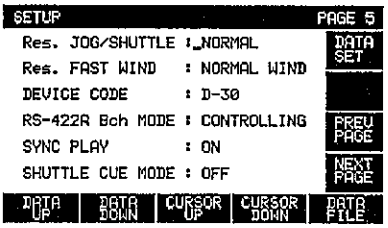
1. Setting of FRAME RATE OF TIME CODE
2. Setting of REPRODUCTION FORMAT OF TIME CODE
3. Setting of TIME CODE OUTPUT WHEN REVERSING
4. Setting of TIME CODE OUTPUT DURING FF/REW
5. Setting of TIME CODE OUTPUT WHEN IN PAUSE MODE
6. Setting of TIME CODE OUTPUT MODE

PAGE 4



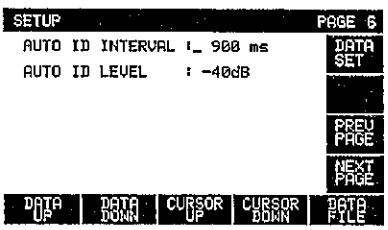
1. Setting of FRAME PULSE

PAGE 5



1. Setting of RESPONSE OF JOG/SHUTTLE
2. Setting of RESPONSE OF FAST WIND
3. Setting of DEVICE TYPE
4. Setting of RS-422 B PORT MODE
5. Setting of ON/OFF OF SYNC PLAY
6. Setting of CUE MODE with JOG/SHTL

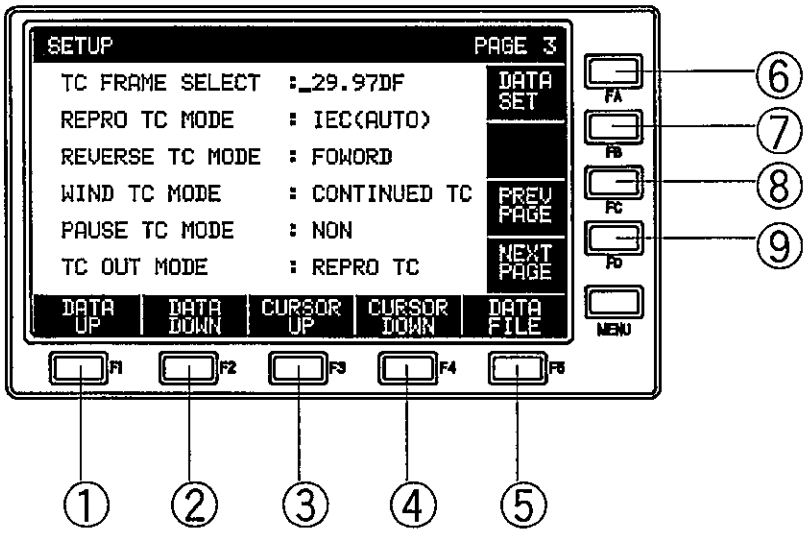
PAGE 6



1. Setting of AUTO ID SILENCE TIME
2. Setting of REFERENCE LEVEL FOR EXECUTION OF AUTO ID AND AUTO CUE UP

14-1-1.Key Displays and Functions

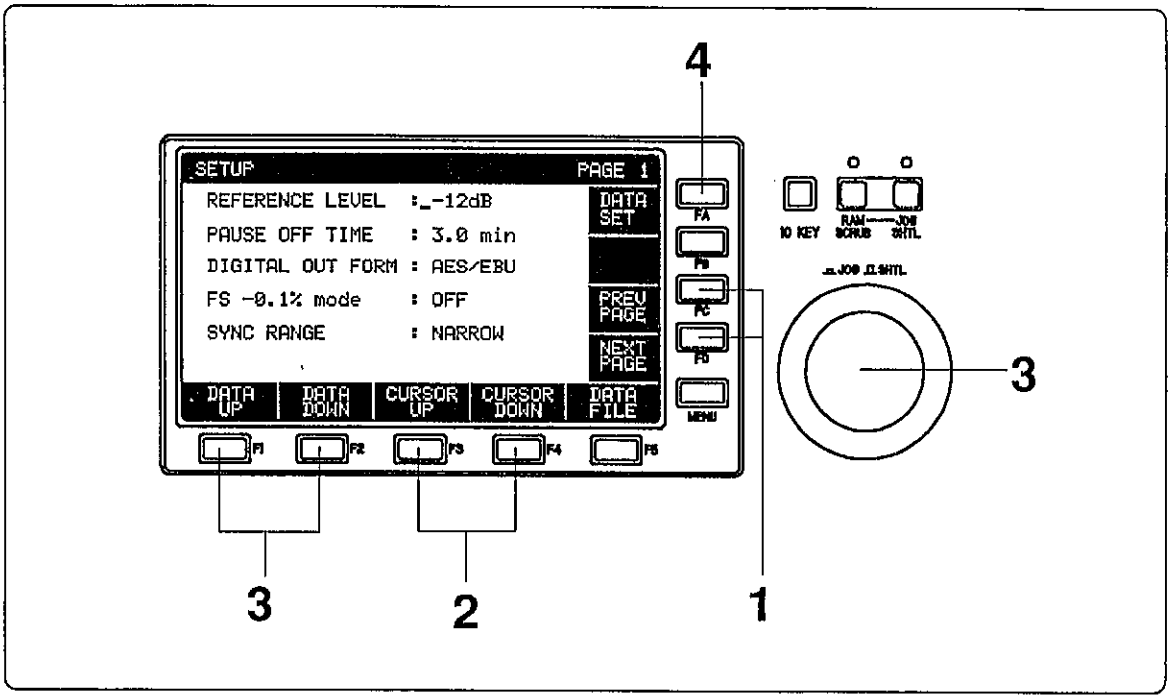
In the SETUP MODE menu pages, the function keys having the same code number have the same function.



No.		Display	Function
①	F1	DATA UP	Pressing this key will scroll up DATA currently displayed above the cursor.
②	F2	DATA DOWN	Pressing this key will scroll down DATA currently displayed above the cursor.
③	F3	CURSOR UP	Pressing this key will move the cursor up.
④	F4	CURSOR DOWN	Pressing this key will move the cursor down..
⑤	F5	DATA FILE	Pressing this key will activate the DATA FILE setting mode, shifting the second level display.
⑥	FA	DATA SET	Pressing this key after selecting DATA to set the data.
⑦	FB		No function at present.
⑧	FC	PREV PAGE	Pressing this key will display the previous page.
⑨	FD	NEXT PAGE	Pressing this key will display the next page.

14-1-2. Selecting and Defining Data

The following procedure may be commonly applied to whichever page of PAGE 1 through 6 when selecting and then defining the desired DATA.



