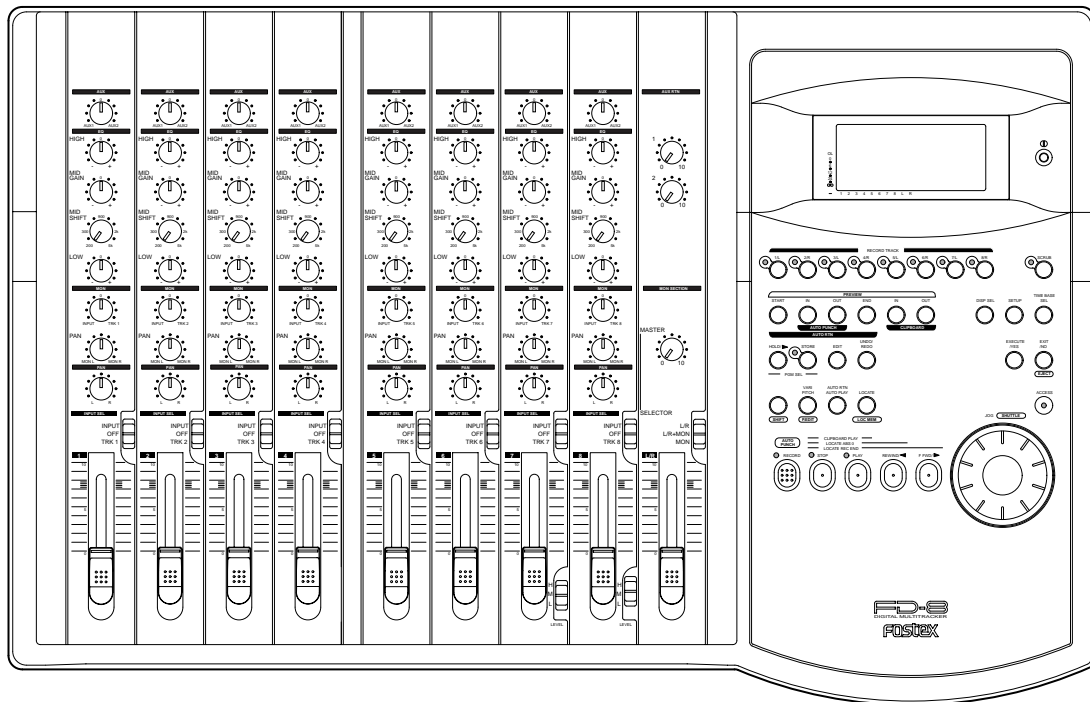


Owner's Manual

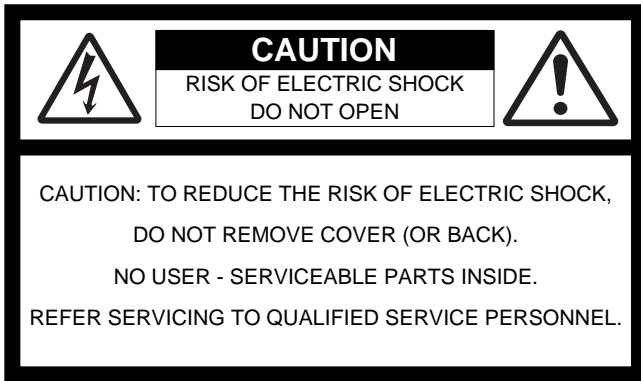
Model

FD-8

Digital Multitracker



Fostex®



"WARNING"

"TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE."

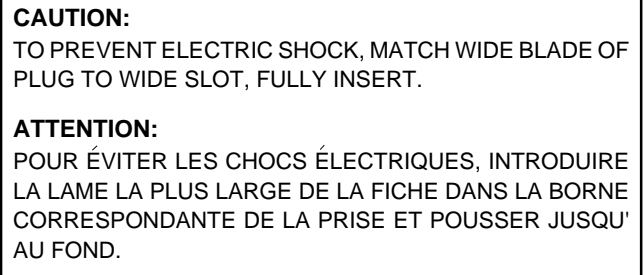
SAFETY INSTRUCTIONS

1. Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.



An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization - The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.
12. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
14. Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
15. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
16. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
 - A. The power supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the appliance; or
 - C. The appliance has been exposed to rain; or
 - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - E. The appliance has been dropped, or the enclosure damaged.
17. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

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Introduction

Thank you for choosing the Fostex FD-8. The FD-8 is a eight-track multitracker equipped with sixteen additional virtual tracks. It uses a SCSI removable disk, such as a Zip cartridge or an MO disk, or a fixed SCSI hard disk, optional 2.5 inch internal hard disk as a recording media to perform eight-track recording and eight-track playback.

Main features

Mixer section

The FD-8 is equipped with a eight-channel analog mixer that achieves the high tonal quality required by state-of-the-art digital recording.

- The mixer section features eight input channels. Inputs 1 to 6 supports line level input and Inputs 7 and 8 support a wide range of input sources, from line level to mic level.
- Inputs 7 and 8 are equipped with a microphone amplifier, a three-stage trim switch, and an insert jack, as well as a balanced XLR connector.
- All input channels have a three-point equalizer (two channels: shelving, one channel: parametric), that allow for a sharp and high-responsive tone adjustment.
- Two AUX sends and returns allows for flexible sound processing. You can connect two ambient-type signal processors with stereo outputs.
- The mixer section also features an “All Stereo Mix function” that facilitates producing a stereo masterpiece and allows you to master all sources in stereo, including synchronizing MIDI sound sources.

Recorder section

The FD-8's recorder section uses a recording format called FDMS-3 (Fostex Disk Management System-3). It uses an external SCSI device (stationary disk or removable disk) as the recording media.

- The FD-8 features non-destructive audio editing (a great advantage of digital recording) such as Copy & Paste, Move & Paste, Erase, etc. You can choose Time Base (ABS or MTC) or MIDI bar/beat/clock as the unit.
- Two recording modes: Normal mode, Mastering mode, to support various recording media.
- A “Preview function” allows for an intuitive fine-adjustment of an editing point (locate point).
- An “Undo/Redo function” enables you to easily correct recording and editing mistakes.
- A “Vari Pitch function” allows you to fine-tune the pitch.
- The FD-8 has a “digital input track setup” function that enables you to input S/P DIF or adat digital signals and record them on any two tracks or all eight tracks.
- The FD-8 has a “digital output track setup” function that enables you to output digital data as S/P DIF or adat digital signals and record them on an external digital device (DAT, MD, adat, etc.).
- You can also use the DATA IN/OUT jacks to mix down digital signals to an external DAT or adat, and to save and load song data (audio data and SETUP mode settings) to and from the DAT or adat.
- You can connect a backup SCSI drive to the unit for the save and load operation.
- A “Digital Remix function” allows for digital output of all twenty sources remixed in the mixer section.
- MIDI clock and Song Position Pointer can be transmitted according to the internal programmable Tempo Map. You can set up a synchronization system with a sequencer or a rhythm machine without wasting a track.
- You can use the FD-8 as a sync slave machine by sending MTC from a connected device.
- The FD-8 supports MTC, MMC, and Fostex System Exclusive Message, which allows for advanced control and high-precision synchronization from external sequencing software. You can set the device number and MTC frame rate for MMC and Fostex System Exclusive Message. Also, “MTC Offset function” and “Offset Mode function” are useful for setting up a sync environment using an external sequencing software.
- Auto Punch In/Out and Manual Punch In/Out functions offer two modes: “Take” for a real recording, and “Rehearsal” for monitoring the part between the in and out points.
- The “Program Select function” enables you to select a song from up to 99 songs and name the songs.
- Recorder In jacks (L/R) are used to record audio directly to the recorder section, bypassing the mixer section.
- A “Bar/Beat Resolution function” is used to edit audio at the beginning of the beat (round up or round off to a beat).
- The “Metronome function” can be used as a rhythm guide for recording.
- Various edit functions using an edit point (locate point), such as Copy & Paste, Move & Paste, Erase, Auto Punch In/Out, Auto Locate, are available. You can also locate ABS 0 or REC END regardless of the edit point (locate point).
- You can set a preroll time of 0 to 10 seconds.
- A “Disk Remain Display function” offers a clear indication of available recording time and disk space (in mono track recording). You can choose the Time Base from ABS, MTC, and BAR/BEAT/CLK.

Precautions

- Be sure to connect the FD-8 to the power supply specified in the Specifications section of this Owner's Manual. Do not use an AC outlet of any other voltage.
- Do not connect the FD-8 to the same AC outlet to which devices that could generate noise (such as a large motor or dimmer), or the devices that consume a large amount of power (such as an air conditioning system or large electric heater) are connected.
- If you use the unit in an area with a different power voltage, first consult your dealer or the nearest FOSTEX service station. You can use the unit with a power frequency of 50Hz or 60Hz.
- It is very dangerous to use a power cord that is frayed or damaged. In such a case, stop using the unit immediately and ask your dealer to repair the cord.
- To avoid possible electric shock and damage to the FD-8, avoid contact with water or other liquids, or do not handle the power plug while your hands are wet.
- To prevent possible electric shock and damage to the FD-8, do not remove the main unit cover or reach the inside the unit.
- Do not let water or other liquid, or metal objects such as pins, accidentally enter the inside of the unit because this may lead to electric shock or damage. Should water enter the inside of the unit, remove the power plug from the AC outlet, and consult your dealer or the nearest FOSTEX service station.
- To prevent damage to the FD-8, be sure to power on the connected devices first, then turn on the power to the FD-8. When you remove or connect the cables to the input/output connectors on the FD-8, make sure that the channel INPUT faders and volume controls are set "0."
- Before turning the power off to the FD-8, first quit Setup mode and make sure that the recorder section is stopped. Especially, never attempt to turn off the power to the unit while the hard disk is accessing data (the HD ACCESS LED is lit or flashing). Otherwise, not only will you lose recorded data, but you may damage to the unit. FOSTEX is not responsible for the data lost during operation of the unit.
- Before you change the location of the FD-8, pack the unit in the shipping carton or an impact-resistant case. Make sure that the unit is kept free from external vibration or impact since the unit is very sensitive to vibration.
- Do not install the unit in locations subject to the following:
 - * Extremely high or low temperature, or significant changes in temperature.
 - * Excessive humidity or dust.
 - * Excessive changes in power supply voltage
 - * Unstable or significantly vibrating or shaking surfaces.
 - * Near a strong magnetic field (such as a TV or speaker).

- If you move the unit from a place with an excessively low temperature to a warm place, or if you use the unit in a room in which the temperature varies significantly during winter, condensation may occur on the hard disk or other parts. In such cases, leave the unit for about an hour in the new location before you turn on the power.

Note on repair

- This unit does not use any parts that users can repair easily. Contact your dealer or the nearest FOSTEX service station to ask about repairs.
- Use the packing carton designed for the FD-8 when you transport the unit to the dealer for repair or return. If you have discarded the packing box, try to pack the unit completely using shock absorbing materials. Fostex is not responsible for malfunction or damage due to incomplete packaging or caused during transport.

About copyrights

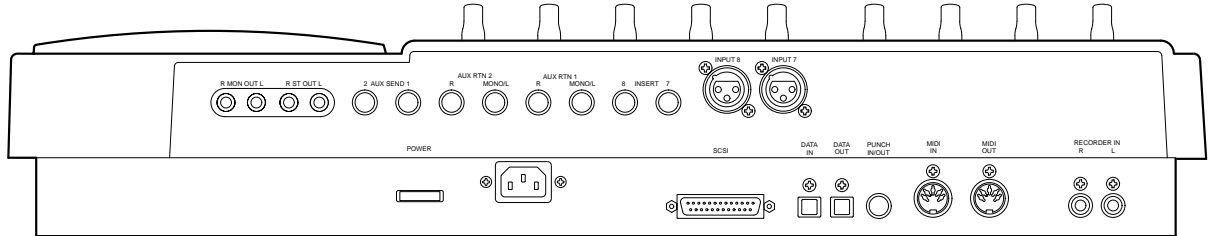
- It is prohibited by law to use any part of a CD recording or video images or audio data for which copyright is possessed by a third party for commercial purposes such as contents, broadcasts, sales, or distribution- any purpose other than for your personal pleasure.

About damage

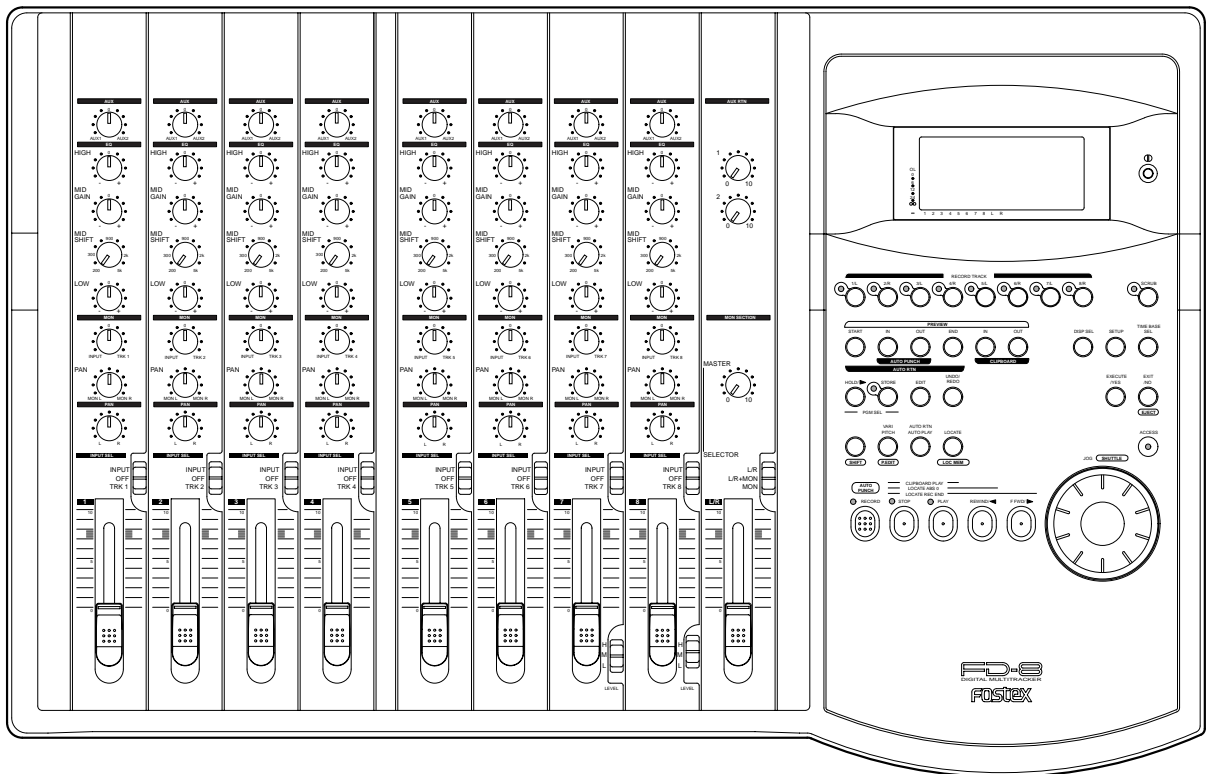
- FOSTEX is not responsible for any "direct damage" or "indirect damage" caused by using the FD-8.

Names and Functions

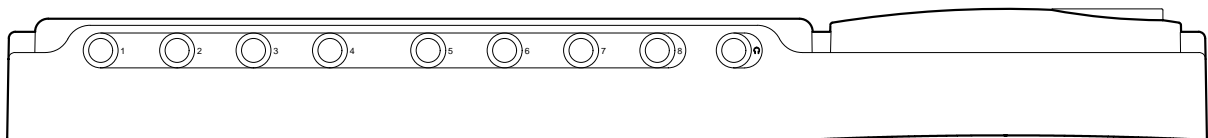
Rear panel



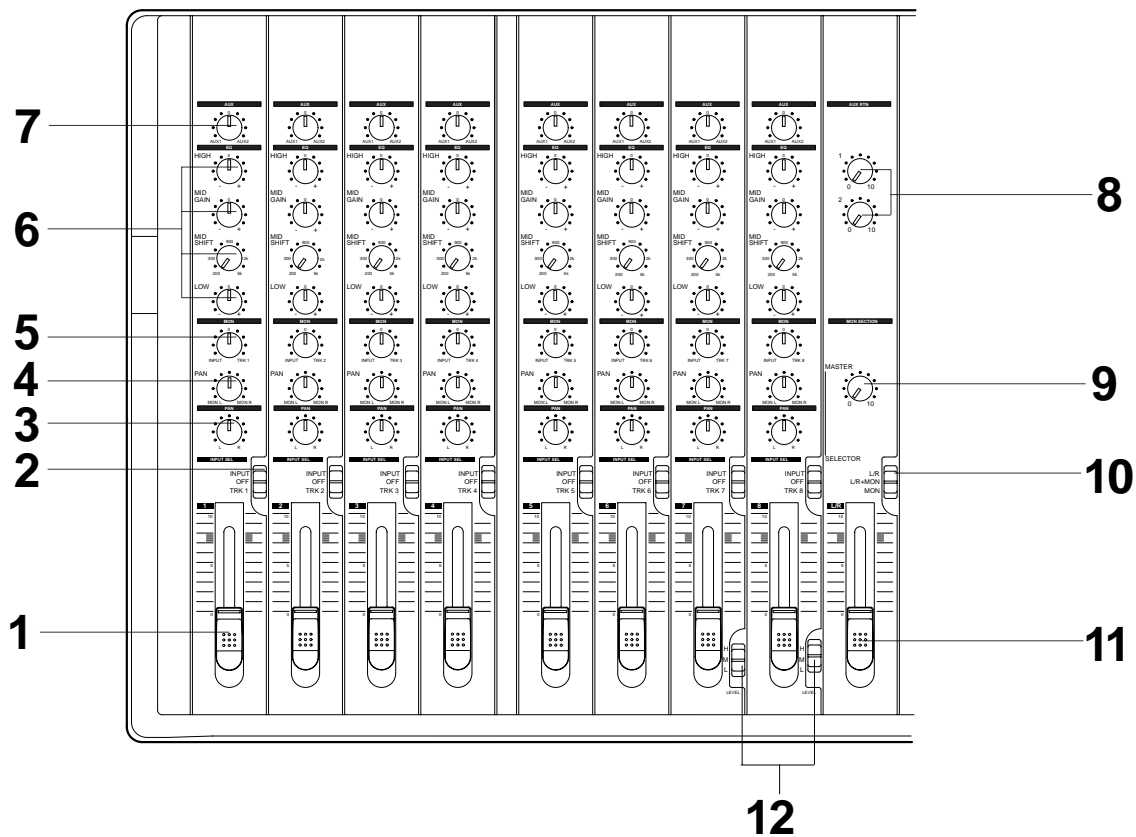
Control panel



Front panel



Control Panel (Mixer Section) Letters in brackets [] are labels on the panel.



1. Input faders [1-8]

These faders allow you to control the input level of signals selected via the INPUT SEL switch [2] (that is, the input signals from the INPUT jacks or the recorder output signals). Nominal level is obtained at fader position of 7-8, and the fader achieves approximately 6dB of gain at the 10 position.

2. Input select switches [INPUT SEL (INPUT/OFF/TRK)]

These switches allow you to select signals to be routed to the input faders. The following options are available:

“INPUT”	Signals from instruments and microphones connected to the INPUT jacks are routed to the channel faders.
“OFF”	The switch is turned off. No signals are routed.
“TRK”	Recorder output signals (TRK 1-8) are routed to the channel faders, with Track 1 output routed to Channel 1, Track 2 routed to channel 2, etc.

3. Panpot knobs [PAN (L/R)]

Panpot knobs have the following two functions:

1

During recording, you can use them to pan channel signals of the sound sources connected to the INPUT jacks to Tracks 1-8 . Turn the knobs all the way to L or R. If you turn the knob to L, the corresponding channel signal is recorded to Tracks 1 , 3 , 5 and 7. If you turn the knob to R, the corresponding channel signal is recorded to Tracks 2 , 4 , 6 and 8.

2

For mixdown, use these knobs to determine the stereo image of the playback sound of Tracks 1-8. Turn the knobs to the desired position.

4. Monitor panpot knobs [PAN (MON L/MON R)]

These knobs allow you to adjust the balance of the signals that were level-adjusted for the level via the MON knob [5] before you send them to the monitor section L and R. The following options are available.

“MON L”

The signal routed to the MON knob will be sent only to monitor section “L.”

“Center”

The signal routed to the MON knob will be sent to both monitor section “R” and “L” at the same level.

“MON R”

The signal routed to the MON knob will be sent only to monitor section “R.”

5. Monitor level control knob [MON (INPUT/TRK)]

These knobs are used to select signals sent to monitor sections L and R, and to adjust the level of those signals. The following options are available.

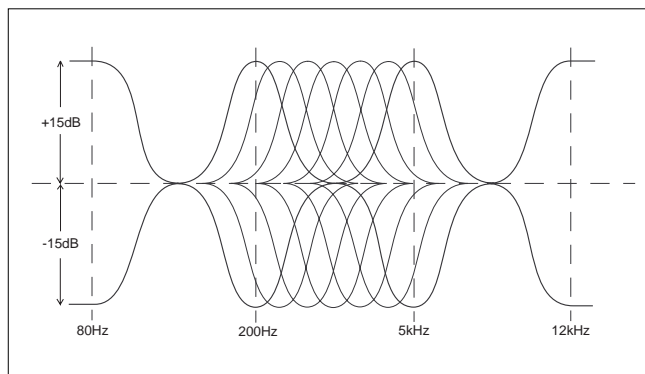
"TRK"	The recorder output signals are sent to the monitor section. As you turn the knob to the right, the signal level becomes higher.
"0"	No signals are sent.
"INPUT"	Pre-fader signals* from the INPUT jacks are sent to the monitor section. As you turn the knob to the left, the signal level becomes higher.

* Pre-fader signal: Input signals before reaching the input faders

6. Equalizer control knobs [EQ (HIGH/MID/LOW)]

These knobs are used to adjust tonal quality of the signals routed to the channel faders. The following settings are available.

"HIGH"	Signals with a frequency of 12kHz will be boosted/cut up to +/-15dB.
"MID GAIN"	The frequency range selected via the MID SHIFT knob (200Hz-5kHz) will be boosted/cut up to +/-15dB.
"MID SHIFT"	Use this setting to select a frequency range to boost or cut using the MID GAIN knob. You can set the frequency in the range of 200Hz-5kHz.
"LOW"	Signals with a frequency of 80Hz will be boosted/cut up to +/-15dB.



7. AUX send knobs [AUX (AUX 1/AUX 2)]

These knobs are used to select whether the channel fader signals are output from the AUX SEND 1 jack or AUX SEND 2 jack, and to adjust the level of those signals. That is, the signals selected and adjusted via these knobs will be sent from the AUX SEND jack 1 or 2 to an external device, such as an effect unit.

"AUX 1"	Signals are sent to the AUX SEND jack 1. Turning the knob to the left will increase the output level.
"0"	No signals are sent.
"AUX 2"	Signals are sent to the AUX SEND jack 2. Turning the knob to the right will increase the output level.

8. AUX return knobs [AUX RTN (1, 2)]

These knobs allow you to adjust the input level of processed signals from a connected external effect unit.

AUX RTN 1	These knobs enable you to adjust the input level of processed signals from an external effect unit connected to the AUX RTN jack 1. The level of both signals input to AUX RTN 1 L/MONO and R will be adjusted equally.
AUX RTN 2	These knobs enable you to adjust the input level of processed signals from an external effect unit connected to the AUX RTN jack 2. The level of both signals input to AUX RTN 2 L/MONO and R will be adjusted equally.

9. Monitor master knob [MONITOR SECTION (MASTER)]

This knob allows you to adjust the final level of monitoring signals, that is, the headphone volume and the level of signals output from the MON OUT L/R jacks.

10. Monitor select switch

[SELECTOR (L/R, L/R+MON, MON)]

This switch allows you to select a signal to be routed to the MON OUT L/R and PHONES jacks. The following options are available.

"L/R"	This selects signals output from the STEREO OUT L/R jacks (stereo bus L/R signals).
"L/R+MON"	This selects both signals output from the STEREO OUT L/R jacks and signals routed to channel monitor buses L/R.
"MON"	This selects signals routed to channel monitor buses L/R.

11. Master fader [L/R]

The master fader allows you to adjust the level of signals output from the STEREO OUT L/R jacks (stereo bus L/R output signal). The fader setting will affect the level of recorder input signals.

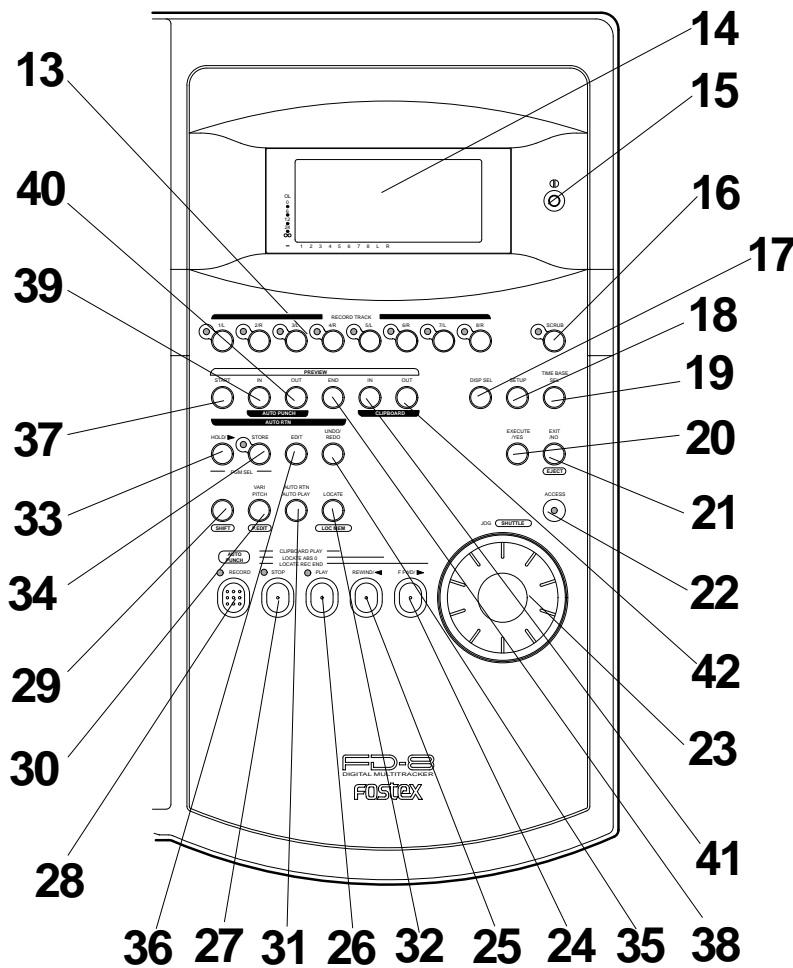
12. Input level switches [LEVEL (H/M/L)]

Set these switches to appropriate positions according to the output level of the devices connected to input jacks 7 and 8 (the phone jacks on the front panel or the XLR connector on the rear panel).

Connect a microphone or other low-output device to input jacks 7 and 8 (on the front panel or rear panel) that have the input level switch. Refer to the example below.

<Example>	
"L (-50dB)"	Set the switch to this position when you connect a microphone.
"M (-30dB)"	Set the switch to this position when you connect a single-coil or humbucking type electric guitar or bass.
"H (-10dB)"	Set the switch to this position when you connect a keyboard or drum machine.

Control Panel (Recorder Section) Letters in brackets ([]) are labels on the panel.



13. Record track select keys

[RECORD TRACK (1/L, 2/R, 3/L, 4/R, 5/L, 6/R, 7/L, 8/R)]

These keys enable you to select “SAFE” or “READY” for a recording track. Pressing the key once will cause the corresponding track to enter READY mode, and the LED of the key you pressed to flash. Pressing the key again will cause the corresponding track to enter “SAFE” mode, and the LED to turn off. When you start recording on a track in READY mode, the flashing LED remains lit.

If you press only the RECORD button with a track in READY mode, you can monitor the signal input to the READY track so that you can adjust the recording level. To cancel this input monitoring status, press the RECORD button again. (This causes the FD-8 to enter playback monitoring mode.) You can also use these select keys to select tracks to edit for Copy & Paste, Move & Paste, Erase, etc.



Note: You can record on Real tracks 1–8 in real-time, but not on Additional tracks 9–24. If you are using an MO drive as the current drive, you can record only two tracks simultaneously. If you try to record more than two tracks by setting them to READY mode, [track Over !] appears and READY mode will be cancelled.



Refer to page 25 for more information on playback monitoring and input monitoring.

14. LCD

The LCD indicates signal levels and various settings.



Refer to “Display Section” on page 17 for more information on the display.

15. Contrast adjustment knob

Use this knob to adjust the contrast of the LCD. Turning this knob clockwise will increase the contrast, and turning it counter-clockwise will decrease the contrast.



Note: The display is not illegible if you leave the knob counter-clockwise all the way.

16. Scrub key [SCRUB]

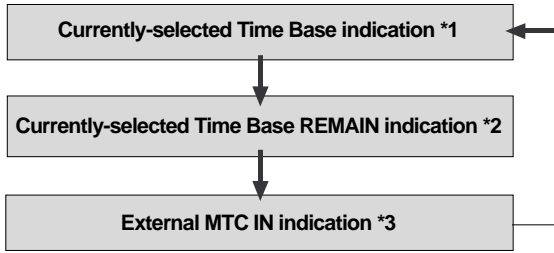
Pressing this key causes its LED to light up as the FD-8 enters Digital Scrub mode. At this point, press the desired RECORD RACK select key to digitally scrub the selected track playback using the JOG dial.



Refer to page 64 for more information on Digital Scrub mode.

17. Display indication select key [DISP SEL]

Pressing this key each time will change the display indication as follows:




*1 The current position in terms of Time Base selected via the TIME BASE SEL key appears. ABS time, MTC time, or BAR/BEAT/CLK is used.

*2 Available recording time and space on the current SCSI disk appears. Time indication uses the currently-selected Time Base (ABS, MTC, or BAR/BEAT/CLK). The space indication uses MB (Megabyte). (The values are based on mono track recording.)

*3 MTC being input from an external MIDI device to the FD-8 appears. If no MTC is input, the display shows "00H 00M 00S 00F."

18. Setup key [SETUP]

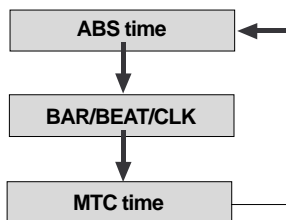
Press this key to set the FD-8 in SETUP mode to execute various menus. This key works only when the FD-8 is stopped.



Refer to page 97 for more information on SETUP mode.

19. Time Base select key [TIME BASE SEL]

Pressing this key repeatedly will switch Time Base as follows:



20. Execute/Yes key [EXECUTE/YES]

Press this key to confirm the edit operations, such as Copy & Paste, Move & Paste, and Erase, and to set the parameters of SETUP menus.

21. Exit/No key [EXIT/NO/ (EJECT)]

This key is the counterpart of the EXECUTE/YES key. Press this key to cancel an operation. When you use a removable SCSI disk, pressing this key while holding down the SHIFT key will eject the disk.

22. Access LED [ACCESS]

This LED lights up or flashes when data is being written to or read from an external SCSI current drive disk, or optional 2.5-inch internal hard disk.



Note: Do not turn off the power to the unit when this LED lights up or flashes. Otherwise you may lose data on the hard disk connected to the unit.

23. JOG dial [JOG/ (SHUTTLE)]

When the FD-8 is stopped, use the JOG dial to perform a jog operation (forward or reverse) for audio scrubbing without pitch change. You can also use this dial to increase and decrease the numeric values or input alphabetical characters in edit mode.

Rotating the JOG dial while holding down the SHIFT key will enable you to perform the shuttle operation with different speeds ranging from normal speed to 64-times speed.



Refer to page 63 for more information on the cue/review function and the shuttle function.

24. Fast forward button [F FWD]

Pressing this button while the FD-8 is stopped will start fast forwarding at low speed at first, then gradually accelerate to 30-times speed. If you press this button while the FD-8 is playing, cueing (fast forwarding with sound) starts at three-time speed. Pressing this button while holding down the STOP button will activate the "LOCATE REC END" operation, which will locate the end point of the recording on the Real track in the current Program. You can also use this button to locate an edit point in edit mode.



Refer to the "STOP button" section and page 66 for more information on the "LOCATE ABS 0" operation.

25. Rewind button [REWIND]

Pressing this button while the FD-8 is stopped will start rewinding at low speed at first, then gradually increase the speed up to 30-times speed. If you press this button while the FD-8 is playing, cueing (rewinding with sound) starts at three-times speed. Pressing this button while holding down the STOP button will activate the "LOCATE ABS 0" operation, which will locate the beginning of the current Program (ABS time: 00m 00s 00f). You can also use this button to locate an edit point in edit mode.



Refer to the "STOP button" section and page 66 for more information on the "LOCATE ABS 0" operation.

26. Play button [PLAY]

Pressing this button causes the recorder section to play back. Pressing this button while holding down the RECORD button when a track is in READY mode will cause the FD-8 to start recording on the READY track.

Pressing only this button during the recording operation will punch-out (cancel) recording. Pressing this button while holding down the STOP button will cause the “CLIPBOARD PLAY” operation to start.



* Refer to the “STOP button” section and page 57 for more information on the “CLIPBOARD PLAY” operation.

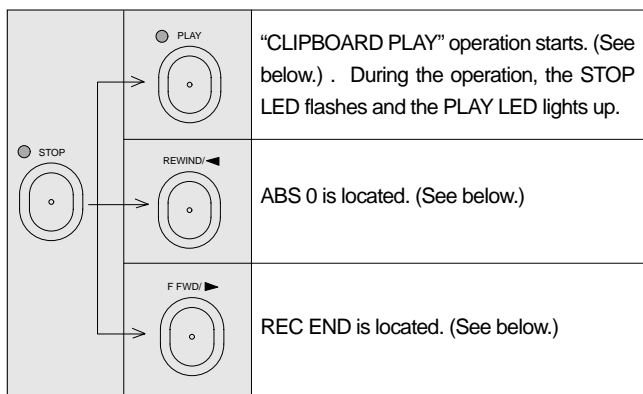
* Refer to page 47 for more information on the Punch Out operation using the PLAY button.

27. Stop button [STOP]

Pressing this button during the playback, recording, fast forward, or rewind operation will stop the recorder transport operation. Pressing this button while the FD-8 is in SETUP mode will cause the unit to exit SETUP mode.

Pressing the PLAY, REWIND, or F FWD button while holding down the STOP button will cause the following operations to start.

If you wish to rehearse the Manual Punch In/Out operation using the foot switch, press the foot switch while holding down this button to enter Rehearsal mode.



*** CLIPBOARD PLAY operation**

The CLIPBOARD PLAY operation plays back data on the clipboard. (If the clipboard does not contain any data, the display shows [Void Data !] and nothing happens.) During this operation, the display indicates the type of the data (“Copy Clip” for copy data, and “Move Clip” for move data), and the duration. The indicator of the copy source or move source track flashes.

In this way, you will know which track the currently playing data comes from and why the data is on the clipboard.

*** ABS 0 locate operation**

This operation locates the beginning of the current Program (ABS time: 00m 00s 00f).

*** REC END locate operation**

This operation locates the end of the audio recording (REC END) on the Real track in the current Program.



* Refer to page 70 for more information on these operations.

* Refer to page 45 for more information on the Punch In/Out operation using a foot switch.

28. Record button [RECORD/ (AUTO PUNCH)]

Pressing the PLAY button while holding down this button will cause the FD-8 to start recording on any READY tracks. At this time, the flashing LED of the RECORD TRACK select key for the corresponding READY track lights up steadily, and the PLAY LED and the RECORD LED light up.

If you press only the RECORD button, a READY Real track enters input monitoring mode (The RECORD LED flashes.). At this time, pressing the RECORD button again will cancel the input monitoring mode, and the track will return to playback monitoring mode.

Pressing the RECORD button while holding down the SHIFT key will toggle between AUTO PUNCH on and off.



* Refer to page 41 for more information on AUTO PUNCH mode.

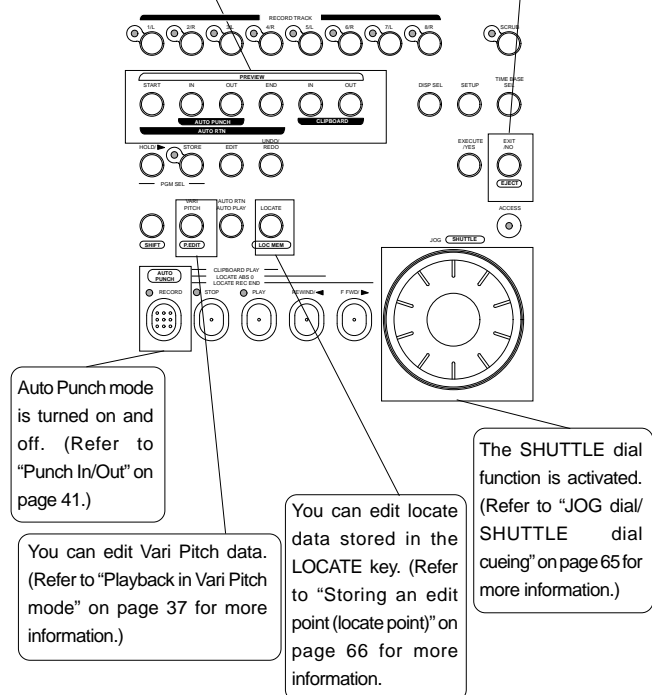
* Refer to page 25 for more information on input monitoring and playback monitoring.