Operating procedure

1. Press the FC (PREV PAGE) or the FD (NEXT PAGE) key to display the desired page.

2. Press the F3 (CURSOR UP) or the F4 (CURSOR DOWN) key to selectthe item to be set. (Move the cursor.)

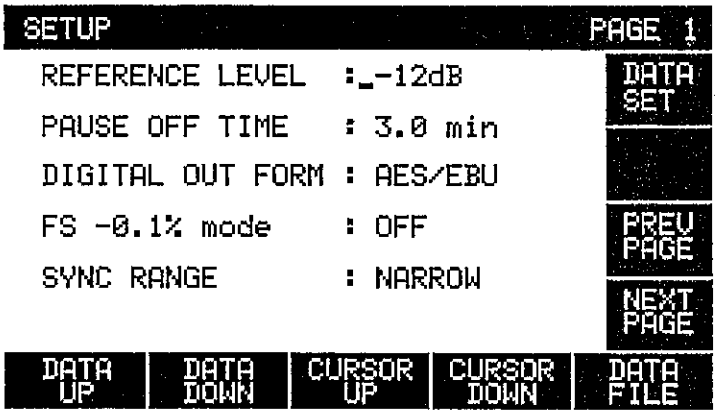
3. Select DATA by pressing the F1 (DATA UP) or the F2 (DATA DOWN)key, or with the JOG dial. (The cursor will flash when selecting.)

4. Press the FA (DATA SET) key to define data selected. (The cursor will stop flashing.)

14-2. Setup

14-2-1. PAGE 1

Use this page to set the following five items.



* Setting the Reference Level (REFERENCE LEVEL)

A reference level for this recorder may be selected from the following four values.
(* denotes the default level.).
As the level is changed, the reference marker (▲) appearing on the level meter of the display will move accordingly.

<NOTE>
The change of the reference level will also change the output level of the headphones.

-10dB	Reference level will be set at -10dB level.
-12dB(*)	Reference level will be set at -12dB level.
-18dB	Reference level will be set at -18dB level.
-20dB	Reference level will be set at -20dB level.

* Setting of the Disabling Time of Pause Mode (PAUSE OFF TIME)

On the D-30, the PAUSE mode will automatically disengage to protect the tape from damage and for other purposes. The setting here is to define the time before the pause mode is turned off. (* denotes the default value.)

NON STOP	Pause mode will remain engaged.
1.0 min	Pause mode will be disengaged in 1 minute.
2.0 min	Pause mode will be disengaged in 2 minute.
3.0 min(*)	Pause mode will be disengaged in 3 minute.
5.0 min	Pause mode will be disengaged in 5 minute.

<NOTE>
Use of the NON STOP function should be avoided as much as possible because it could cause an increase in the error rate.

* Setting of the Format for Digital Output (DIGITAL OUT FORM)

The format of the digital interface at the DIGITAL OUT terminal will be selected here.
(* designates the default setting.)

AES/EBU(*)	AES/EBU (IEC 958 Broadcasting studio use) will be selected.
CONSUMER	IEC 958 Consumer use will be selected.
AES/EBU W/SUB ID	SUB DATA will be output to U bit of AES/EBU.

<NOTE>
At present, the AES/EBU W/SUB ID mode is not defined.

* Setting of [-0.1%] Mode of Sampling Frequency (FS -0.1% MODE)

A sampling frequency of -0.1% of FS 44.1kHz or 48kHz will be set.
(* denotes the default setting.)
This mode will function only when 30 or 30DF is set for the time code FRAME SELECT and will not function with any other settings. Since the setting here is -0.1%, FS mode of 44.056 or 47.952kHz with 29.97 or 29.97DF, respectively, will result. Thus, 29.97 will be the only external SYNC to be synchronized to.

ON	FS of 44.056kHz or 47.952kHz will result.
OFF(*)	Normal FS of 44.1kHz or 48kHz will result.

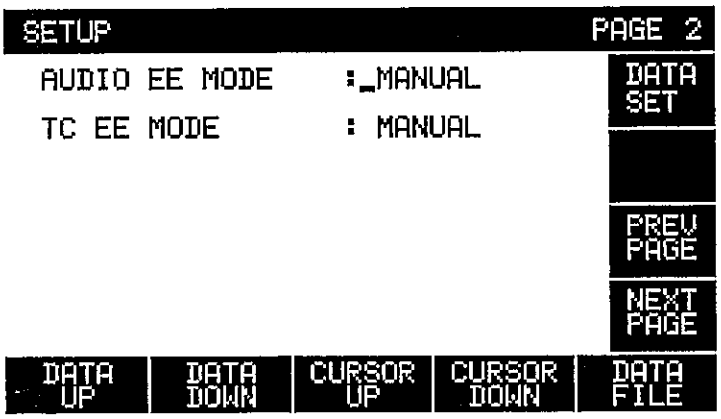
Setup of frequency range possible for synchronization (SYNC RANGE)

Setup of frequency range in which synchronization is possible at DIGITAL IN or WORD IN
(* denotes the default setting.).

NARROW (*)	It will not lock to the Word Clock if the deviation is more than 400 ppm.
WIDE	It will synchronize to the Word Clock within the +/- 12.5% range.

14-2-2. PAGE 2

The following two items may be set on this page.



* Setting of Audio EE Mode (Audio EE MODE)

(* denotes the default setting.)

MANUAL(*)	The AUDIO INPUT MONITOR will function only when manually controlled.
AUTO	The AUDIO INPUT MONITOR will be automatically activated when STOP or PAUSE is enabled.

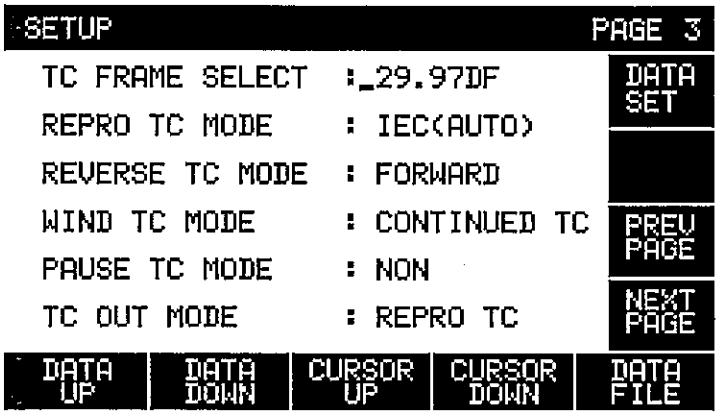
* Setting of Time Code EE Mode (Time code EE MODE)

(* denotes the default setting.)