29. Shift key [(SHIFT)]

Press a key, button, or turn the dial while holding down the SHIFT key to activate the following “shift-invoked” functions.

You can audition the data at edit points (locate points) stored in the memory keys. (For more information, refer to “Preview function” on page 74.)

The removable SCSI disk is ejected. (Refer to “Formatting a disk” on page 29.)



30. Vari Pitch key [VARI PITCH/ (P.EDIT)]

This key toggles Vari Pitch mode on and off. When Vari Pitch mode is on, the “VARI PITCH” indicator lights up on the display, and the FD-8 plays using the current pitch data. Pressing the VARI PITCH key while holding down the SHIFT key will cause the FD-8 to enter edit mode, in which you can change pitch data in real-time.

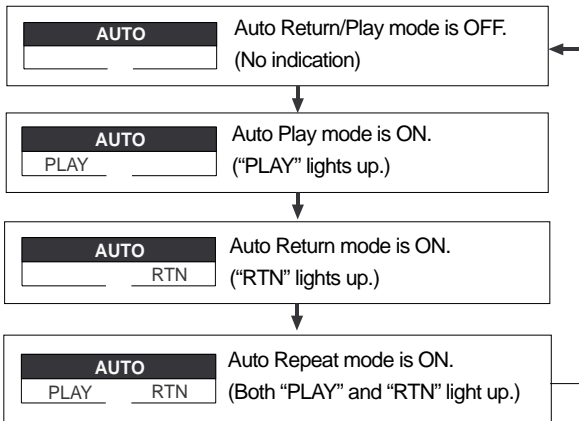
To exit edit mode, press the EXIT/NO key.



Refer to page 37 for more information on playing with Vari Pitch and editing Vari Pitch data.

31. Auto Return/Auto Play mode on/off key [AUTO RTN/AUTO PLAY]

Use this key to turn on and off Auto Return mode, Auto Play mode, and Auto Repeat mode. Each time you press the key, the mode will change and the following indication will be displayed.



*** Auto Play mode**

The FD-8 locates a point and starts playing from the locate point.

*** Auto Return mode**

When the AUTO RTN END point is reached while the recorder section is playing, the FD-8 automatically locates the AUTO RTN START point. This mode is effective only if the AUTO RTN START point and the AUTO RTN END point have already been specified.



Note: The Auto Return function is enabled only when the FD-8 is playing. While the FD-8 is recording, the FD-8 will not locate the START point after it reaches the AUTO RTN END point.

*** Auto Repeat mode**

This mode is effective only when Auto Play mode and Auto Return mode are turned on. The FD-8 will play the part between the AUTO RTN START point and the AUTO RTN END point repeatedly. This mode is also effective only if the AUTO RTN START point and the AUTO RTN END point have already been specified.



Refer to page 70 for more information on each mode.

32. Locate key [LOCATE/ (LOC MEM)]

Use this key to locate a point. Press a key that stores locate points, such as the CLIPBOARD IN/OUT keys, AUTO PUNCH IN/OUT keys, and AUTO RTN START/END keys, then press the LOCATE key to locate a point stored in the corresponding key.

The last locate data will replace the data stored in the LOCATE key. Therefore, pressing only the LOCATE key will locate the last locate point. If you have set Auto Play mode, the FD-8 will start playing from the located point.

Pressing the LOCATE key while holding down the SHIFT key will cause the FD-8 to enter edit mode, in which you can edit data stored in the LOCATE key.



* Refer to page 70 for more information on the Locate function.

* Refer to page 69 for more information on editing data using the LOCATE key.

33. Hold/> key [HOLD/>]

Pressing the HOLD/> key while the recorder is operating will cause the FD-8 to capture the time at which you pressed the key (or bar/beat/clock value), display it, then enter edit mode. (If you press the HOLD/> key while the recorder section is stopped, the FD-8 enters edit mode directly.) To cancel edit mode, press the STOP button, DISP SEL key, or the EXIT/NO key.

In edit mode, you can use this key to select a digit of the value to edit (edit point). You can select a digit which flashes on the display in the following order.

ABS or MTC is used as Time Base:
First, “S” (second) flashes. Each time you press the HOLD/> key, the flashing characters change in this order: F -> SF -> H -> M -> S.

BAR/BEAT/CLK is used as Time Base:
First, “BAR” flashes. Each time you press the HOLD/> key, the flashing indicator changes in this order: ♪ -> CLK -> BAR.

If you press the HOLD/> key and the STORE key simultaneously while the recorder is stopped, the FD-8 enters Program Select mode, in which you can select a Program or set up a new Program.



* Refer to page 66 for more information on editing memory.

* Refer to page 33 for more information on the Program Select function.

34. Store key [STORE]

This key is used to store time values (or bar/beat/clock values) in the memory keys. Press this key, then one of the following keys to store data indicated on the display (including edit data) in the corresponding memory key. If you press the STORE key and the HOLD/> key simultaneously while the recorder is stopped, the FD-8 enters Program Select mode, in which you can select a Program or set up a new Program.

Press the STORE key, and press the CLIPBOARD IN key.

The CLIPBOARD IN point is stored.
This data can be used as locate data.

Press the STORE key, and press the CLIPBOARD OUT key.

The CLIPBOARD OUT point is stored.
This data can be used as locate data.

Press the STORE key, and press the AUTO PUNCH IN key.

The AUTO PUNCH IN point is stored.
This data can be used as locate data.

Press the STORE key, and press the AUTO PUNCH OUT key.

The AUTO PUNCH OUT point is stored.
This data can be used as locate data.

Press the STORE key, and press the AUTO RTN START key.

The AUTO RTN START point is stored.
This data can be used as locate data.

Press the STORE key, and press the AUTO RTN END key.

The AUTO RTN END point is stored.
This data can be used as locate data.

To cancel the store operation after you have pressed this key, press the EXIT/NO key.

* Refer to page 70 for more information on the Locate function.



* Refer to page 66 for more information on storing edit points (locate points).

* Refer to page 33 for more information on the Program Select function.

35. Undo/Redo key [UNDO/REDO]

If you wish to restore the status prior to editing, recording, or performing a punch in/out take, press the UNDO/REDO key. Pressing the UNDO/REDO key again will restore the status obtained before you pressed the [UNDO/REDO] key the first time.

When you undo the operation, [Undo!] appears. When you redo the operation, [Redo!] appears on the display for a short moment.



Note: The Undo/Redo function is enabled only when the FD-8 is stopped.

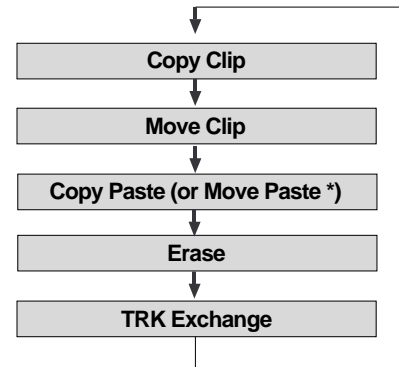


Refer to pages 44, 47, 58, 60 and "Quick operation guide" for more information on the Undo/Redo function.

36. Edit key [EDIT]

Pressing this key causes the FD-8 to enter menu selection mode for editing tracks, and displays the title of the menu you used last time. Press this key repeatedly or turn the JOG dial to select a menu. The edit menus appear in the following order. To execute a desired menu, select the menu, then press the EXECUTE/YES key.

To exit selection mode, press the EXIT/NO key.



(*) After you execute Copy Clip, "Copy Paste" appears. After you execute Move Clip, "Move Paste" appears.



* Refer to page 56 for more information on Copy & Paste and Move & Paste.

* Refer to page 59 for more information on Erase.

* Refer to page 61 for more information on Track Exchange.

37. Auto Return Start key

[AUTO RTN START/ (PREVIEW)]

Use this key to store the start point (AUTO RTN START point) for the Auto Return function and the Auto Repeat function. When you press this key, the FD-8 displays the currently-stored data, which you can edit. After editing the data, press the STORE key, then the AUTO RTN START/PREVIEW key to store the edited data in this key. The stored data can be used as locate data.

This memory is reset to the factory default value when you turn off the power to the FD-8.

If you press the AUTO RTN START/PREVIEW key while holding down the SHIFT key when the recorder is stopped, you can preview the fade-in part at the stored AUTO RTN START point.



* Refer to page 66 for more information on setting and editing the AUTO RTN START point.


* Refer to page 70 for more information on the Auto Return and Auto Repeat functions.

* Refer to page 74 for more information on previewing data at the AUTO RTN START point.

38. Auto Return End key [AUTO RTN END/ (PREVIEW)]

Use this key to store the start point (AUTO RTN END point) for the Auto Return function and the Auto Repeat function. When you press this key, the FD-8 displays currently-stored data, which you can edit. After editing the data, press the STORE key, then press the AUTO RTN END/PREVIEW key to store the edited data in this key. The stored data can be used as locate data.

If you press the AUTO RTN END/PREVIEW key while holding down the SHIFT key when the recorder is stopped, you can preview the fade-out part at the stored AUTO RTN END point.




- * Refer to page 66 for more information on setting and editing the locate point.
- * Refer to page 70 for more information on the Auto Return and Auto Repeat functions.
- * Refer to page 74 for more information on previewing data at the AUTO RTN END point.

39. Auto Punch In key [AUTO PUNCH IN/ (PREVIEW)]

Use this key to store the punch in (recording start) point for the Auto Punch In/Out function. The stored data is also used as a paste start point (for Copy & Paste, Move & Paste) and as an erase start point.

When you press this key, the FD-8 displays currently-stored data, which you can edit. After editing the data, press the STORE key, then press the AUTO PUNCH IN/PREVIEW key to store the edited data in this key. The stored data can be used as locate data.

If you press the AUTO PUNCH IN/PREVIEW key while holding down the SHIFT key when the recorder is stopped, you can preview the fade-out part at the stored AUTO PUNCH IN point.




- * Refer to page 66 for more information on setting and editing the locate point.
- * Refer to page 41 for more information on the Auto Punch In/Out functions.
- * Refer to page 74 for more information on previewing data at the AUTO PUNCH IN point.

40. Auto Punch Out key [AUTO PUNCH OUT/ (PREVIEW)]

Use this key to store the punch out (recording end) point for the Auto Punch In/Out function. The stored data is also used as an erase end point.

When you press this key, the FD-8 displays currently-stored data, which you can edit. After editing the data, press the STORE key, then press the AUTO PUNCH OUT/PREVIEW key to store the edited data in this key.

The stored data can be used as locate data. If you press the AUTO PUNCH OUT/PREVIEW key while holding down the SHIFT key when the recorder is stopped, you can preview the fade-in part at the stored AUTO PUNCH OUT point.




- * Refer to page 66 for more information on setting and editing the locate point.
- * Refer to page 41 for more information on the Auto Punch In/Out functions.
- * Refer to page 74 for more information on previewing data at the AUTO PUNCH OUT point.

41. Clipboard In key [CLIPBOARD IN/ (PREVIEW)]

Use this key to store the start point of audio data to be copied or moved.

When you press this key, the FD-8 displays data currently stored, and you can edit the data. After editing the data, press the STORE key, then press the CLIPBOARD IN/PREVIEW key to store the edited data in this key. The stored data can be used as locate data.

If you press the CLIPBOARD IN/PREVIEW key while holding down the SHIFT key when the recorder is stopped, you can preview the fade-in part at the stored CLIPBOARD IN point.




- * Refer to page 66 for more information on setting and editing the locate point.
- * Refer to page 56 for more information on the Copy & Paste/Move & Paste functions.
- * Refer to page 74 for more information on previewing data at the CLIPBOARD IN point.

42. Clipboard Out key [CLIPBOARD OUT/ (PREVIEW)]

Use this key to store the end point of audio data to be copied or moved.

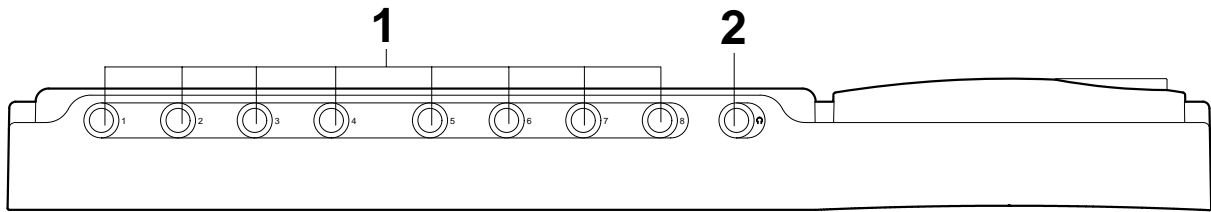
When you press this key, the FD-8 displays currently-stored data, which you can edit. After editing the data, press the STORE key, then press the CLIPBOARD OUT/PREVIEW key to store the edited data in this key. The stored data can be used as locate data.

If you press the CLIPBOARD OUT/PREVIEW key while holding down the SHIFT key when the recorder is stopped, you can preview the fade-out part at the stored CLIPBOARD OUT point.



- * Refer to page 66 for more information on setting and editing the locate point.
- * Refer to page 56 for more information on the Copy & Paste/Move & Paste functions.
- * Refer to page 74 for more information on previewing data at the CLIPBOARD OUT point.

Front Panel (Input/Output Section)



1. Input jacks [1, 2, 3, 4, 5, 6, 7, 8] (Connector: phone)

Connect sound sources, such as musical instruments and microphones, here.

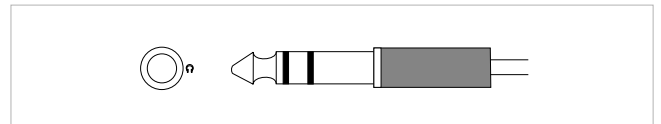
Connect a microphone to input jacks 7 and 8, which are equipped with TRIM switches that allow you to switch according to the connected microphone output level. Input channels 7 and 8 also support balanced XLR connectors on the rear panel.



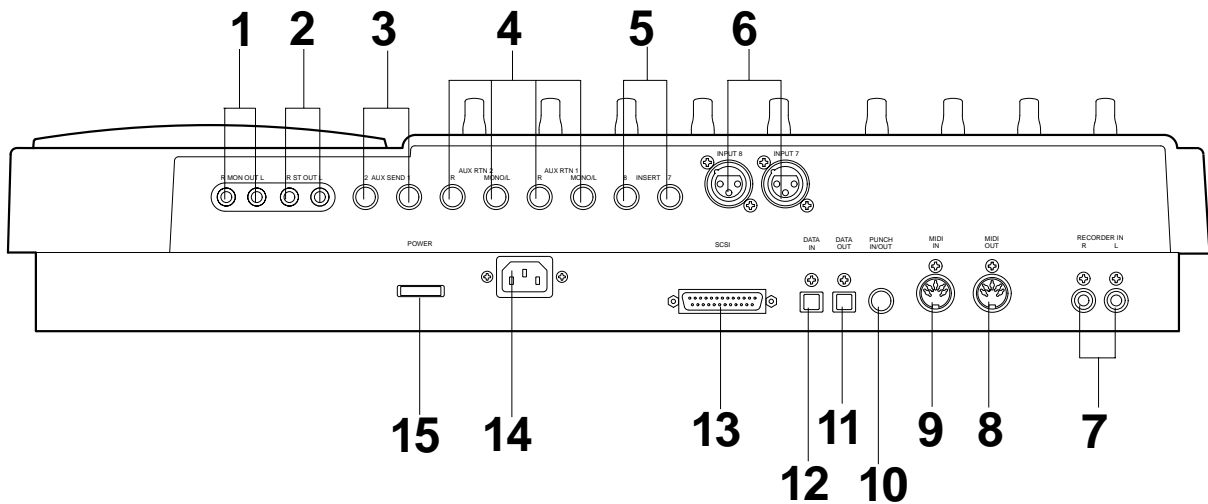
The phone jacks for input channels 7 and 8 on the front panel have priority. If you connect sound sources to these jacks, the balanced XLR jacks for input channels 7 and 8 on the rear panel will be disabled.

2. Headphone jack [PHONES] (Connector: stereo TRS phone)

Connect headphones here. You can adjust the headphone volume using the MASTER knob in the monitor section.

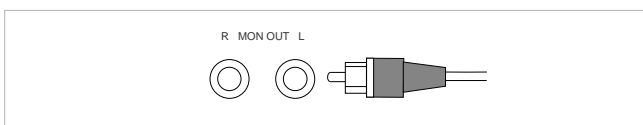


Rear Panel (Input/Output Section)



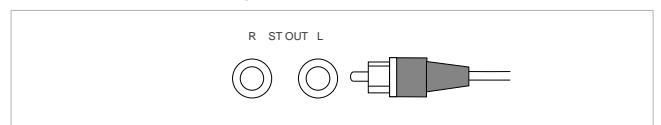
1. Monitor Out jacks [MON OUT L, R] (Connector: RCA pin)

Connect monitoring speakers and amplifier or powered speakers here. These jacks output signals selected by the SELECTOR in the monitor section (L/R, L/R+MON, or MON). Use the MASTER knob in the monitor section to adjust the output level.



2. Stereo Out jacks [ST. OUT L, R] (Connector: RCA pin)

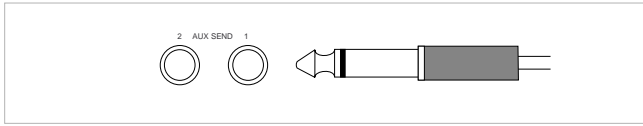
These jacks output stereo bus L/R signals. Connect these jacks to the input jacks of a master recorder. You can adjust the output level using the master fader L/R.



3. AUX Send jacks 1, 2 [AUX SEND 1, 2]

(Connector: phone)

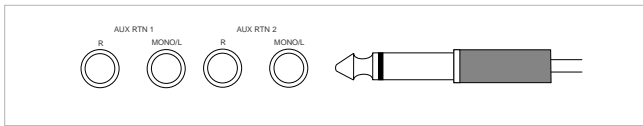
Connect these jacks to the input of an effect unit. The AUX SEND jacks send out signals selected and adjusted by the AUX send knobs to the connected effect unit.



4. AUX Return jacks 1, 2 [AUX RTN 1, 2]

(Connector: phone)

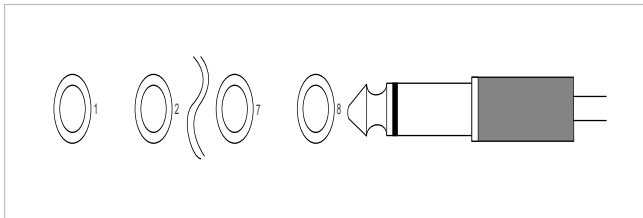
Connect these jacks to the output of an effect unit. You can also use these jacks as auxiliary inputs. If a connected effect unit has a mono output, connect the output to the L/MONO jack of the FD-8. The right channel will also receive the same signal. Adjust the level of processed signals using AUX RTN knobs 1 and 2.