MANUAL(*)	The TC INPUT MONITOR will function only when manually controlled.
AUTO	The TC INPUT MONITOR will be automatically activated when STOP or PAUSE is enabled.

14-2-3. PAGE 3

The following six items may be set on this page.



* Setting of Frame Rate of Time Code (time code FRAME SELECT)

The TC FRAME RATE of both INTERNAL GENERATOR and external video sync may be selected here. (* denotes the default setting.)

29.97 DF(*)	NTSC color with real time adjust
29.97NDF	NTSC color
30 FRAME	NTSC video/film
25 FRAME	European film/PAL-SECAM video EBU
24 FRAME	American motion picture
30 DF	NTSC video/film

* This setting is possible in GEN SETUP MODE as well.

* Setting of Reproduction Format of Time Code (REPRO time code MODE)

The format for reproducing time code may be set here. (* denotes the default setting.)

IEC (AUTO)(*)	The IEC format will dominate. When it is not available but the FOSTEX format is, the FOSTEX format will be output. The conversion frame is set at AUTO at this time.
FOSTEX	FOSTEX format will dominate. When it is not available but the IEC format is, the IEC format will be output. The conversion frame is set at AUTO at this time.
A-TIME	The time code conversion frame coming from A-TIME will act like the internal generator.
IEC (MANUAL)	The conversion frame for IEC format will act like the internal generator.
NON	No time code will be output.

<NOTES>

· Only L time code output is available with FOSTEX format. Display and locating will not function.

· It is recommended that FOSTEX format recorded on the tape be converted to IEC format via digital-copying audio and time code.

* Setting of TC IN Rewind (REVERSE TC MODE)

The frame data format may be selected using the time code output when in the REW mode). (* denotes the default setting.)

FORWARD(*)	Time code output of train of bits in the forward direction will be generated when reversing. This mode is effective on time code readers, such as the FOSTEX 4030, which only read time code in the forward direction.
REVERSE	When reversing, bit train of time code will also be generated in the reverse direction.

* Setting of TC Output During FWD/REW (WIND time code MODE)

In DAT recorders, continuous signal reading is not possible when in the fast-forward mode. This makes it necessary to utilize fractions of signals which are either read out or generate time code to supplement them so that the synchronized operation can continue. Selected here is the status for time code output in during FWD/REW in both fast and slow modes. (* denotes the default setting.)

CONTINUED TC (*)	Continuous output mode time code for 5 frames or more will be generated and output following any point where time code has been read. Time code will be continuously generated until time code can be read again. On reading time code, another round of generation and output in the same manner as above will be repeated. This mode is ideal when time code readers such as the Fostex 4030 need continuity in time code frame.
STOP TC	Time code will not be output during FWD/REW, but during REC and PLAY (in constant speed mode) it is output continuously.
READ TC	Intermittent output mode time code will be output as read. In this mode, time code frame will be output intermittently.

* Setting of TC Output when in Pause Mode (PAUSE TC MODE)

In PAUSE mode, it is selected whether the same time code should be output.
(* denotes the default setting.)

NON(*)	No time code will be output in the pause mode.
OUTPUT	The same time code will be output in the pause mode.

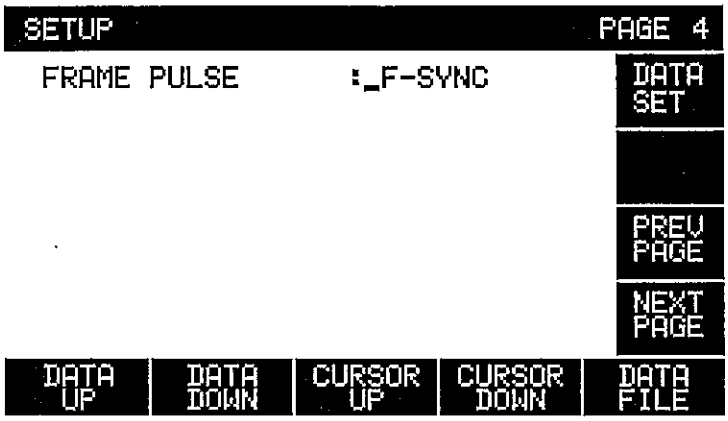
* Setting of TC Output Mode (TC OUT MODE)

The type of time code output from TIME CODE OUTPUT may be selected.
(* denotes the default setting.)

REPRO time code(*)	Played back time code of tape will be output.
GEN time code	The time code of the internal generator will be output.

<NOTE>
The D-30 will default to REPRO time code whenever turned OFF.

14-2-4. PAGE 4



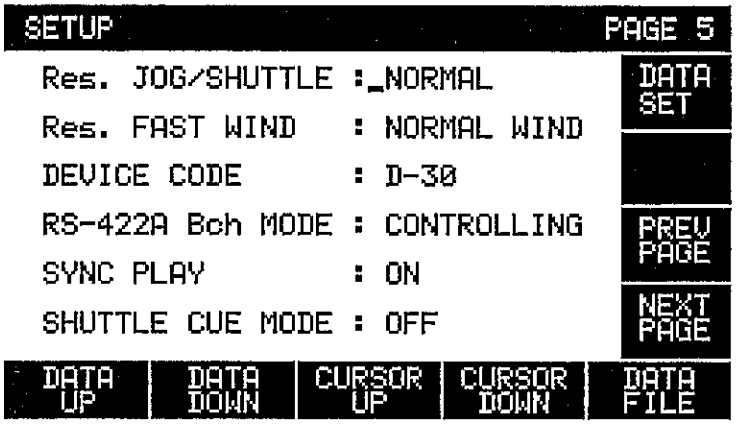
* Setting of Frame Pulse (FRAME PULSE)

The type of frame pulse output from EXT SYNC OUTPUT may be selected.
(* denotes the default setting.)

TC FRAME(*)	The frame pulse signal of the internal generator will be output.
F-SYNC	The DAT frame sync signal will be output.

14-2-5. PAGE 5

This page allows to set six items involved when using RS-422.



* Setting of Response of JOG/SHUTTLE (Res. JOG/SHUTTLE)

Here, the response of JOG/SHUTTLE to the signals from RS-422 may be set.
(* denotes the default setting.)

NORMAL(*)	As accurate a response as possible may be expected to protocol data from RS-422.
EMULATION 1	This is to emulate a VIDEO EDITOR.
EMULATION 2	This is to emulate a VIDEO EDITOR.
EMULATION 3	This is to emulate a VIDEO EDITOR.

* Setting of Response of Fast Wind (Res. FAST WIND)

Here, the response of FAST WIND to the signals from RS-422 may be set.
(* denotes the default setting.)