5. Insert jacks 7, 8 [INSERT 7, 8]

(Connector: stereo TRS phone)

Use these jacks when you wish to apply an effect to the signal input at input jacks 7 and 8 (unbalanced inputs on the front panel or balanced inputs on the rear panel). In particular, use them when you wish to apply a compressor/limiter.



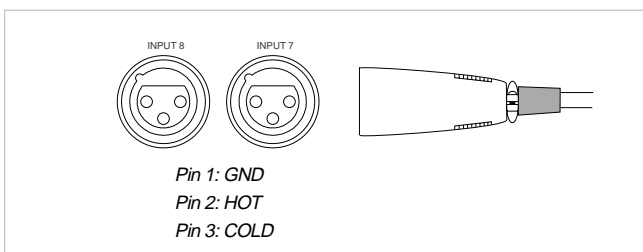
Refer to page 38 for more information on examples of using the INSERT jacks.

6. Balanced input connectors 7, 8 [INPUT 7, 8]

(Connector: balanced XLR)

Connect sound sources that have balanced outputs, such as musical instruments and microphones. Input channels 7 and 8 also support phone jacks on the front panel.

The phone jacks for input channels 7 and 8 on the front panel have priority. If you connect sound sources to these jacks, the balanced XLR jacks for input channels 7 and 8 on the rear panel will be disabled.

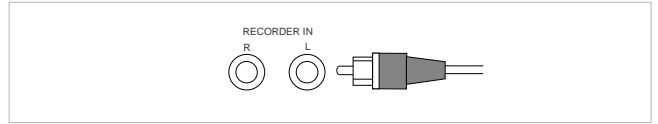


7. Recorder in jacks L, R [RECORDER IN L, R]

(Connector: RCA pin)

These jacks are used to route analog signals input from an external device directly to the recorder section. Using these jacks enables you to use only the recorder section, bypassing the mixer section.

Signals input from these jacks are recorded to the tracks selected by the RECORD TRACK select keys.

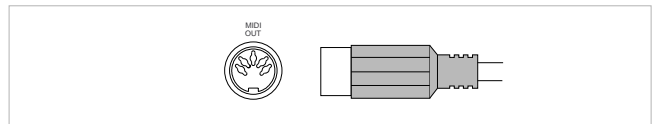


Refer to page 54 for more information on using the RECORDER IN jacks.

8. MIDI OUT jack [MIDI OUT] (Connector: DIN 5-pin)

Connect this jack to the MIDI OUT jack of an external MIDI device.

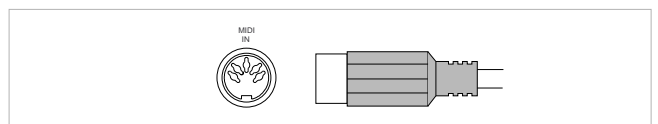
This jack transmits MTC (MIDI timecode), MIDI clock & Song Position Pointer, MMC (MIDI Machine Control) command, response, and FEX (Fostex System Exclusive Message) response.



Refer to page 77 for more information on the example of using the MIDI OUT jack.

9. MIDI IN jack [MIDI IN] (Connector: DIN 5-pin)

Connect this jack to the MIDI IN jack of an external MIDI device. You can control the FD-8 remotely by inputting MMC (MIDI Machine Control) command or FEX (Fostex System Exclusive Message) here.

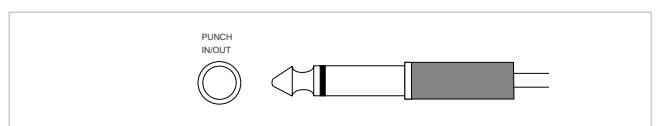


Refer to page 77 for more information on using the MIDI IN jack.

10. Punch in/out jack [PUNCH IN/OUT]

(Connector: phone)

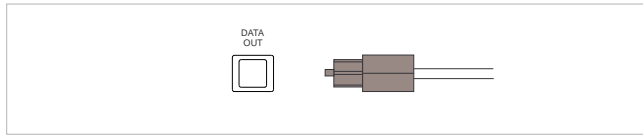
Using an optional foot switch connected to this jack enables you to perform the Manual Punch In/Out operation (including rehearsal) using your foot. Connect an optional Fostex foot switch, Model 8051.



Refer to page 45 for more information on using the PUNCH IN/OUT jack.

11. Data output jack [DATA OUT] (Connector: OPTICAL)

Connect this jack to the OPTICAL digital input (or adat In) of an external digital device to save song data to a DAT or an adat, or to record digitally to a digital device (MD, DAT, CD-R, or adat).



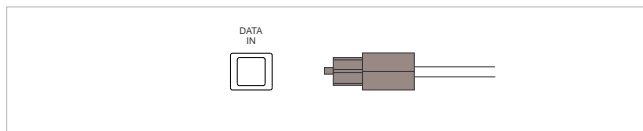
Refer to page 48 for more information on using the DATA OUT jack.



Note: You can save only the data recorded on the current drive formatted in [Master] mode to a DAT or adat. You cannot save data recorded in [Normal] mode.

12. Data input jack [DATA IN] (Connector: OPTICAL)

Connect this jack to the OPTICAL digital output (or adat Out) of an external digital device to load song data from a DAT or an adat, or to record data digitally from a digital device (MD, DAT, CD-R, or adat) to the FD-8.



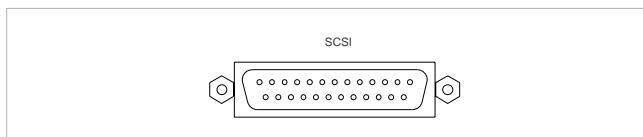
Refer to page 48 for more information on using the DATA IN jack.



Note: You can load the data only to the current drive formatted in [Master] mode. You cannot load data recorded in [Normal] mode.

13. SCSI connector [SCSI] (Connector: D-SUB 25-pin)

Connect an external current SCSI drive as the recording media or as a backup SCSI drive for the FD-8.



Refer to the "Quick Operation Guide" for information on connecting an external SCSI drive.

14. AC IN connector

The power cable packaged with this recorder is connected here.



Note: Always plug the power cable to the recorder before plugging the cable into the wall outlet.

15. Power switch [POWER]

This switch turns power on and off to the FD-8.

Display Section

The FD-8 uses a liquid crystal display which integrates a 9-digit/35-dot message section, 7-segment display section, and level meters.

The level meters indicate the output level of tracks 1-8 and stereo out L/R.

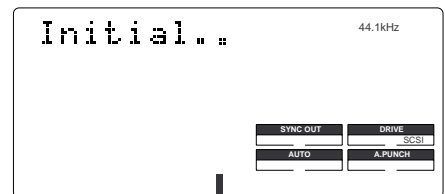
The time display shows various temporal information in different units, such as ABS time (absolute time), MTC (MIDI timecode), BAR/BEAT/CLK (bar/beat/clock), and makes it easy to check the recorder's current time.

The message display shows various messages required to operate the FD-8, and offers interactive operation.

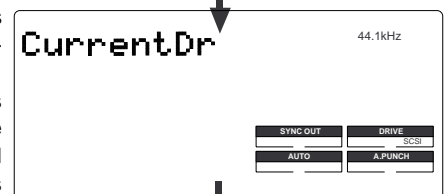
This section describes display functions along with examples.

Display when the power is turned on

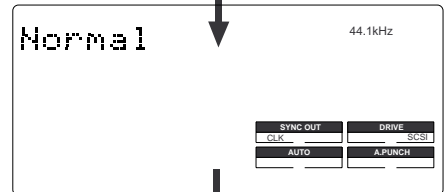
When you turn on the power to the FD-8 and the connected external SCSI drive (a formatted removable disk or hard disk), the display shows the [Initial...] message, [Current Dr], the name of the connected current drive, then recording mode (Master or Normal), and finally the top position of the disk in the Time Base (ABS, MTC, or BAR/BEAT/CLK) used in the last Program before you turned the power off. The following example indicates that the FD-8 started with the ABS Time Base used in Program 1.



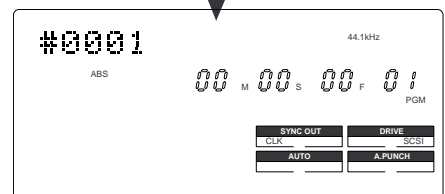
The current drive is recognized. (If the current drive is a SCSI device, [SCSI] lights up. If the current drive is an optional internal hard disk, [IDE] lights up.)



The name of the SCSI drive (The name is different, depending on the type of device.)



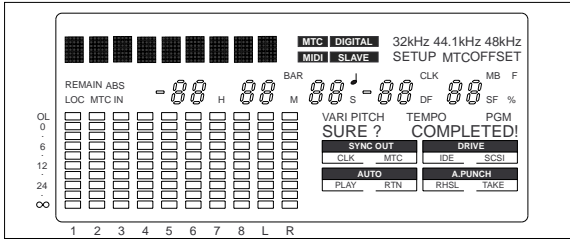
Indicating a recording mode used during formatting.



Indicating Time Base ABS 0 (top of the disk)

Preset display

The display below shows all preset items for explanation purposes.



The level meter shows the recorder output level and the recording level for tracks 1~8 and stereo bus L, R.

ABS	Lights up when ABS is selected as Time Base.
MTC	Lights up when MTC is selected as Time Base.
REMAIN	Lights up to indicate available recording time and space on the disk.
SETUP	Lights up when the FD-8 enters SETUP mode.
COMPLETED !	Lights up when an edit operation (copy, move, paste, or erase) is completed.
SURE ?	Lights up to confirm or cancel the operation when you are making settings or edits.
MTC OFFSET	Lights up when the MTC Offset menu is selected in SETUP mode.
PGM	Lights up to indicate the current Program number.
TEMPO	Lights up when the tempo setting menu is selected in SETUP mode.
VARI PITCH	Lights up when Vari Pitch mode is turned on.
44.1kHz	Indicates a sampling rate of the corresponding Recording mode. It does not light up when the disk is formatted in Normal mode.
MTC IN	Lights up to indicate that MTC is input from an external MIDI device to the FD-8.
LOC	Lights up when the FD-8 enters locate point (edit point) edit mode.
DIGITAL	Lights up when the digital input track settings are made in SETUP mode and the FD-8 is receiving digital signals correctly. However, if the FD-8 is not receiving digital signals correctly, or if there is a connection problem, this indicator flashes.
SLAVE	Flashes when Slave mode in SETUP mode is turned on. When a signal is locked, the flashing indicator lights up steadily.
MIDI	Lights up when the FD-8 is receiving effective MIDI messages (MMC or FEX) from an external device.

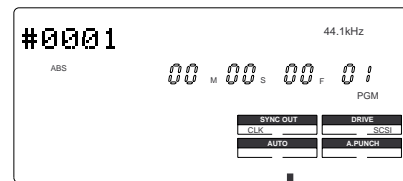
MTC	Lights up when the FD-8 receives MTC (MIDI Time Code) from an external device.
%	Lights up when the FD-8 enters Vari Pitch data edit mode.
MB	Indicates available disk space on the disk in megabytes when the REMAIN indicator appears.
H, M, S, F, SF	Lights up to indicate a time value when ABS or MTC is used as Time Base.
BAR, ↓, CLK	Lights up to indicate a bar/beat/clock value when BAR/BEAT/CLK is selected as Time Base.
[Icons]	Indicates a Program title, edit parameters, and SETUP mode parameters.
SYNC OUT	Indicates the "SYNC OUT settings" in SETUP mode.
AUTO	Indicates the AUTO PLAY/AUTO RTN mode settings.
DRIVE	The current drive that the FD-8 recognizes (SCSI or IDE) appears on the display. (See the following note.)
A.PUNCH	Indicates the AUTO PUNCH mode settings.

Note: If only a SCSI drive is connected to the FD-8, [SCSI] lights up. If an optional 2.5-inch internal IDE hard disk has been installed but no external SCSI device is connected as the current drive, [IDE] lights up. If a SCSI drive is connected, turned on, and specified as the current drive, and an internal hard disk is also connected, only [SCSI] will light up.

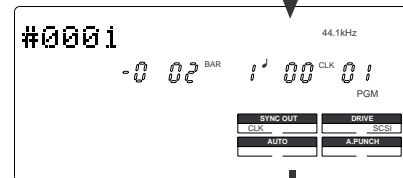
Display examples for Time Base selected via the TIME BASE SEL key

You can use the TIME BASE SEL key to select ABS, BAR/BEAT/CLK, or MTC as Time Base. The following examples show the displays when you select a Time Base at the beginning of the disk of Program 1.

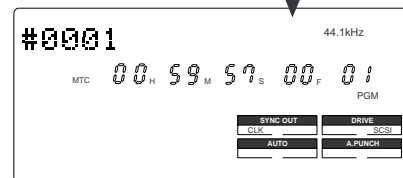
Time Base is ABS.



Time Base is BAR/BEAT/CLK.



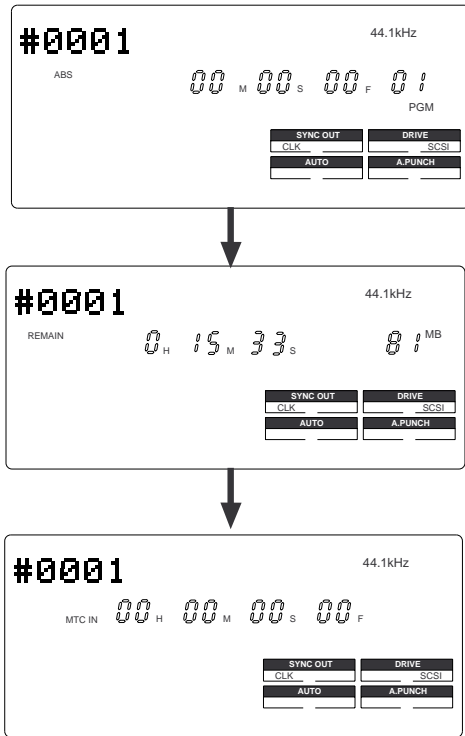
Time Base is MTC.



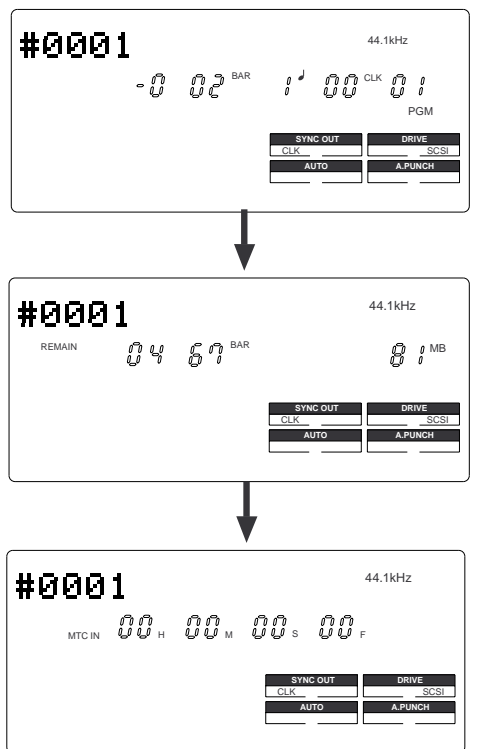
Selecting Time Base using the DISP SEL key

When you press the DISP SEL key after you select a Time Base using the TIME BASE SEL key, the display changes as follows:

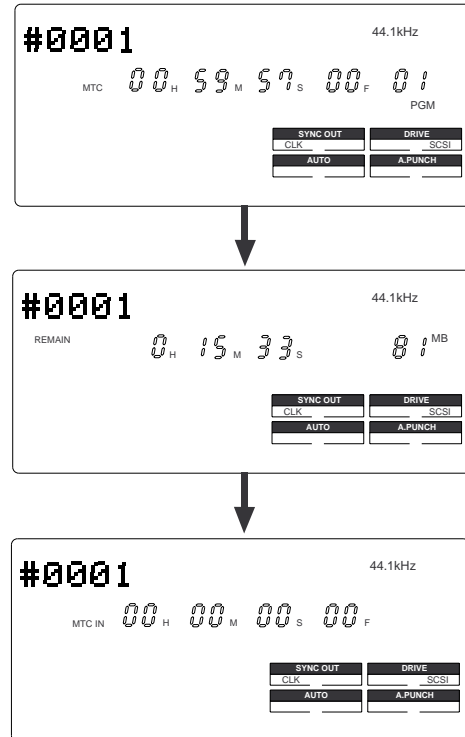
Time Base is ABS.



Time Base is BAR/BEAT/CLK.



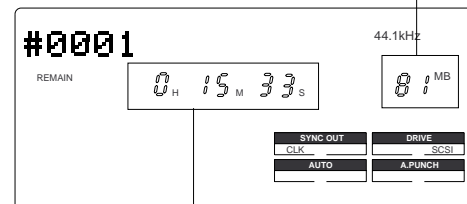
Time Base is MTC.



The REMAIN display

The REMAIN display usually shows available recording space and time on the disk, calculated based on mono track recording. That is, it indicates how much space and time are available for recording on a track. Therefore, if you wish to know how much time is available for multiple-track recording, you need to divide the REMAIN value by the number of tracks you wish to record. The value calculation includes all data from Real tracks and Additional tracks. If some data exists on the Additional tracks, but not on the Real tracks, the space and time consumed by the Additional tracks are considered during the calculation. For more information on the REMAIN display, refer to "Recording method and REMAIN display" in the "Before Starting" chapter on page 22.

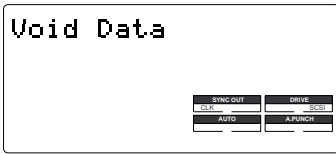
This number indicates available recording space on the disk for recording on a track.



This number indicates available recording time on the disk for recording on a track. For example, if you record on eight tracks, one-eighth of the indicated duration is the available recording time for each track.

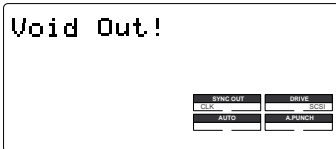
Warning messages

The following warnings are shown operating mistakes are made, an unsuitable editing point (= locate point) is input, or when errors occur. If any of these warnings appear, refer to information detailed below.



<Void Data> message
This means registered data necessary for the selected operation is incorrect.

Action to take: Re-register the correct data.



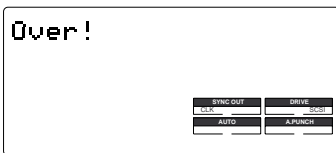
<Void Out !> message
This means the registered in/out point is wrong.

Action to take: Re-register the correct data.



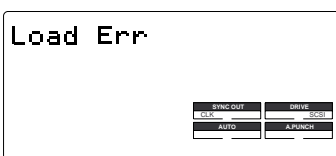
<Select Trk> message
This means a track has not been specified.

Action to take: Select any one track with the RECORD TRACK select key.



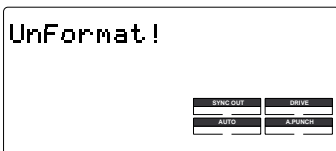
<Over !> message
This means that disk space necessary for recording and editing is insufficient.

Action to take: Before proceeding to the next operation, temporarily data in order to source empty space necessary for the next operation.



<Load Err > message
This means that loading is impossible because there is an error in data applied to the DATA IN connector from the external DAT, or adat.

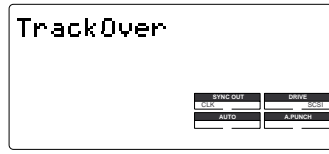
Action to take: Check the external DAT or adat connected to the DATA IN connector and be sure there is no problem with the DAT, or adat tape. Then, try loading again.



<Unformat !> message
An unformatted or crashed SCSI disk. After a few seconds of this display, the FD-8 automatically enters the SETUP mode [Format ?] menu.

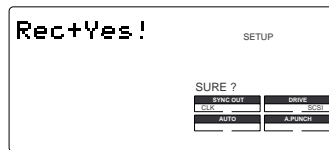
Action to take: Press the EXECUTE/YES key while pressing the RECORD button.

Note: Any sound data recorded up to this point on the disk will be lost.



<Track Over> message
This message appears when trying to record more than 2 tracks of signals simultaneously using a MO drive/disk as a Current Drive.

Action to take: The MO drive only allows to record up to 2 tracks at a time. After changing the RECORD TRACK select key setting, please record signals.



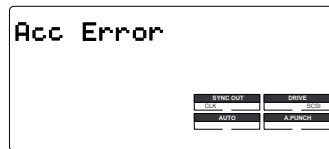
<Rec + Yes !> message
This is displayed when formatting. This means press the EXECUTE/YES key while pressing the RECORD button.

Action to take: Press the EXECUTE/YES key while pressing the RECORD button.



<Protected> message
This means the disk inserted in the drive cannot be used because it is write-protected. The disk will be ejected automatically.

Action to take: Release the write-protect and re-insert it.



<Acc Error> message
This message indicates that an error occurs when accessing the disk. With this message, no keys and buttons do not function at all.

Action to take: If this message appears, please follow the following procedures.

1. Leave the disk inside the SCSI drive and turn off the power to the FD-8 and all connected devices.
2. Turn on the power to the SCSI drive.
3. Make sure that the orange LED on the SCSI drive lights up in green and that the disk is not being accessed, turn on the power to the FD-8.

Before Starting

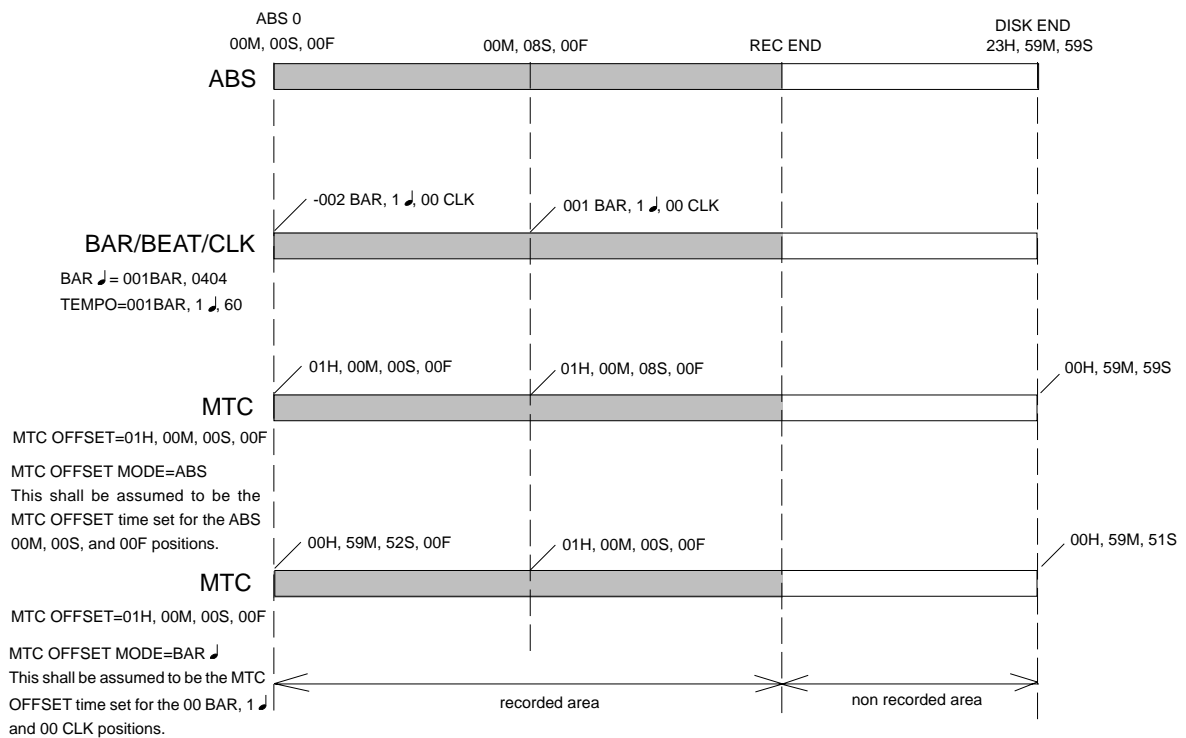
This chapter describes some basic items that you need to know before you start operating the FD-8. All users, including those who are familiar with using tape-based multitrackers and those who are new to multitrackers, should read this chapter thoroughly to understand the functions of the FD-8.

1. Time Base
2. Recording method and REMAIN indicator
3. Managing songs by Program Change function
4. Real tracks and Additional tracks
5. Input monitoring and playback monitoring
6. Signal flow (The PAN knob function and Stereo Bus)
7. Audio file and Event

Time Base

The word “Time Base” appears frequently in this manual. The concept of Time Base is similar to a “tape counter” on a conventional tape-based multitracker in that it indicates the precise position of the recorder transport section (the current position).

The FD-8 offers three types of Time Base: ABS (Absolute type), MTC (MIDI time code), and BAR/BEAT/CLK (bar/beat/clock). ABS indicates an absolute time on the disk. MTC indicates a relative time that is obtained by adding a certain value (MTC offset value) to the ABS value. BAR/BEAT/CLK indicates the position in a song created in the internal Tempo Map according to MIDI clock and Song Position Pointer. The following diagrams depict the relationship among these three types of the Time Base.



You can switch between these three types of Time Base to suit your purpose. (Refer to the explanation in “Display Section” on page 17 for more information on switching Time Base.)

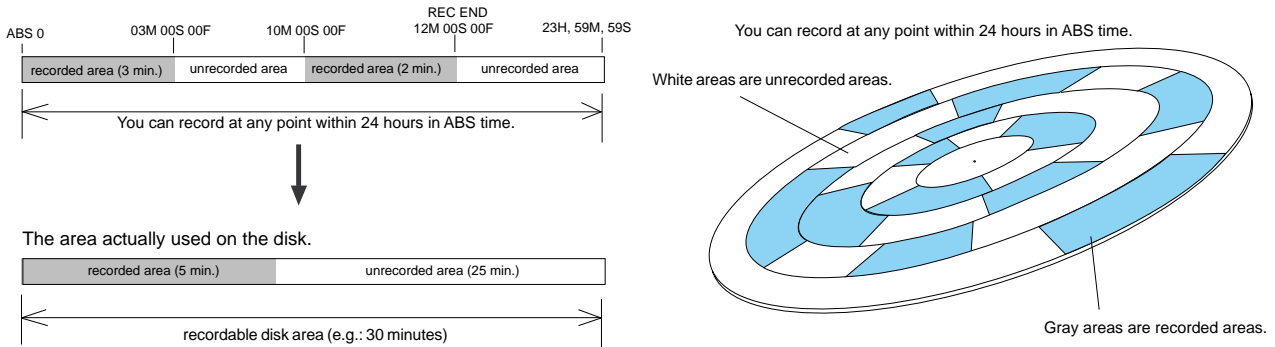


Note: When BAR/BEAT/CLK is selected as Time Base, the position for ABS 0 (top of the disk) is always “-2 BAR, 1 ↓, 00 CLK” and you cannot modify this value.

Recording method and REMAIN indicator

Recording method

The FD-8 uses a SCSI removable disk (such as an MO disk, EZ disk, or Zip disk) instead of a cassette tape. You can start recording sound sources from any point on a formatted disk as long as the point is within the range of 24 hours in ABS time, as described in the previous “Time Base” section. (Refer to the following diagram.)



For example, if you record three minutes of data starting from ABS 0 (top of the disk) to ABS 03M 00S 00F on a disk that has a recordable space of thirty minutes, as shown in the diagram, then if you record two minutes starting at the 10-minute point in ABS time (ABS 10M 00S 00F) to ABS 12M 00S 00F, the recording end point (REC END) is 12 minutes (ABS 12M 00S 00F) in ABS time. However, this does not mean that the entire recording duration is 12 minutes. The disk space actually used for recording is five minutes (3 minutes + 2 minutes).

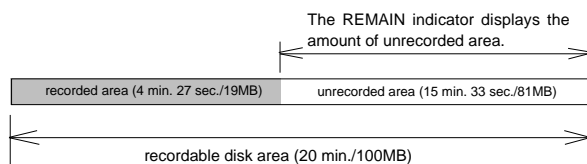
That is, the area between three minutes and ten minutes (that corresponds to 25 minutes of recording space) in terms of ABS time is still unrecorded.

When you try to play or fast forward this unrecorded area, the time counter on the display will count, but the FD-8 will not access the disk. However, MTC will be output when you try to play this area.

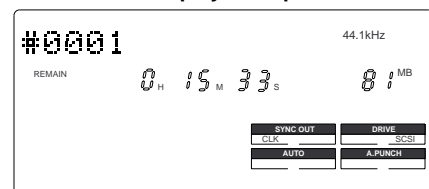
On the FD-8, the top of the disk is called “ABS 0” and the recording end point is called “REC END.”

REMAIN indicator

The REMAIN indicator displays available recording time expressed in time value (ABS or MTC) or bar/beat/clock (BAR/BEAT/CLI) value, depending on the currently selected Time Base. It also indicates the available disk space. Right after you format the disk, the REMAIN indicator will show the maximum recordable time and space on the disk. The following example shows that the disk had about 20 minutes or 100MB recordable space after the disk format operation, and has recorded data of 4 minutes 27 seconds (or 19MB).



<Display example>



The REMAIN value is calculated on a mono-track basis. That is, the value indicates available recording time and space if you record on one mono track.

For example, if you wish to know how much you can record on four tracks, you need to divide the current REMAIN value by eight.

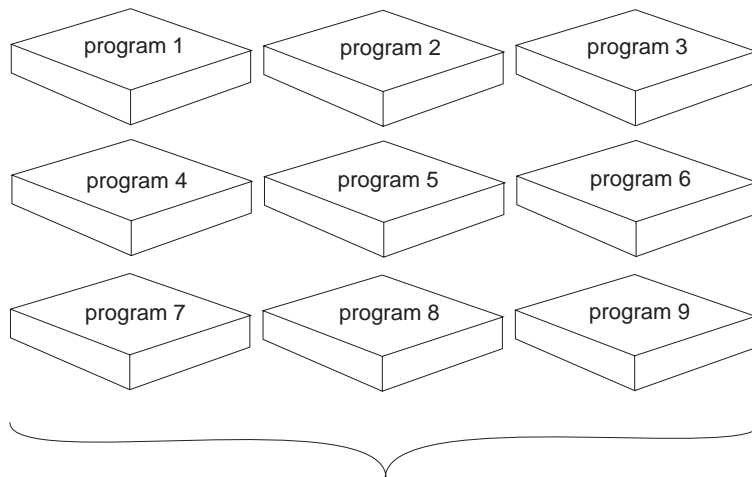
The REMAIN value is also calculated by deducting the time and space of all data on the Real tracks and Additional tracks from the original available recording time and space. Therefore, even if there is no recording on Real tracks, but there is data on Additional tracks, the REMAIN time will consider the time and space used by the data to calculate available time and space.

As described in “Managing the song by Program,” the FD-8 can set up as many as 99 Programs on the disk. Setting up a Program requires a small amount of disk space. In other words, disk space is used not only for storing recorded data but also for storing all setup data. Therefore, make sure that you have enough space on the disk before you start recording to avoid running out of space (the [OVER !] message flashes in that case).

Managing songs by Program Change function

The FD-8 features Program Select function, which enables you to set up to 99 Programs on the disk. When you format a disk, one Program will be automatically created on the disk. You may create more Programs, if necessary. You may also delete unnecessary Programs.

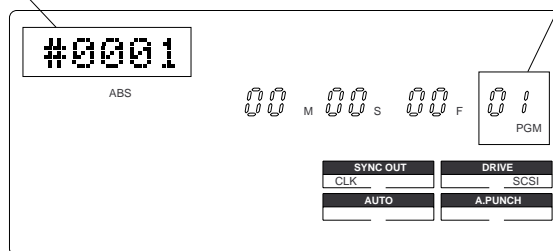
The FD-8 also features Program Change function that enables you to select one of the Programs set on the disk. Programs on the disk are something like independent containers. You can record, play, and edit each container without affecting other containers. You can also name Programs, which is useful for managing songs.



You can set up to 99 programs (independent containers).

You can name a Program.

(This example shows a “temporary title” automatically named to Program 1 right after you format the disk.)



This indicates the number of the currently selected Program. (In this example, Program 1 is selected.)



Refer to page 33 for more information on the program select function.



Refer to page 35 for more information on the program delete function.



Refer to page 36 for more information on the editing a program title.



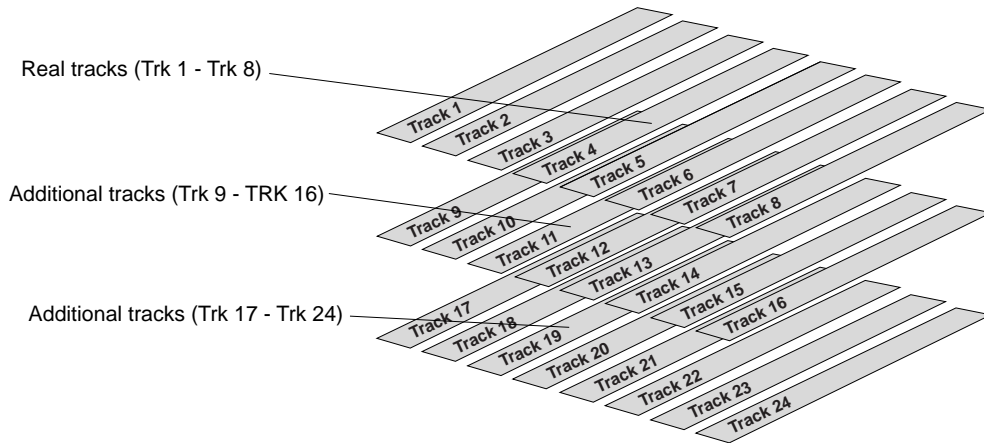
Note: Total available recording time is always the maximum available recording time on the disk, regardless of the number of Programs you set on the disk. That is, if you use up the maximum recording time for one Program, you will not be able to record any data in other Programs.



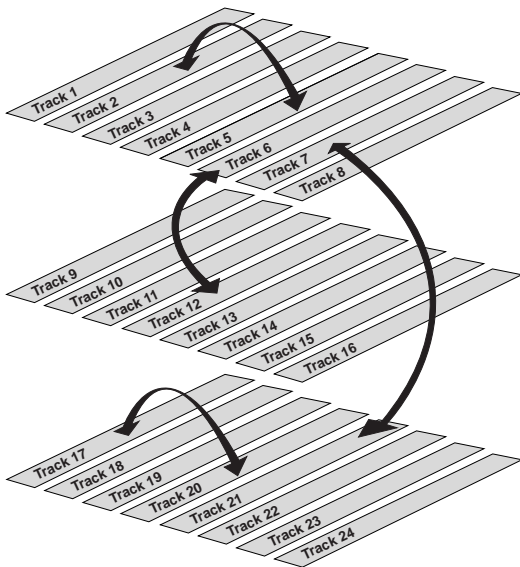
Note: As described in the “REMAIN indicator,” creating additional Programs will consume a small amount of disk space.

Real tracks and Additional tracks

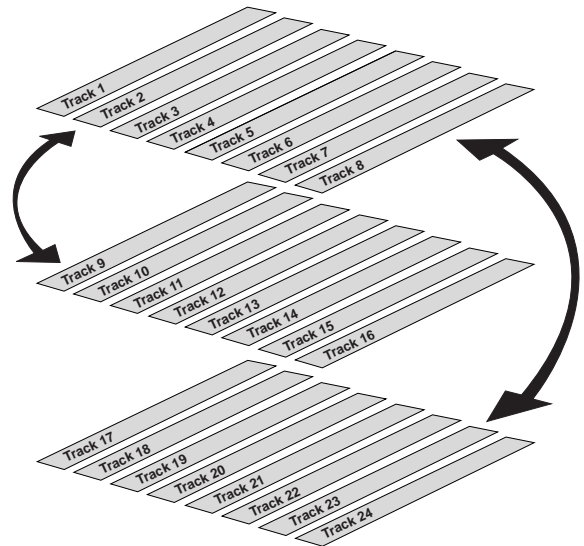
The FD-8 features eight Real tracks (1-8) and sixteen Additional tracks (9-24), for a total of twenty-four tracks. Real tracks are used to record sound sources in real-time. Additional tracks are used to temporarily store the sound recorded in the Real tracks. This is useful since you can move data from Real tracks to Additional tracks to clear tracks for fresh recording. The Track Exchange function of the FD-8 handles this operation. This function allows you to swap data freely between twenty-four mono tracks. You can also swap data between multiple Real tracks and Additional tracks as an eight-track unit.



You can swap data between twenty-four mono tracks.



You can also swap data between Real tracks and Additional tracks in units of eight tracks.



Note: You cannot record data on Additional tracks in real-time. Also, you cannot play back data on Additional tracks as is in real-time. If you wish to play back data on an Additional track, first use the Track Exchange function to move the data to a Real track. Also, you need to move the data to a Real track if you wish to check the REC END point of a song on an Additional track.



Note: Data on the Additional tracks also affects the REMAIN value. If Real tracks contain no data, but Additional tracks contain data, the amount of data (time and space) will be reflected in the REMAIN value.



Refer to page 61 for more information on the Track Exchange function.

Input monitoring and playback monitoring

There are two methods for monitoring track sound (only on the Real tracks): input monitoring and playback monitoring. They are defined as follows:

Input monitoring

Input monitoring means to monitor via track output the recording signal sent to the Real tracks of the recorder. That is, you are monitoring a post-recorder signal, not a pre-recorder signal. The FD-8 enters input monitoring status when you perform one of the following operations.