RAMP WIND	Speed will gradually increase to 100 times fast search.
NORMAL WIND(*)	Regular 100 times fast search speed will be enabled.
MAX 16 times	Regular 16 times fast search speed will be enabled.

* Setting of Device Type (DEVICE CODE)

The device codes of this recorder may be set as device codes of other devices as follows: Hence, reacting to readily the available editor will be possible without a D-30 device code registered on the editor. (* denotes the default setting.)

D-30(*)	The code has been set for D-30.
PCM-7050	The code has been set for PCM-7050.
BVW-75	The code has been set for BVW-75.
BVU-800	The code has been set for BVU-800.

* Setting of RS-422 B port Mode (RS-422A B ch MODE)

(* denotes the default setting.)

CONTROLLING (*)	The D-30 may control external equipment.
CONTROLLED	D-30 may be controlled with external equipment such as an editor.

* Setting of ON/OFF of Sync Play (SYNC PLAY)

This is the function to have SYNC of playback time code locked to the frame of input VIDEO REFERENCE when playing in response to PLAY command from RS-422, and is to be set ON so that video editor may be used. (* denotes the default setting.)

ON(*)	Sync play will be performed.
OFF	No sync play will be performed.

<NOTE>

This setting must be <OFF> when D-30 is used as a PLAYER for auto editing.

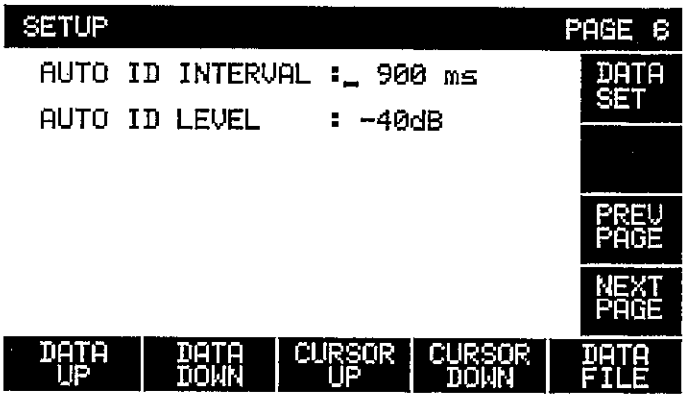
* Setting of Cue Mode with JOG/SHTL (SHUTTLE CUE MODE)

Desired cueing monitor function may be slected with JOG/SHUTTLE using the signal coming through RS-422. (* denotes the default setting.)

OFF(*)	Cueing monitor is possible at no speed selection but one time speed.
ON	Cueing monitor is possible at any speed but high speed FF/ REWIND.

14-2-6. PAGE 6

The following two items relating to AUTO ID function may be set in this page.



* Setting of Auto ID Silence Time (AUTO ID INTERVAL)

Length of silence (no sound) interval before AUTO ID inputs will be set.
(* denotes the default value.)

300m sec	300m sec interval before ID input.
600m sec	600m sec interval before ID input.
900m sec(*)	900m sec interval before ID input.
1200m sec	1200m sec interval before ID input.
1500m sec	1500m sec interval before ID input.

* Setting of Reference Level for Execution of Auto ID and Auto Cue Up (AUTO ID LEVEL)

Set here is the reference level to determine the crossing from no sound to sound input so that the AUTO ID or AUTO CUE UP function will be activated. (* denotes the default setting.)

-20dB	-20dB will be set as reference level.
-30dB	-30dB will be set as reference level.
-40dB(*)	-40dB will be set as reference level.
-55dB	-55dB will be set as reference level.

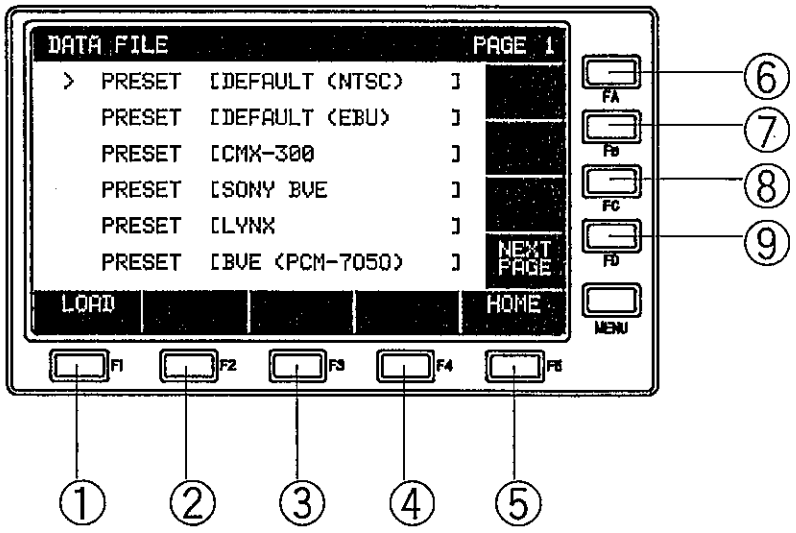
14-3. Setting of Mode of Data File

Second level display pages in the SETUP MODE menu include the DATA FILE setting mode. This mode, consisting of PAGE 1 and PAGE 2, allows selection of the preset which fits with the editor to be connected to the D-30 (PAGE 1), and execute user registration of what is set (PAGE 2). To enter this mode, press the F5(DATA FILE) key in any of SETUP MODE menu pages.

14-3-1. Display and Functions of Function Keys of Each Page

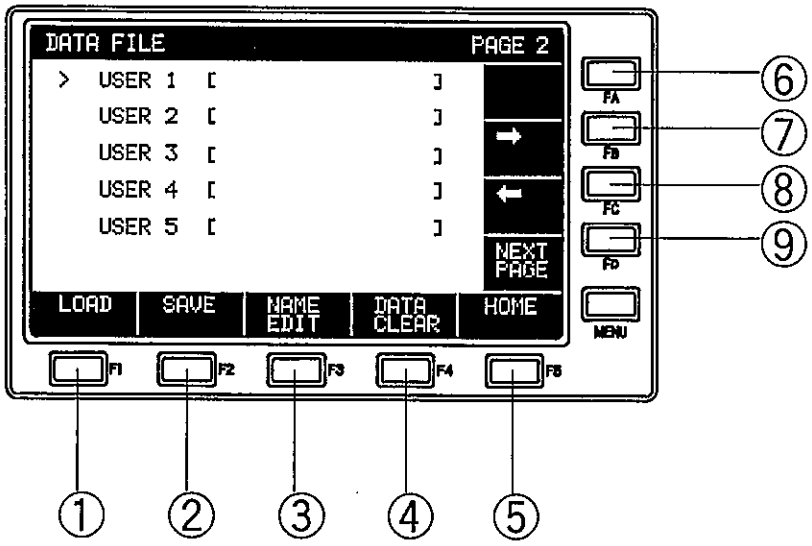
The displays and functions of function keys of PAGE 1 and 2 are as follows:

PAGE 1:



No.		Display	Function
①	F1	LOAD	Pressing this key will enable selection of the desired PRESET DATA and turn the function of the FA key into that of the [DATA SET] key.
②	F2		No function at present..
③	F3		No function at present..
④	F4		No function at present..
⑤	F5	HOME	Pressing this key will restore the previous display.
⑥	FA	(DATA SET)	Pressing the LOAD key will change its the function into the [DATA SET] key. Pressing this key following the LOAD key will set the PRESET DATA selected by the D-30.
⑦	FB		No function at present..
⑧	FC		No function at present..
⑨	FD	NEXT PAGE	Pressing this key will cycle the pages within the same level display or page.

PAGE 2:



No.		Display	Function
①	F1	LOAD	What has been user-registered in the recorder may be retrieved here. Pressing this key will cause the function of the FA key to turn into the [DATA SET] key. Pressing the FA (DATA SET) key following the LOAD key will retrieve what is currently set.
②	F2	SAVE	A new user name may be registered (saved), or what is set may be registered. When this key is pressed, the function of the FA key will turn change to [DATA SET] key. Pressing the FA (DATA SET) key following the SAVE key will allow registration (saving) of another user name.
③	F3	NAME EDIT	Pressing this key will allow a user name to be input.
④	F4	DATA CLEAR	Press this key to clear set data. Pressing this key will turn the function of the FA key into the [DATA SET] key. Pressing the FA (DATA SET) key following the DATA CLEAR key will clear the selected set data. The user name will remain.
⑤	F5	HOME	Pressing this key will restore the previous display.
⑥	FA	(DATA SET)	The function of LOAD, SAVE or DATA CLEAR key, when pressed, will turn into that of the [DATA SET] key, and define respective operations.
⑦	FB	->	Pressing this key will move the edit point rightward.
⑧	FC	<-	Pressing this key will move the edit point leftward.
⑨	FD	NEXT PAGE	The function of this key is identical to that of PAGE 1.

14-3-2. Presetting of Editor (PAGE 1)

This recorder has built in settings for those editors which are expected to be used. In this page, the PRESET DATA for the editor to be connected to the D30 may be selected so that D-30 will operate under the best conditions.

PRESET [DEFAULT (NTSC)] :Set to use NTSC specifications (Default setting)

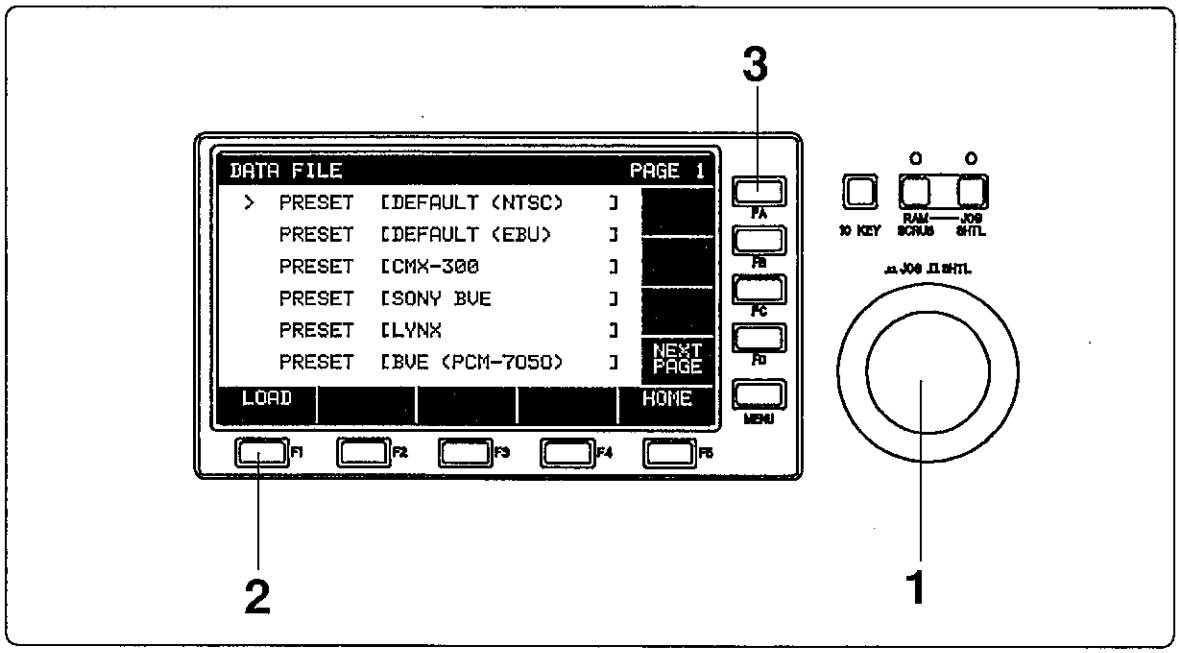
PRESET [DEFAULT (EBU)] :Set to use EBU specifications

PRESET [CMX-300] :Set to use most editors such as AMPEX and others

PRESET [SONY BVE] :Set to use Sony BVE series editors

PRESET [LYNX] :Set to use LYNX synchronizer

PRESET [BVE (PCM-7050)] :Set to use editor for the BVE Series complying to the SONY PCM-7050



Operating procedure

1. While in PAGE 1, select the desired PRESET using the JOG dial.
   JOG will move > (rightward).

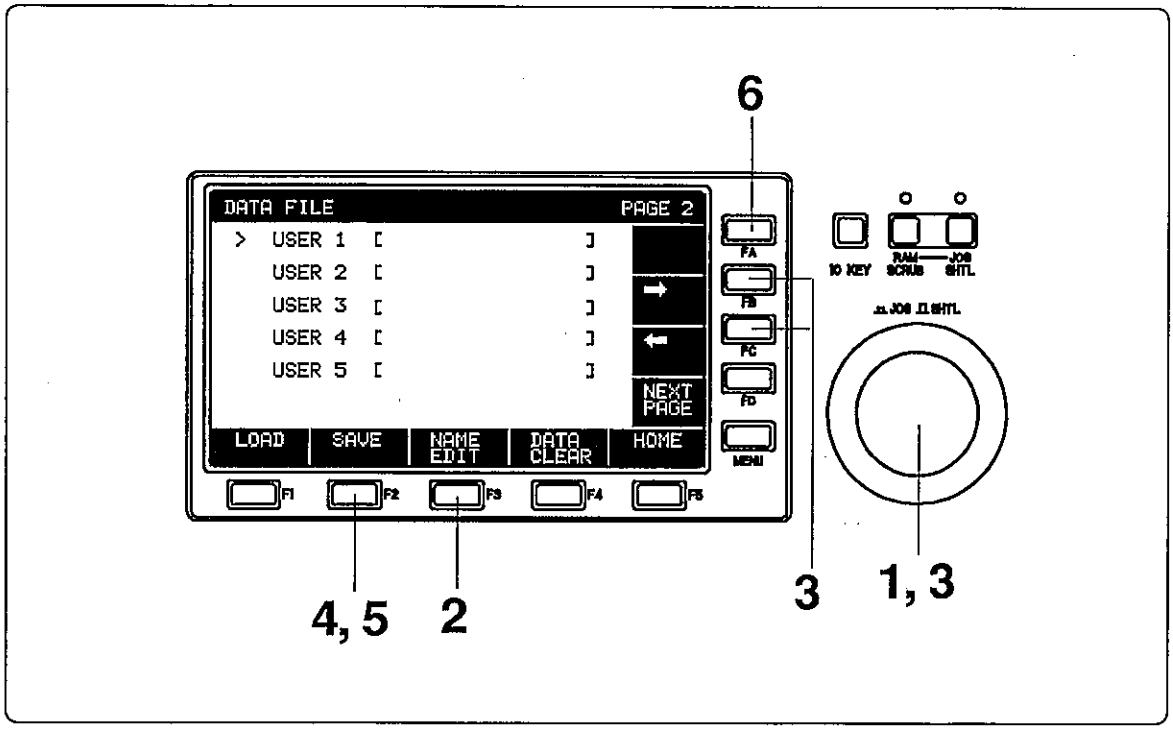
2. Press the F1 (LOAD) key.
   Pressing this key will cause the display to read as follows, asking whether the PRESET DATA selected may be loaded. (At the same time, the function of the FA key will turn into that of DATA SET key.)

   ARE YOU SURE ?

3. Press the FA (DATA SET) key.
   D-30 will be set to the selected PRESET condition. [COMPLETE !] will be displayed for a few seconds and turn off when setting is completed. At the same time, the function of the FA (DATA SET) key will be disabled. Press the F1 (LOAD) key before the FA (DATA SET) key when loading is not intended.

14-3-3. Setting of User Registration (PAGE 2)

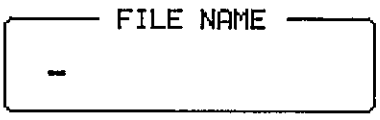
Use this function to insert any packages of settings into the D-30 memory necessary for execution of a certain job. There are five user memories available in which registration may be made. Each memory will accept registration of a package of settings along with a name assigned, which may be retrieved as needs arise.
This facility makes this recorder very convenient to use especially when time consuming complex settings are necessary or repetitive settings are involved.



Operating procedure

1. While in PAGE 2, use the JOG dial to select a user number.
   The desired user number may be selected by moving > to that number with JOG dial

2. Press the F3 (NAME EDIT) key.
   The display will read as follows and a file name may be entered.

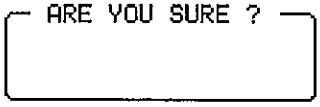


3. Input the desired file name using JOG dial.
   Use the FB (->) or FC (<-) key to move the edit point and the JOG dial to input.
   Refer to the next page for numerals and alphabets that the JOG can enter.

4. Press the F2 (SAVE) key after the file name has been input.
   The input file name will be registered and displayed.

5. Press the F2 (SAVE) key again.

The display will then ask whether to save the file name registered.
(At this time, the function of the FA key will turn into that of DATA SET key.)

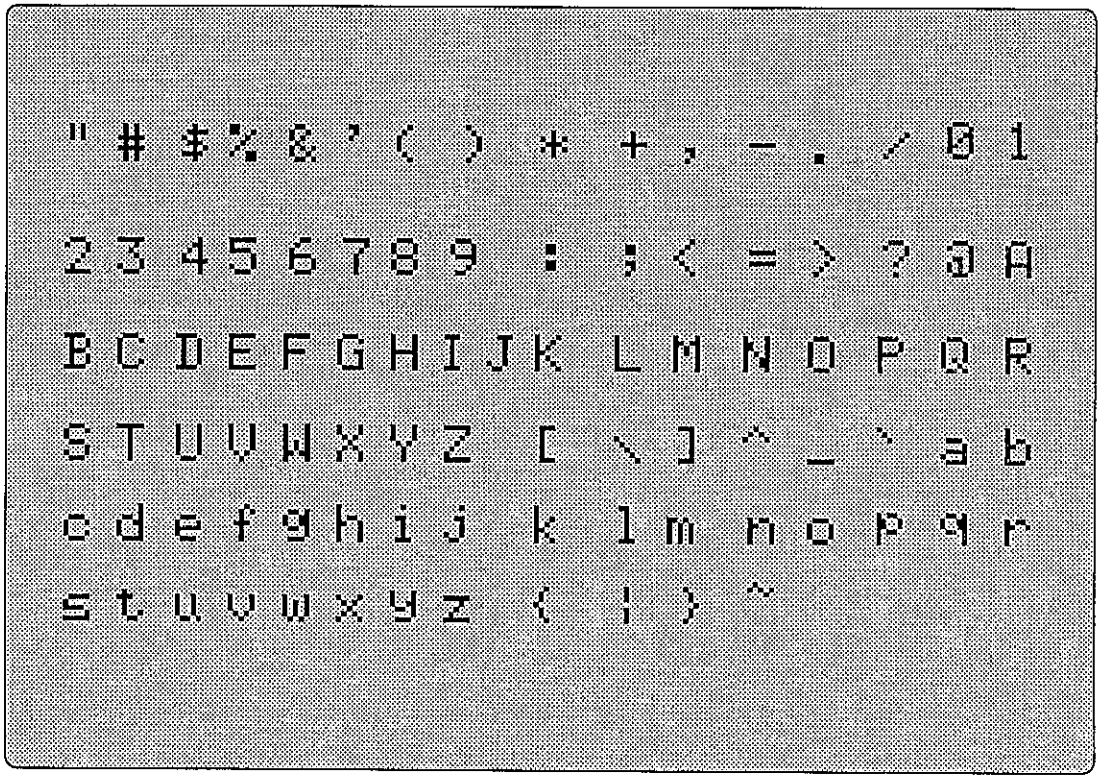


6. Press the FA (DATA SET) key.

The display will show [COMPLETE !] for a few seconds. At the same time, the data set under the file name input at the designated user number will be saved. When saved, the user number will be prefixed with [*] indicating that the number has been registered. Data setting function of the FA key will be disabled, and the [DATA SET] display will disappear.