- **When you set a track to recording mode**

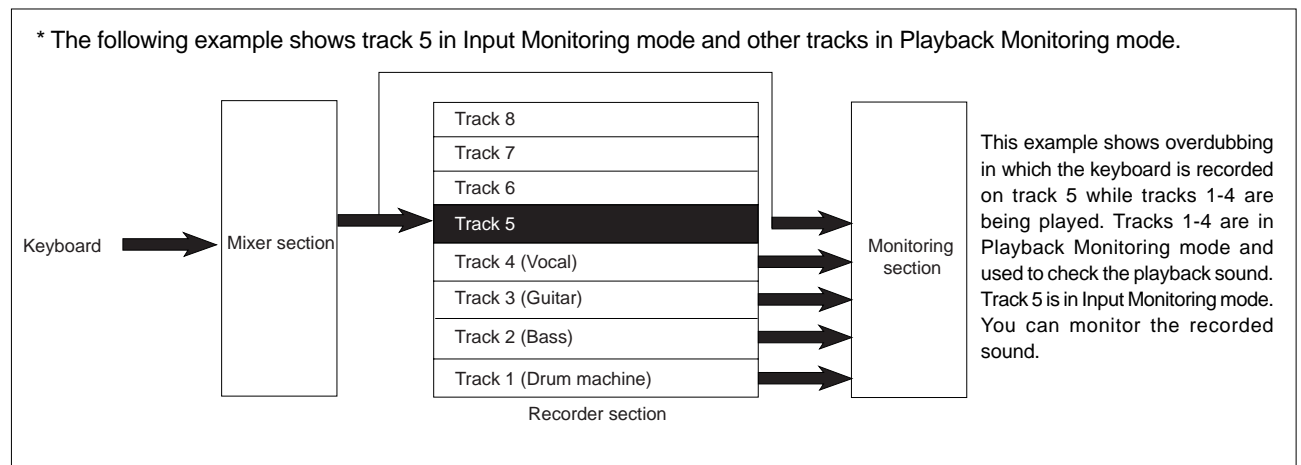
To set a track to recording mode, press the RECORD TRACK select key to set the track READY, then press the PLAY button while holding down the RECORD button.

When recording starts on the READY track, the FD-8 automatically enters input monitoring status.

- **When you set a track to recording stand-by mode**

To set a track to recording stand-by mode, press the RECORD TRACK select key to set the track READY, then press only the RECORD button. (Pressing the RECORD button again will cause the FD-8 to enter playback monitoring mode.)

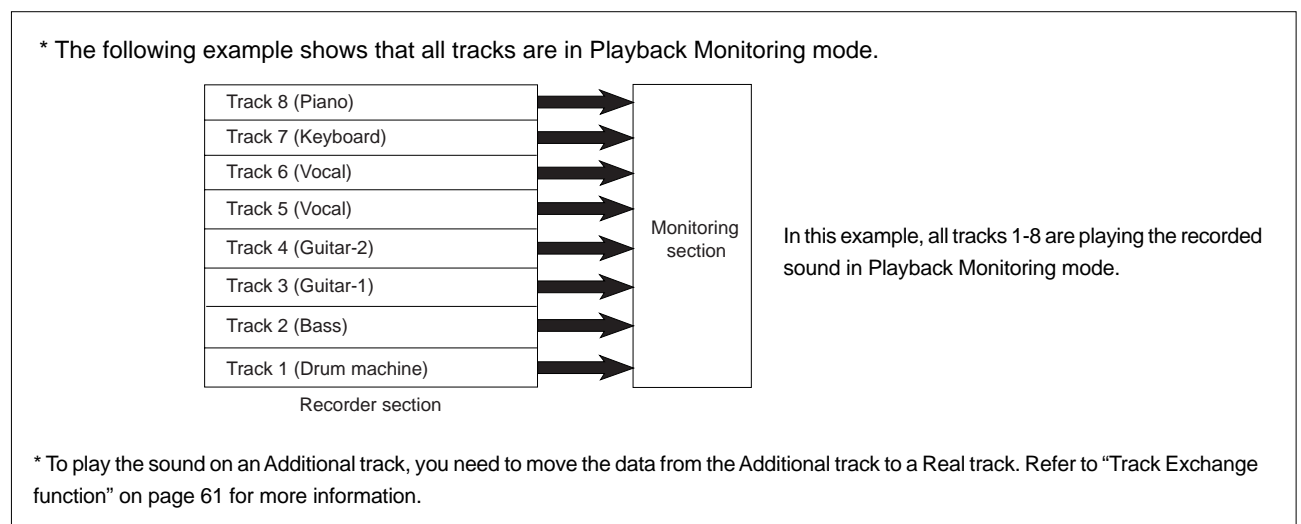
Under this condition, only the READY track enters input monitoring mode, on stand-by for recording.



Playback monitoring

“Playback monitoring” means to monitor the playback sound of the tracks (only Real tracks).

That is, you are monitoring the playback sound on the track, not the sound being recorded to the track.



Signal flow (The PAN knob function and Stereo Bus)

The FD-8 is equipped with an eight-channel mixer function, which enables you to mix and record eight sound sources into stereo signal. The following diagram is designed to help you visualize the signal flow of the FD-8. It illustrates how input signals are routed through the mixer and sent to the recorder section.

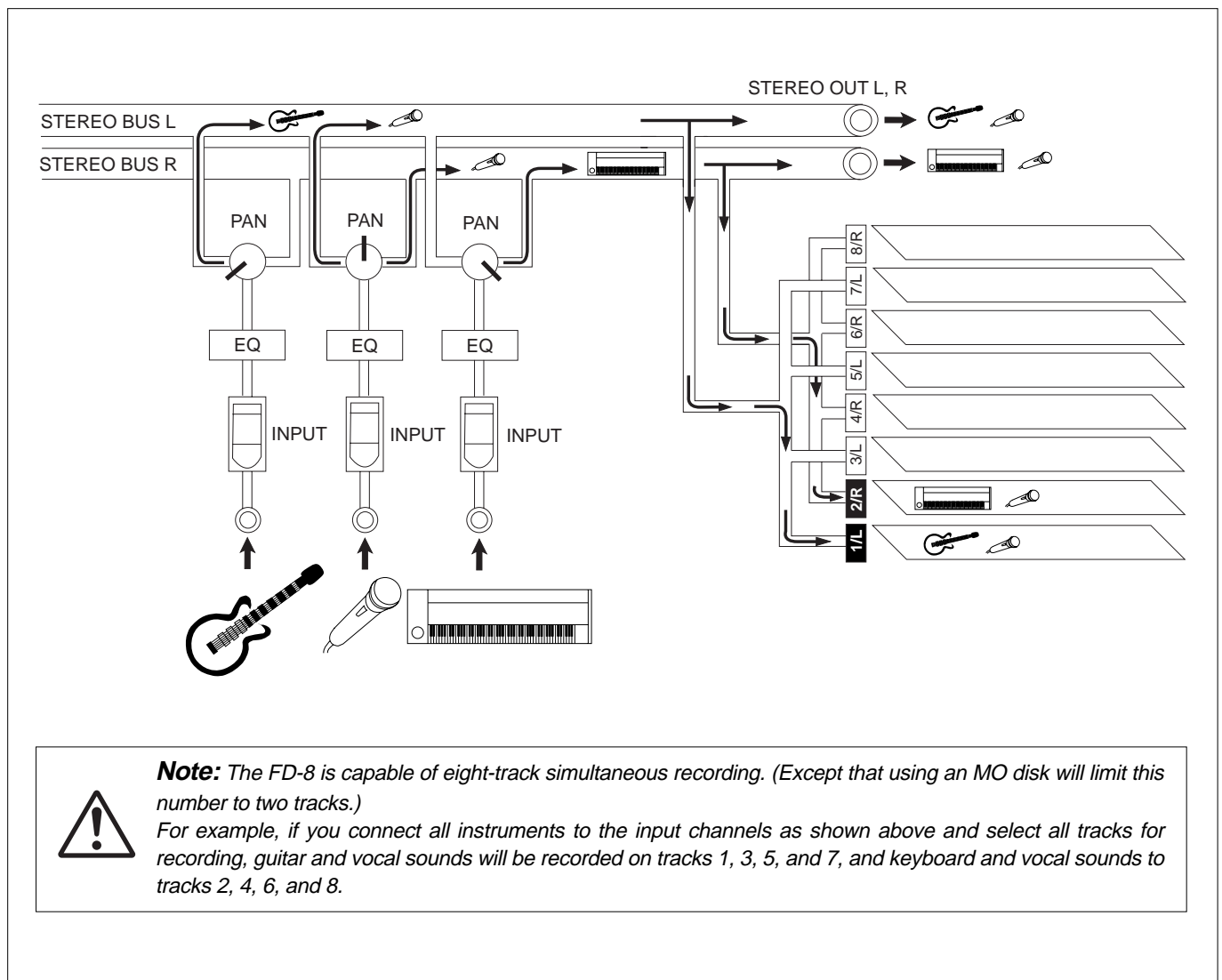
The thick pipes in the diagram are called the “Stereo Bus,” which collects input channel signals passing through the equalizers and distributes them to L or R via the PAN knobs. The signal is adjusted for final output by the master faders L/R, then output from the STEREO OUT L/R jacks. At the same time, the signal is sent to the recorder (external SCSI disk) and recorded onto the tracks selected by the RECORD RACK select keys.

The PAN knobs function as a “turning signal” to Stereo Bus L or R. That is, turning the PAN knob toward L will send signals to Stereo Bus L, and turning the PAN knob toward R will send signals to Stereo Bus R. If you set the PAN knob in the center, signals are sent equally to Stereo Bus L and R. At the same time, Stereo Bus L signals are finally sent to Real tracks 1, 3, 5, and 7, and Stereo Bus R signals are sent to Real tracks 2, 4, 6, and 8.

Recording tracks are selected via the RECORD RACK select keys.

For example, if you input three sound sources (guitar, vocal, and keyboard), set the channel PAN knobs as shown below, and press the RECORD RACK select keys 1/L and 2/R to record the sources to tracks 1 and 2, the sound sources are recorded to tracks 1 and 2 as shown below.

If you wish to record all eight sources input to Channels 1-8, turn all channel PAN knobs toward L, and press the RECORD TRACK select key 1/L to select track 1 as a recording track.



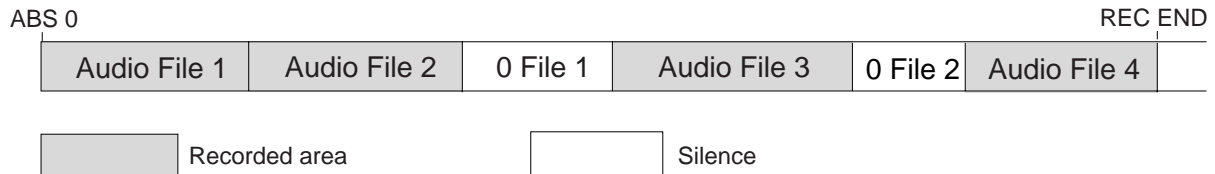
Audio file and event

<About an audio file>

During recording, the FD-8 consecutively records an independent audio file (recorded area) in each track of each Program. However, you can record data on the FD-8 at any point within 24 hours of ABS time, and you can intentionally create silence between two audio files. In this case, a silent part is counted as a 0 file.

Therefore, audio files and 0 files are consecutively created as shown in the diagram below.

The total number of these audio files and 0 files is called “the number of events.” The maximum number of events is 512 per track (tracks 1-24). After the number of events reaches 507, new data will not be recorded.



Usually, an event is created by one recording or edit. The number of events increases or decreases depending on the number of edit points or the amount of disk free space. (FD-8 disk management operates in such way that the number of events will decrease.) The number of events does not affect usual music production. However, if a small amount of single-track data is written in many different sections on the disk, the maximum number of events may be reached. To avoid this “event number overflow,” you need to check the number of events for each track. The FD-8 provides an event check menu in Setup mode for this purpose.

<Notes on digital recording>

During analog recording, “0 files” are not created since silence does not create “data 0.” However, during S/P DIF and adat digital recording, the FD-8 records “data 0” (this is called “mute recording”). When one second of consecutive data 0 is input to the FD-8, it creates a “0 file” and limits the consumption of disk space. However, repeating this operation will eventually increase the number of events, leading to “event number overflow.”

Formatting a Disk

The “Quick Operation Guide” and the “Saving and Loading Song Data” chapter of this book describe how to format a disk. This chapter explains how to format an unformatted disk and how to re-format a formatted disk. Formatting a disk refers to both formatting the current drive disk and formatting a backup disk. You will use the [Format ?] and the [Bk Format?] menus in Setup Mode.

Recording mode

There are three recording Modes: “Normal mode,” “Mastering mode,” and “Backup mode.” Normal mode and Mastering mode are used to format a disk as the current disk. Backup mode is used to format a SCSI disk (removable or fixed) for saving and loading song data.

For use	Recording mode for current drive		Recording mode for backup
	Normal mode	Mastering mode	Backup mode
Record mode	Normal mode	Mastering mode	Backup mode
Sampling Rate	44.1kHz	44.1kHz	44.1kHz
Quantumize	A.D.A.C. (*)	16bit liner	
Available recording time	Approx. 67 minutes/100MB (converted to one track)	Approx. 17 minutes/100MB (converted to one track)	
Compatible media	MO disk, EZ disk, Zip cartridge, Fixed hard disk, Optional 2.5 inch IDE internal hard disk	Fixed hard disk, Optional 2.5 inch IDE internal hard disk	MO disk, EZ disk, Zip cartridge, Fixed hard disk,
Recording	* Simultaneous 8 track recording by adat digital input is possible. * 4 tracks simultaneous recording by S/P DIF digital signal (two inputs) and analog signal (two inputs) is possible. Note: Simultaneous recording by MO disk is a maximum two tracks.	* Simultaneous 8 track recording by adat digital input is possible. * 4 tracks simultaneous recording by S/P DIF digital signal (two inputs) and analog signal (two inputs) is possible.	This is a special backup disk format for saving and loading data. You cannot use a disk in this format for real-time recording/playback.
Save/Load	Save/load is possible only with external SCSI drives. Save/load is not possible with DAT and adat.	Save/load is possible only with external SCSI drive, DAT or adat.	You can save and load data between the backup disk and a current drive disk formatted in any mode (Normal or Mastering mode).

(*) A.D.A.C. is the next generation digital audio coding technique maximized for multitrack recording, which has been developed by joint research of Matsushita Electric Industry Corporation and Fostex Corporation.

Note: Available recording time varies depending on the disk capacity and type. For actual available time for a particular disk, please refer to the “List of the drives with guaranteed operation” in the Owner’s Manual.

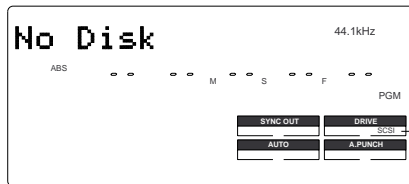
Note: You can format only a fixed disk or an optional 2.5-inch internal hard disk in Mastering or Normal modes. (The optional 2.5-inch internal hard disk must have its SCSI ID number set to any number except “6.”)

To use a removable type disk as the current drive, format the disk in Normal mode. Formatting a removable disk in Mastering mode will not provide you with enough recording space. Data recorded on a disk formatted in Normal mode cannot be saved or loaded using a DAT or adat. Those formatted in Mastering mode are capable of saving and loading data to and from a DAT or adat.

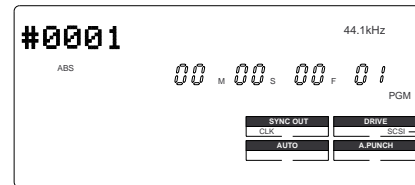
You may format a disk for backup as long as the SCSI drive (fixed or removable) is set to ID number “6.” If you execute the [Format ?] menu in SETUP mode, the FD-8 will automatically recognize a connected SCSI drive or a 2.5-inch internal hard disk set to any ID number other than “6.” If you execute the [Bk Format ?] menu, the FD-8 will automatically recognize the SCSI drive set to ID number “6.”

Formatting a current drive disk (SCSI disk)

You may use a SCSI removable disk, a fixed hard disk, or an optional 2.5-inch internal hard disk as the FD-8's current drive. This section explains how to format a SCSI-type removable or fixed disk. Before you can format a SCSI disk, [SCSI] should appear in the [DRIVE] indication area. If you are also using an optional 2.5-inch internal hard disk, make sure that the following indication appears on the display.



<The display when no disk is set in the current drive.>



<The display when disk is set in the current drive.>

Formatting a new disk

The following procedure explains how to format a new SCSI disk, and assumes that a SCSI drive (removable or fixed hard disk) is connected to the FD-8 as the current drive.

1. Turn on the power to the FD-8 and the current drive.

The [Initial...] message, then [No Disk] message appears on the display. (If a fixed hard disk is connected, the [Initial...] message, then the [Un Format !] message appears and the FD-8 enters SETUP mode. Skip to Step 3 below.)

2. Insert a new removable disk into the current drive.

The FD-8 displays the "UnFormat!" message, then automatically enters SETUP mode, and displays the "Format ?" menu. At this time, the ID number (e.g., [SCSi id-2]) of the connected SCSI drive (or fixed disk) will appear and [SURE ?] will blink on the display.

3. Make sure that the ID number is correct and the [SURE ?] message appears, then press the EXECUTE/YES key.

The FD-8 displays [Pls Wait !], then immediately displays the recording mode menu, with [Normal] (Normal mode) and [SURE ?] flashing.

4. Turn the JOG dial to select the desired recording mode.

Turning the JOG dial toggles between [Normal] and [Master].

Note: If you are using a removable MO, Zip, or EZ disk as the current drive, select [Normal]. If you are using a fixed disk or optional 2.5 inch internal hard disk, select [Normal] or [Master]. Note that you cannot save or load data via a DAT or adat if you recorded the data on a disk formatted in Normal mode.

5. Press and hold the RECORD button and press the EXECUTE/YES key.

The FD-8 starts formatting in selected recording mode. [REMAIN] lights up on the display, and a negative value of the unformatted disk area size will count down as the format operation progresses. Please wait a while. When formatting is complete, [COMPLETED !] lights up on the display, and the FD-8 stops spinning the disk.

6. Press the EXIT/NO key or the STOP button to exit SETUP mode.

Formatting will automatically create one Program 1 on the disk. The Time Base will change to ABS 0.

7. Press the DISP SEL key to change to the REMAIN display and check the available recording time.

Press the DISP SEL key again to return to the Time Base display.

Press the EXIT/NO key while holding down the SHIFT key to eject the removable disk from the drive.

If you wish to format another removable disk, insert the disk and repeat the procedure described above.

Re-formatting a formatted disk

This section explains how to re-format a current drive (Master or Normal) or backup disk as the current disk. You need to use the [Format ?] menu in SETUP mode to reformat a disk. In the following procedure, we assume that a SCSI drive is connected to the FD-8 and that the power to the FD-8 and the SCSI drive is turned on. (The same procedure also applies to a fixed disk.)

1. Insert a formatted disk into the SCSI drive.

The FD-8 displays the recording mode of the disk (Normal FM or Master FM), then displays ABS 0 of Program 1. If you are using a disk formatted for backup, the FD-8 displays [Illegal FM], then the Time Base indication.

2. Press the SETUP key to enter SETUP mode and turn the JOG dial to select [Format ?].

3. Press the EXECUTE/YES key.

The ID number of the connected SCSI drive appears and [SURE ?] flashes on the display.

4. Press the EXECUTE/YES key again.

The recording mode selection display appears. The current recording mode of the disk (Normal or Master) and [SURE ?] flash.

5. Use the JOG dial to select the desired recording mode. Press and hold down the RECORD button and press the EXECUTE/YES key.

The FD-8 starts formatting the disk in selected recording mode.

[REMAIN] lights up on the display, and the negative value of the unformatted disk area size will count down as the format operation progresses. Please wait a while.

When formatting is complete, [COMPLETED !] lights up on the display, and the FD-8 stops spinning the disk.

6. Press the EXIT/NO key or the STOP button to exit SETUP mode.

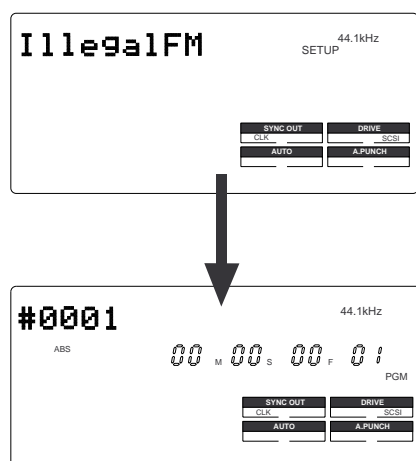
Formatting will automatically create one Program 1 on the disk, and the Time Base will change to ABS 0.

7. Press the DISP SEL key to change to the REMAIN display and check the available recording time.

Press the DISP SEL key again to return to the Time Base display.

Note: Before re-formatting a formatted disk, first make sure that the disk does not contain data you want to keep. Otherwise, you may lose your important archives.

To cancel the format operation, press the EXIT/NO key or the STOP button prior to Step 5 above to return to the previous level in the menu hierarchy and exit SETUP mode.



<Notes on re-formatting a disk>

When you re-format a backup disk to be a current drive disk, inserting the disk in the current drive displays [Illegal FM] followed by the ABS 0 Time Base.

Although the ABS 0 Time Base appears, the disk cannot be used in its present condition as the current drive disk to perform real-time playback/recording. The display indicates the ABS 0 Time Base of the backup disk when the FD-8 enters Setup mode. Therefore, after you insert the backup disk into the current drive, do not perform any operation other than using the [Format ?] menu in SETUP mode. Otherwise, the disk may run erratically any operations will be ignored. If this happens, turn off the power to the FD-8, then turn it on again.

Formatting a current drive disk (2.5-inch hard disk)

If you have ordered an optional 2.5-inch IDE internal hard disk, the Fostex service department will format the disk in [Master] mode and install it in the FD-8 before delivery. You do not have to format it from scratch. However, if you wish to re-format the 2.5-inch hard disk, follow the steps described above in the “Re-formatting” section. Before you start the format operation, make sure that the FD-8 displays the following indication:

The image shows the FD-8 display with the following elements:

- Top left: #0001
- Top right: 44.1kHz
- Below #0001: ABS
- Below 44.1kHz: 00 M, 00 S, 00 F, 0 PGM
- Bottom left: SYNC OUT, CLK, AUTO
- Bottom right: DRIVE, IDE, A.PUNCH

<Note on formatting an optional 2.5-inch hard disk>
[IDE] appears on the display when you turn on the power to the FD-8 with an optional 2.5-inch hard disk installed and without a SCSI drive connected, or with a SCSI drive that is connected to the FD-8 but not turned on. It indicates that the FD-8 recognizes an optional internal hard disk as the current drive. So make sure that the [IDE] indicator appears when you format the 2.5-inch hard disk. The re-formatting procedure described above applies to formatting the IDE hard disk.

[IDE] is lights up

Formatting a backup disk (SCSI disk)

Song data you recorded in the current drive (SCSI drive, fixed disk, or optional 2.5-inch hard disk) can be saved to a backup SCSI drive disk, as well as a DAT or adat, and can be re-loaded later. To use a backup SCSI drive, you need to set the SCSI ID number of the backup drive to “6” and format it in backup recording mode.

The FD-8 does not indicate the connected backup disk on the display (unlike the current drive). You need to use [Bk Format?] menu in SETUP mode to format a backup disk while the current drive is on. However, if the disk has not yet been formatted, you may format it during the save/load operation.

For more information on formatting an unformatted disk for saving and loading song data, refer to “Saving and Loading Song Data” on page 85.

The following procedure assumes that a current drive (SCSI drive, fixed disk, or optional 2.5-inch hard disk) is connected to the FD-8, and a Program on the current drive disk is selected.

Formatting an unformatted disk for backup

This procedure enables you to format a new disk for backup, and assumes that a disk has been installed in the current drive.

1. Insert a new disk into the backup drive.

The display remains showing the Time Base indication for the current drive disk.

2. Press the SETUP key to enter SETUP mode, and turn the JOG dial to select the [Bk Format ?] menu.

3. Press the EXECUTE/YES key.

The FD-8 displays [UnFormat] and [SCSi id-6], and [SURE?] flashes. This means that the disk with the ID number “6” is ready for formatting.

If you turn the JOG dial, [Eject] appears, and pressing the EXECUTE/YES key will eject the disk.

4. Press and hold the RECORD button and press the EXECUTE/YES key.

The FD-8 starts formatting [REMAIN] lights up on the display, and the negative value of the unformatted disk area size will count down as the format operation progresses. Please wait a while.

When formatting is complete, [COMPLETED !] lights up on the display, and the FD-8 stops spinning the disk.

At the same time, the FD-8 shows the maximum recordable space. (To check the REMAIN time and space, refer to the following <Memo>.)

5. Press the EXIT/NO key or the STOP button.

The display will change from the REMAIN indication for the backup disk to the Time Base indication for the current drive.

<Memo>

To check the REMAIN time for the backup disk after formatting it, eject the disk, then replace it with the disk in the current drive. Then press the DISP SEL key to show the REMAIN display. You can check the REMAIN time of the backup disk in this way. However, you cannot perform another operation using the backup disk at this time. Attempting to do so will cause the FD-8 to display [Illegal FM] and ignore your operation.

To eject the disk from the backup drive or the current drive after the format operation, follow the procedure below:

- * To eject a disk from the backup drive: **Press the Eject button on the drive.**
- * To eject a disk from the current drive: **Press and hold the SHIFT key and press the EXIT/NO key.**

Re-formatting a formatted disk for backup

This section explains how to re-format a backup or current drive (Master or Normal) disk as a backup disk. The following procedure assumes that a disk has been installed in the current drive.

1. Insert a formatted disk into the backup drive.

The display continues to show the Time Base for the current drive.

2. Press the SETUP key to enter SETUP mode, and turn the JOG dial to select the [Bk Format ?] menu.

3. Press the EXECUTE/YES key.

The FD-8 displays the recording mode that corresponds to the disk format. The [SCSi id-6] message appears and [SURE?] flashes.

A different message appears depending on the type of format used by the disk as shown below.

If you turn the JOG dial, [Eject] appears, and pressing the EXECUTE/YES key ejects the disk.

Type of format	Message
Backup mode	[Backup Dsk]
Mastering mode	[Master FM]
Normal mode	[Normal FM]

4. Press and hold the RECORD button and press the EXECUTE/YES key.

The FD-8 starts formatting.

[REMAIN] lights up on the display, and the negative value of the unformatted disk area will count down as the format operation progresses. Please wait a while.

When formatting is complete, [COMPLETED !] lights up on the display, and the FD-8 stops spinning the disk.

At the same time, the FD-8 shows the maximum recordable space. (To check the REMAIN time and space, refer to the <Memo> on the previous page.)

5. Press the EXIT/NO key or the STOP button.

The display will change from the REMAIN indication for the backup disk to the Time Base indication for the current drive.

Note: Before re-formatting a formatted disk, first make sure that the disk does not contain data that you want to keep. Otherwise, you may lose your important archives.

To cancel the format operation, press the EXIT/NO key or the STOP button prior to Step 4 above to return to the previous level in the menu hierarchy and exit SETUP mode.

Formatting a backup disk (fixed disk)

You can also use a fixed disk by setting its ID number to “6.”

The formatting procedure described above also applies to formatting a fixed disk as a backup disk.

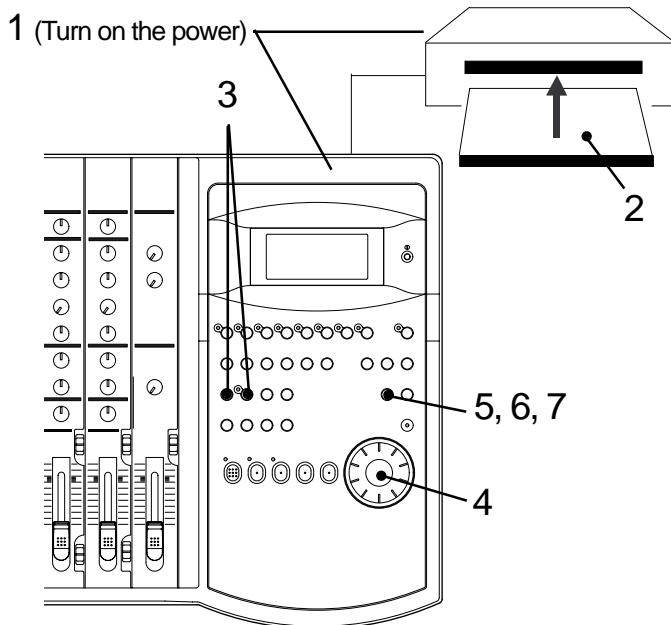
Handling Programs

This chapter explains how to handle Programs. It covers the following topics:

1. Creating a new Program
2. Using a Program Change function
3. Deleting a Program
4. Editing a Program title

Creating a new Program

You can manage individual songs by setting multiple Programs on the disk as explained in the “Managing songs by Program Change function” section of the “Before Starting” chapter. You can create up to 99 Programs can be created as long as the disk space allows. When you format a disk, one Program will be automatically created. Follow the steps below to create a new Program (in addition to the Program created on the disk during the format operation).

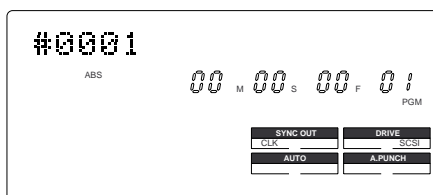


1. Turn on the power to the FD-8 and a connected SCSI drive.

2. Insert a formatted disk into the SCSI drive.

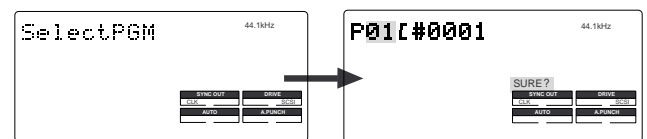
The FD-8 displays [Initial.], [(SCSI drive name and ID number)], [(Recording mode, such as [Normal])], then the top of ABS Time Base (ABS 0).

The current Program is [PGM 01]. [#0001] is the default name of PGM 01.



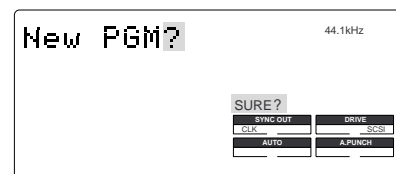
3. While holding down the HOLD/> key, press the STORE key.

[Select PGM] appears on the display briefly, then changes to a flashing “01” ([#0001 of PGM 01] and [SURE?] flash. ([#0001] is the default name of PGM 01.)



4. Turn the JOG dial clockwise.

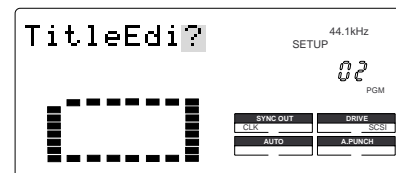
The question marks “?” of [New PGM ?] and [SURE?] flash. This indication asks you if you wish to set a new Program (Program 2).



5. Press the EXECUTE/YES key.

The FD-8 automatically enters [Title Edit ?] menu in SETUP mode. You can enter a title for Program 2. ([t] and [?] flash alternately.)

If you prefer the default name, press the EXIT/NO key.



6. Press the EXECUTE/YES key again.

A default title (#0002) appears on the display, with [#] and [SURE?] flashing. This means that you can enter a name for the new Program.

If you wish to name the Program with a unique title, continue the steps below.

In either case, you can change the title later, as explained in “Editing a Program title.”

To enter a title:

- Turning the JOG dial will enter a character or number at the location of the flashing cursor. You can enter up to 16 characters, nine of which will appear on the display.
- To move the flashing cursor, press the HOLD/> key, the REWIND button, or the F FWD button. The F FWD button is the most convenient.
- You can enter the following characters and numbers:

```

# $ % & ' ( ) * + , - . / 0 1 2 3 4
5 6 7 8 9 : ; < = > ? @ A B C D E F
G H I J K L M N O P Q R S T U V W X
Y Z [ \ ] ^ _ ` a b c d e f g h i j
k l m n o p q r s t u v w x y z { |
} ~ € _ ! "
    
```

7. When you finish entering the title, press the EXECUTE/YES key.

Program 2 (PGM 02) and its title are set. The display shows the ABS Time Base indication of the Program.

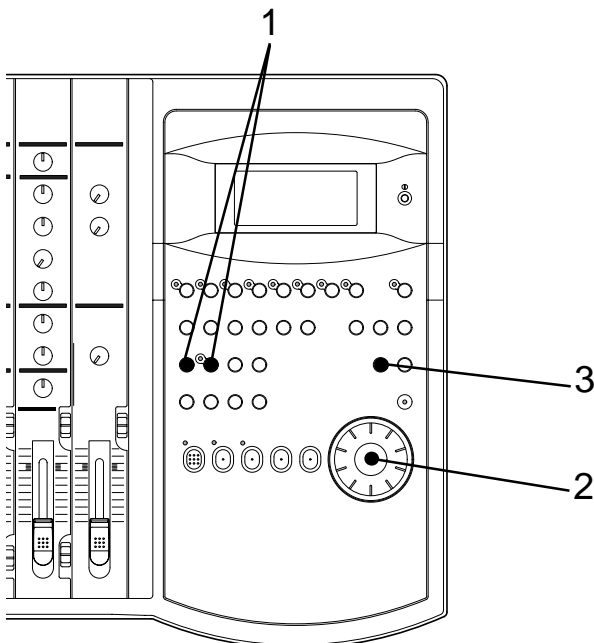
<Important!>

- When you create a new Program by selecting the [New PGM ?] menu, a new Program is created with an increment number. That is, if only one Program exists and when you create a new Program, it will be named Program 2. If Programs 1-5 already exist, a new Program number will be 6.
- If there is insufficient recording space on the disk, you cannot create the new Program. Each time you create a new Program, the recordable area on the disk will decrease.

Using a Program Change function

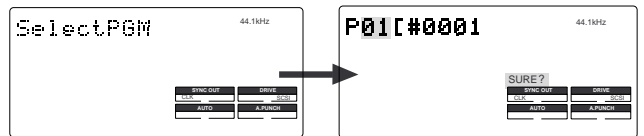
If multiple Programs exist on the disk, you need to select a Program to record, play, or edit. This section describes how to select a Program.

Note: You cannot use the Program Change function when the FD-8 is in SETUP mode.



1. When the FD-8 is stopped, press the STORE key while holding down the HOLD/> key.

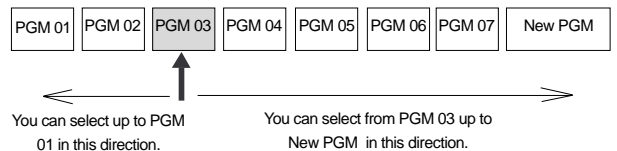
[Select PGM] appears on the display briefly, then changes to a flashing "01" ([#0001 of PGM 01) and [SURE?] flash. ([#0001] is the default name of PGM 01.)



2. Turn the JOG dial to select the desired Program number (flashing).

Rotating the JOG dial counter-clockwise decreases the number, and rotating it clockwise increases the number. If you turn the JOG dial clockwise all the way, [New PGM?] will be selected. Select [New PGM ?] to create a new Program as mentioned in the previous section "Creating a new Program."

For example, you can select one of seven Programs as follows:



3. Press the EXECUTE/YES key.

The ABS Time Base indication for the selected Program appears. In this way, you can be sure to select a Program before you start working.

Deleting a Program

This section explains how to delete an unnecessary Program.

Deleting an unnecessary Program will expand the recordable area, making your work flow more smoothly, since recording or editing requires sufficient recordable area (free space on the disk). Use the [Del. PGM ?] menu in SETUP mode to delete a Program.

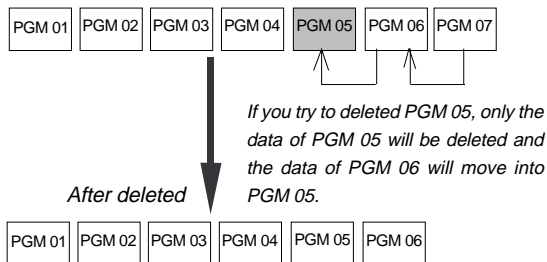
<Notes on deleting a Program>

- You can delete only the currently-selected Program. Refer to the previous section, "Using a Program Change function," for information on how to select the desired Program before you proceed to delete the Program.

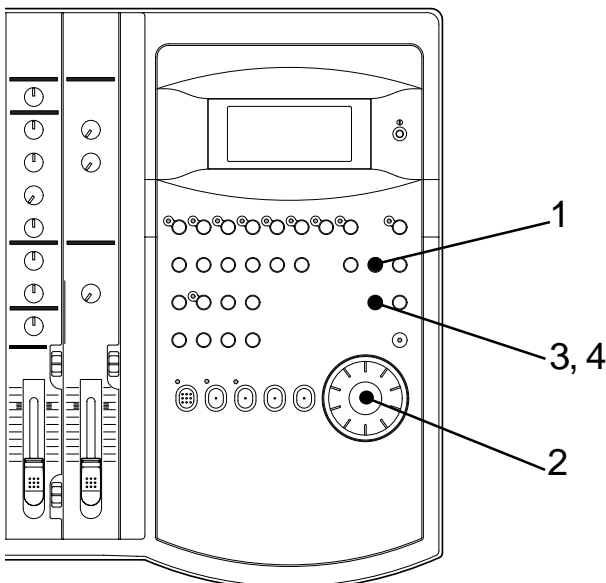
- If only one Program exists and you try to delete it, data contained in the Program will be deleted, but the Program itself will remain. For example, assume that PGM 01 -07 exist and you try to delete PGM 05. Program number 05 will remain, but the data inside PGM 05 will be replaced with the data of PGM 06.

The subsequent Programs' data will move in the same way. Therefore, it will appear that PGM 07 has been deleted.

If you delete the last Program (PGM 07 in this example), PGM 07 will be completely deleted.