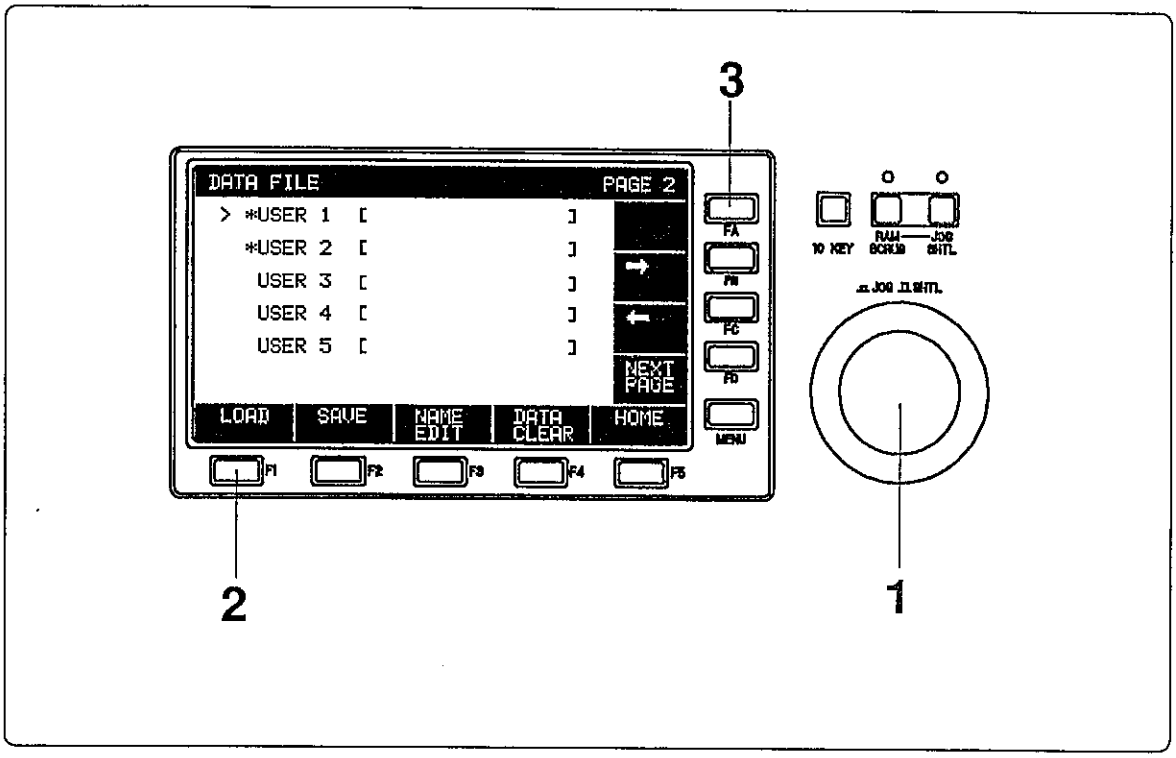
* Press the F2 (SAVE) key when finishing saving before FA (DATA) key is pressed.

The numerals, alphabets and symbols that may be available for inputting FILE NAME and may be input with JOG dial are as follows.



14-3-4. Recalling Saved Settings (LOAD)

Use this function to recall saved settings



Operating procedure

1. While in PAGE 2, select the desired user number using the JOG dial.
   Move the cursor (>) with JOG dial. (The number with * needs to be selected.)

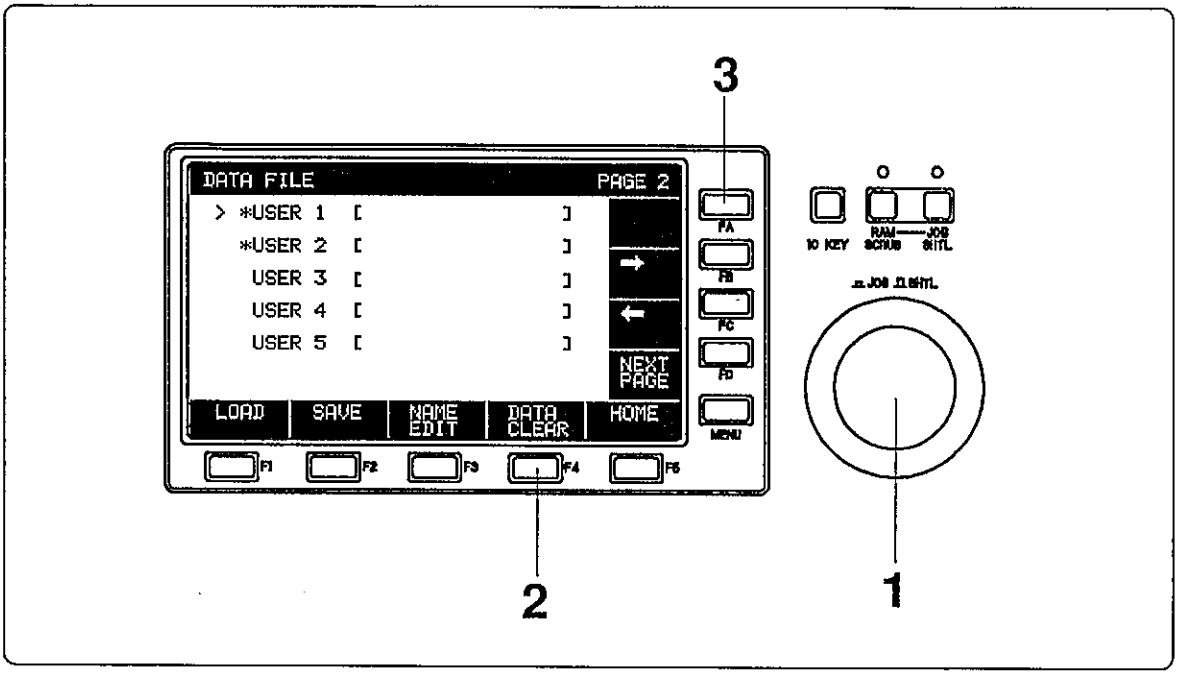
2. Press the F1 (LOAD) key.
   The display will then read as follows, asking whether to load the data at the designated user number. (The function of the FA key will turn into that of DATA SET key.)

   ```
   ARE YOU SURE ?
   ```

3. Press the FA (DATA SET) key.
   The display will show [COMPLETE !] for a few seconds. At the same time, the data registered at the designated user number will be loaded. When loaded, the D-30 will function accordingly. The data setting function of the FA key will be disabled, and the [DATA SET] display will disappear. Press the F1 (LOAD) key when ceasing loading before the FA (DATA SET) key is pressed.

14-3-5. Clearing Away Set Data Which Are No Longer Necessary

It is possible to clear away data which is no longer useful. There are five user numbers available to register on DATA FILE in the D-30. To make full use of them, it is suggested that any unnecessary data be cleared away.



Operating procedure

1. Select the user number to be cleared away using JOG while in PAGE 2. (Move >.)

2. Press the F4 (DATA CLEAR) key.
   The display will read as follows, asking whether to clear away the data at the designated number. (At this time, the function of the FA key will turn into that of DATA SET key.)

   ARE YOU SURE ?

3. Press the FA (DATA SET) key.
   The display will show [COMPLETE !] for a few seconds. At the same time, the data registered at the designated user number will be cleared, and [*] will turn off. The data setting function of the FA key will be disabled, and the [DATA SET] display will be gone.

<NOTES>

* The file name will remain after the data has been cleared. This file name may be used again when registering new data. Changing the file name may be executed following, "14-3-2. setting of user registration (PAGE 2)".

* Press the F4 (DATA CLEAR) key when finishing data clearing before FA (DATA SET) is pressed.

CHAPTER 15

Specifications

Specifications

General

Recording Format	: IEC DIS DAT Standard, Part 5
Recording Tape	: Digital Audio Tape
Number of Channels	: Audio x 2, Time Code x 1
Recording Time	: 120 minutes (T-120 tape)
Head Composition	: Rotating 4 head
Error Correction	: Duble Encoded Reed Solomon Code
Track Pitch	: 13.6 μm
Sampling Frequency	: 48kHz, 44.1kHz
Modulation Type	: 8-10 Conversion
Transmission Rate	: 2.4Mbit/sec
Quantization	: 16 bit linear
Emphasis	: 50 μsec/15 μsec
Copy Guard	: Not Provided
Power Supply	: 120VAC 60Hz (AC inlet type) : 230V ∿ 50/60Hz (AC inlet type) : 230V ∿ 50Hz (AC inlet type)
Power Consumption	: 50W
Physical Dimensions	: 482 (W) x 150 (H) x 480 (D) mm
Weight	: Approx. 14kg

Mechanical

Motor Construction	: 4DD Motors
Tape Speed	: 8.15 mm/sec, 12.225 mm/sec (automatic switching)
Fast Wind Time	: Approx. 80 seconds (T-120 tape)
Search Speed/Fastwind Speed	: Max. 100 times
Loading System	: Top Loading Type, internal tape visible
Search Speed	: 1/2, 1, 2, 3, 5, 9, 16, 100 times
Vari Pitch Control	: -12.5% ~ +12.5%

Memory Reproducing

Tape RAM	: 8M bit 5sec x 2 (48kHz MAX.)
Source RAM (Option)	: 8M bit 5sec x 2 (48kHz MAX.)
RAM Search Speed	: 0~1 times

Cross Fade

: 0~300 msec def. 10msec

External Sync

Sync Signal	: Composite, Frame Pulse, Field Pulse, Word Sync
Frame Rate	: 24, 25, 29.97, 30, 48, 50, 59.94, 60 (±100ppm), Word Sync ±12.5%

Electrical Characteristics

R/P Frequency Responce	: 20Hz ~ 20kHz, ±0.5dB
S/N Ratio	: Higher than 90dB
Dynamic Range	: Higher than 90dB
Total Harmonic Distortion	: Less than 0.05% (1kHz, +4dBu)
Channel Separation	: Better than 80dB (1kHz)
Wow and Flutter	: Less than +/- 0.002% WTD/peak
Standard Recording Level	: -20dB, -18dB, -12dB, -10dB (Switchable) (0dB=16bit full scale level):Default (-12dB)

Input and Output Connectors

Analog Audio Inputs (XLR-3-31 type)

Reference Input Level	: +4dBu/10kΩ (balanced)
	: +4dBm/600Ω (balanced)
	: -10dBV/10kΩ (unbalanced, between HOT and GND)

Analog Audio Outputs (XLR-3-32 type)

Reference Output Level	: +4dBu/600Ω (balanced)

Monitor Outputs (6 ϕ standard phone jack)

Reference Output Level : -10dBV/10kΩ (unbalanced)

Headphone Output (6 ϕ stereo phone jack)

Max. Output Level : 100mW (at 32Ω)
Output Load Impedance : 8Ω or more

Digital Inputs (XLR-3-31 type)

Input Format : Comply to AES/EBU specifications

Digital outputs (XLR-3-32 type)

Output Format
Output Level : Comply to AES/EBU specifications
C-BIT : AES/EBU, IEC Consumer Switchable

Time Code Input (XLR-3-31 type)

Input Format : Comply to AES/EBU specifications
Reference Input Level : 2V p-p
Min. Input Level : 0.25V p-p
Input Impedance : 20kΩ or higher

Time Code Output (XLR-3-32 type)

Output Format : Comply to AES/EBU specifications
Reference Output Level : 2V p-p
Output Impedance : 50Ω or higher

Time Code Thru (XLR-3-32 type)

Reference Output Level : Direct output of time code input.

VITC Input (BNC type)

Reference Input level : 1V p-p
Input Impedance : 75Ω (ON-OFF switchable)

VITC Thru (BNC type)

Reference Output Level : Direct output of VITC input.

External Sync Input and Output Connectors

Word Input (BNC type)

Reference Input Level : TTL Level

Input Impedance : 75Ω (ON-OFF switchable)

Word Thru (BNC type)

Reference Output Level : Direct output of WORD input.

Word Output (BNC type)

Reference Output Level : TTL Level

Output Load Impedance : 75Ω

Video Input (BNC type)

Reference Input Level : TTL Level

Input Impedance : 75Ω (ON-OFF switchable)

Video Thru (BNC type)

Reference Output Level : Direct output of VIDEO input.

DAT-F Output (BNC type)

Pulse output of DAT Frame/Time Code Frame.

Reference Output Level : TTL Level, Pulse Output

Output Load Impedance : 75Ω

External Control Connectors

RS-422 x 2

D-SUB 9pin PROTOCOL : Comply to RS-422 specifications
: Comply to SONY 9 PIN PROTOCOL

Device Mode : Switchable
: Controlling Device Mode
: Controlled Device Mode

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