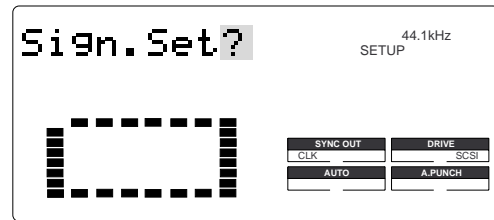
Note: You cannot use the Undo/Redo function to delete Programs. Make sure that you delete the correct Program.



1. Press the SETUP key while the FD-8 is stopped.

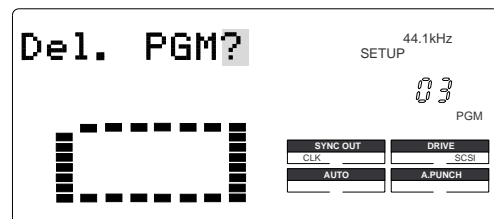
The FD-8 enters SETUP mode, and displays the first hierarchy of the SETUP menu that was displayed before you turned off the power.

The default setting is [Sign. Set ?] menu (setting a time signature).



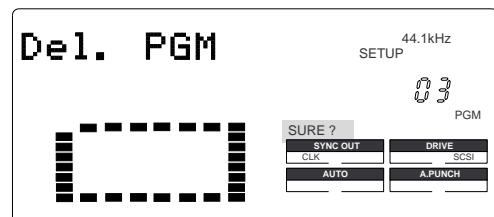
2. Turn the JOG dial to select the first hierarchy of the [Del. PGM ?] (deleting a Program) menu.

Alternatively, you can use the HOLD/> key, the REWIND button, or the F FWD button.



3. Press the EXECUTE/YES key.

The number of the Program to be deleted appears and [SURE ?] flashes.



To cancel the delete operation, press the EXIT/NO key while [SURE ?] is flashing. Each time you press the button or key, the FD-8 will return to a higher level in the hierarchy, and finally exit SETUP mode.

4. Press the EXECUTE/YES key again.

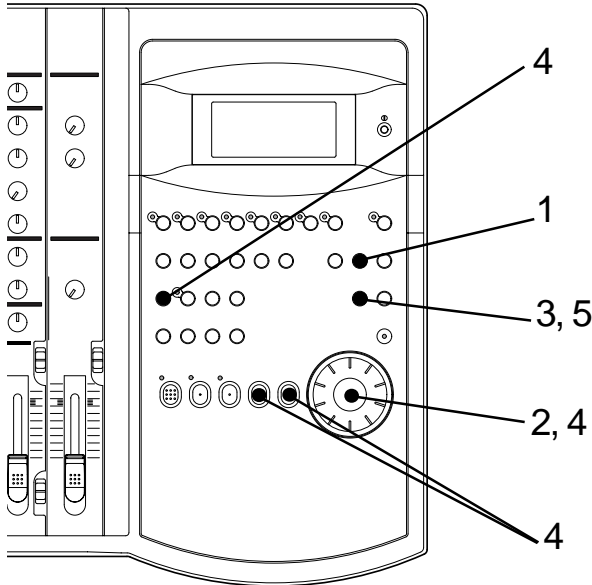
When the FD-8 displays [Deleting...], and finishes deleting the Program, the data of the next Program number moves in, and its ABS time appears.

- To check the REMAIN time and free space, press the DISP SEL key to display the [REMAIN] indication after the Program is deleted.

Editing a Program title

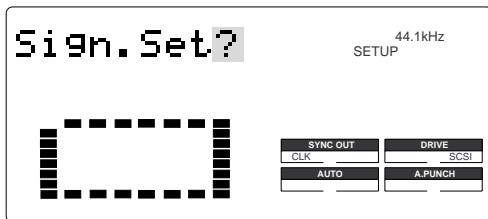
You can name the Program as explained in the “Creating a new Program” section. You can also change the title later by using the [Title Edit ?] menu in SETUP mode.

Note: You can edit the title of the selected Program before you select SETUP mode. You cannot select a Program after the FD-8 enters SETUP mode. Be sure to select the desired Program using the steps explained in the “Using the Program Change function” section.



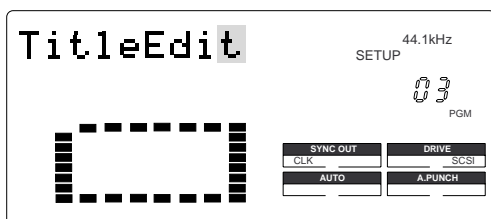
1. Press the SETUP key while the FD-8 is stopped.

The FD-8 enters SETUP mode and displays the first hierarchy level of the SETUP menu that was selected before you turned off the power.



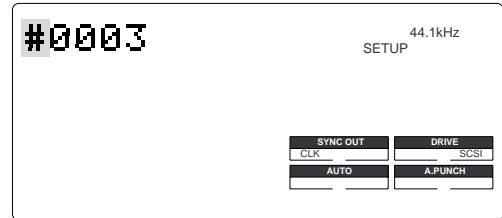
2. Turn the JOG dial to select the first hierarchy level of the [Title Edit ?] ([t] and [?]) flash alternately.) menu.

The currently-selected Program number also appears. You can also use the HOLD/> key, the REWIND button, or the F FWD button to select the first hierarchy level display.



3. Press the EXECUTE/YES key.

The currently-selected Program title appears with the left-most character flashing.

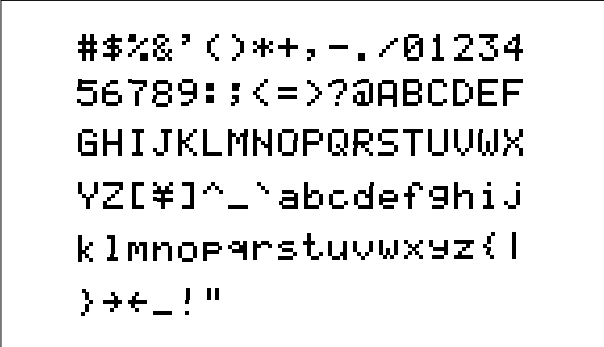


4. Press the HOLD/> key, the REWIND button, or the F FWD button to move the flashing cursor, and use the JOG dial to enter characters or numbers.

To move the flashing cursor, press the HOLD/> key, the REWIND button, or the F FWD button. The F FWD button is the most convenient.

You can enter up to 16 characters, nine of which will appear on the display.

You may enter the following characters and numbers:

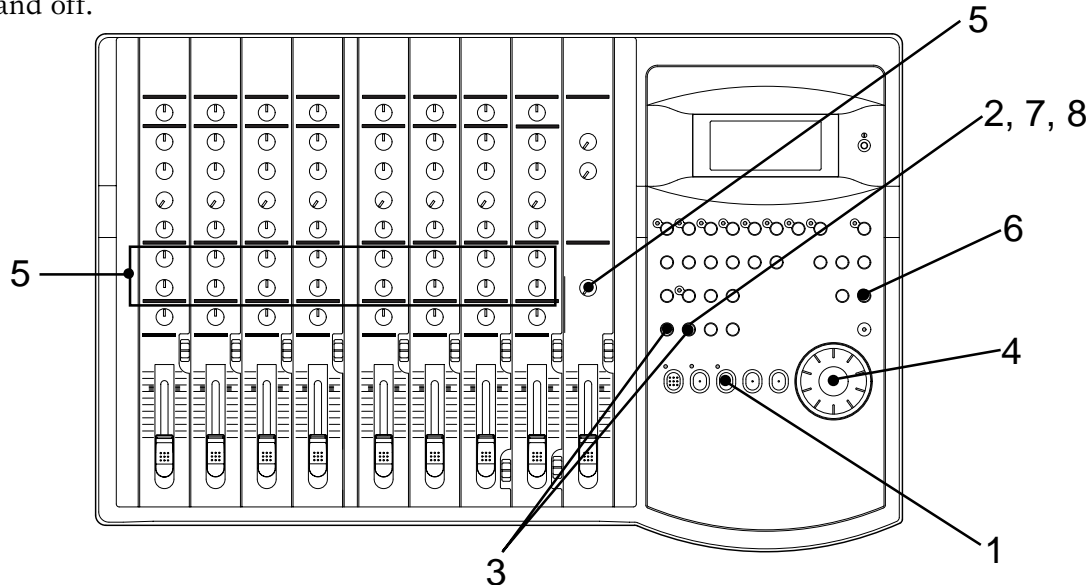


5. After you enter the title, press the EXECUTE/YES key.

The new title is confirmed, and the ABS time value of the Program appears.

Playback in Vari Pitch Mode

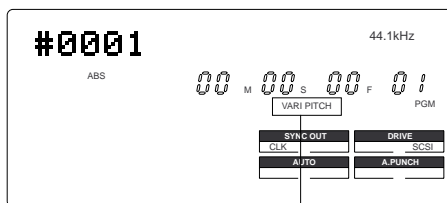
This chapter explains how to change the playback speed of the recorder using the Vari Pitch function. You can set Vari Pitch in the range of +6.0% to -6.0% in 0.1% steps. The VARI PITCH key turns Vari Pitch mode on and off.



1. Press the PLAY button to play the FD-8.

2. Press the VARI PITCH key.

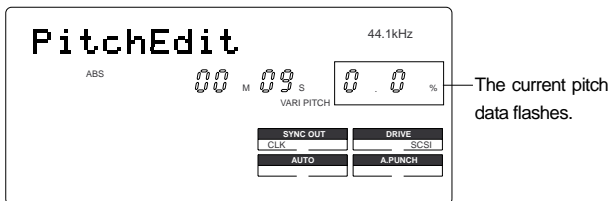
The [VARI PITCH] indicator lights up on the display, indicating that Vari Pitch mode is turned on.



VARI PITCH lights up to indicate Vari Pitch mode is turned on.

3. Press the VARI PITCH key again while holding down the SHIFT key.

The FD-8 enters Vari Pitch data edit mode, and the current pitch data flashes on the display.



4. Set the desired pitch data using the JOG dial.

You can hear the changes in playback speed.

5. To adjust the monitor sound, use the corresponding channel MON MIX section.

6. After you set the pitch data, press the EXIT/NO key.

The FD-8 exits from Vari Pitch data edit mode and continues playing with the Vari Pitch you just set.

7. To turn off Vari Pitch mode, press the VARI PITCH key. (The [VARI PITCH] indicator turns off.)

Vari Pitch mode is cancelled, and the FD-8 resumes playback at normal speed.

8. If you wish to play back data at the current Vari Pitch again, press the VARI PITCH key to turn the mode on.

You can turn the Vari Pitch function on and off and edit the pitch data while the FD-8 is playing or stopped, but not during recording.

However, if the Vari Pitch function has already been turned on and the pitch data was specified before you start recording, the FD-8 will record using the current Vari Pitch.

<Notes>

* Even if the pitch data is 0.0% (no speed change), pressing the VARI PITCH key will turn on the [VARI PITCH] indicator on the display. In other words, the [VARI PITCH] display indicates that the Vari Pitch function is turned on.

* The Vari Pitch function is automatically turned off and the [VARI PITCH] indicator is turned off under the following conditions:

- You have turned on the power to the FD-8. (The pitch data will be reset to 0.0%.)
- You have set "Slave mode setting" in SETUP mode to ON. (The pitch data previously set will be maintained.)
- You have specified a track for "Digital input track setting" in SETUP mode, and [DIGITAL] lights up on the display. (The pitch data previously set is retained.)

Recording to a Metronome Sound

This chapter explains how to record your performance while you are playing an instrument accompanied by a metronome based on the time signature and tempo specified in the Tempo Map. The metronome sound is output from track 8.

For example, record the acoustic guitar using a microphone to track 2 while using a compressor/limiter.

- Initialize the FD-8 before the operation.
- If multiple Programs exist, first select the desired Program.

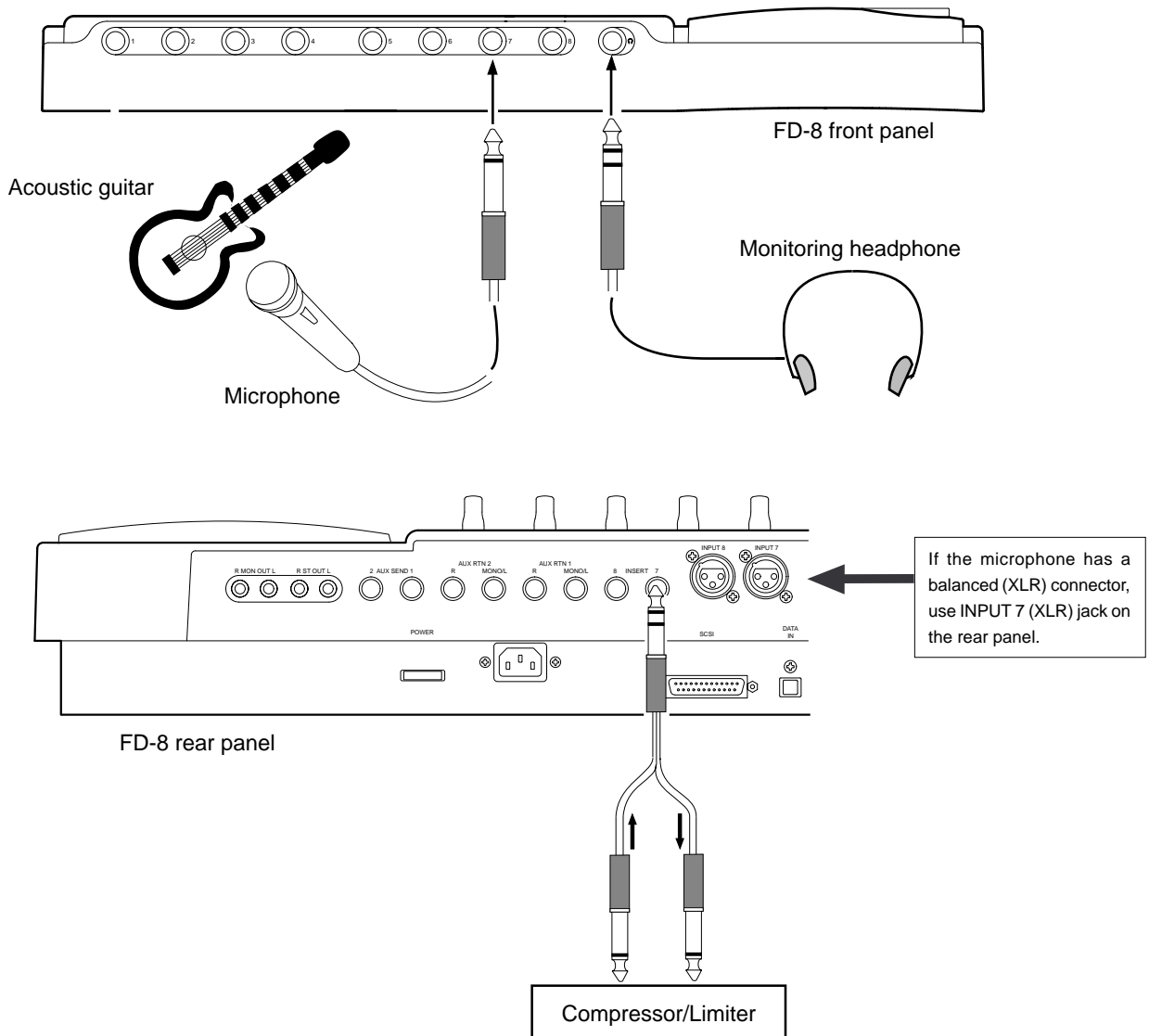
Connecting a sound source and a effect unit

1. Connect a microphone to input jack 7.

If the microphone has a balanced (XLR) connector, use INPUT 7 (XLR) jack on the rear panel.

2. Connect a compressor/limiter to INSERT jack 7 on the rear panel.

The compressor/limiter will be applied to channel 3 signal.



Punch In/Out Recording

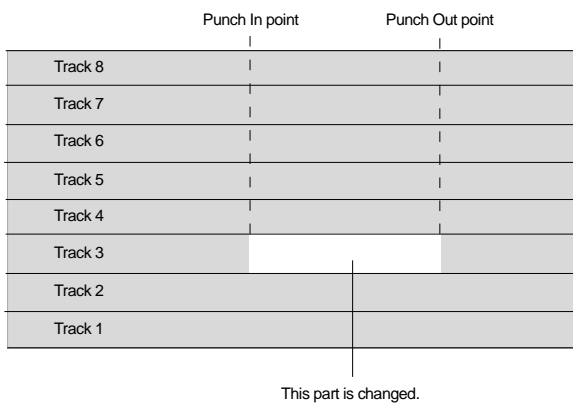
What is Punch In/Out recording?

Punch In/Out recording enables you to record over previously-recorded parts. See the diagram below.

For example, using the Punch In/Out function allows you to change an unsatisfactory guitar solo.

The FD-8 offers two types of Punch In/Out functions. One is called Auto Punch In/Out, in which you automatically re-record a specified part. The other is called Manual Punch In/Out, in which you record data manually (using your foot to operate an optional foot switch, model 8051).

Both functions feature “Rehearsal mode” to enable you to practice repeatedly until you are ready.



- Select a Program for Punch In/Out recording.
- Initialize the FD-8.

Note: You can use the Punch In/Out recording only for Real tracks 1-8.
If you wish to use Punch In/Out recording for data on an Additional track, first move the data to the Real tracks.

Auto Punch In/Out

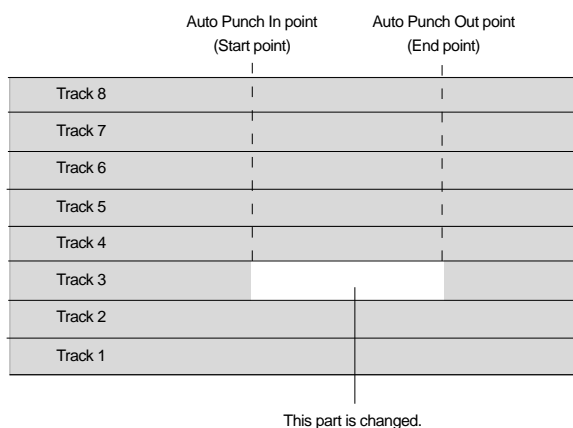
To perform Auto Punch In/Out recording, you need to specify the Auto Punch In point (recording start point) and the Auto Punch Out point (recording end point).

Storing the edit points

1. Refer to “Storing the edit points” to set the Auto Punch In/Out points.

Store the Auto Punch In point to the AUTO PUNCH IN key, and the Auto Punch Out point to the AUTO PUNCH OUT key.

- Refer to page 66 for more information on storing the edit points.



Note: Make sure that you specify an Auto Punch In point that precedes the Auto Punch Out point. If the Auto Punch Out point precedes the Auto Punch In point, [Void Out !] appears and you will be unable to perform Auto Punch In/Out recording.

Previewing and trimming the edit points

You can check the stored edit points by pressing the corresponding memory keys to display them on the LCD. You can also change the points if necessary.

In this example, use the Preview function to fine-tune the point while previewing.

1. While the FD-8 is stopped, hold down the SHIFT key and press the memory key.

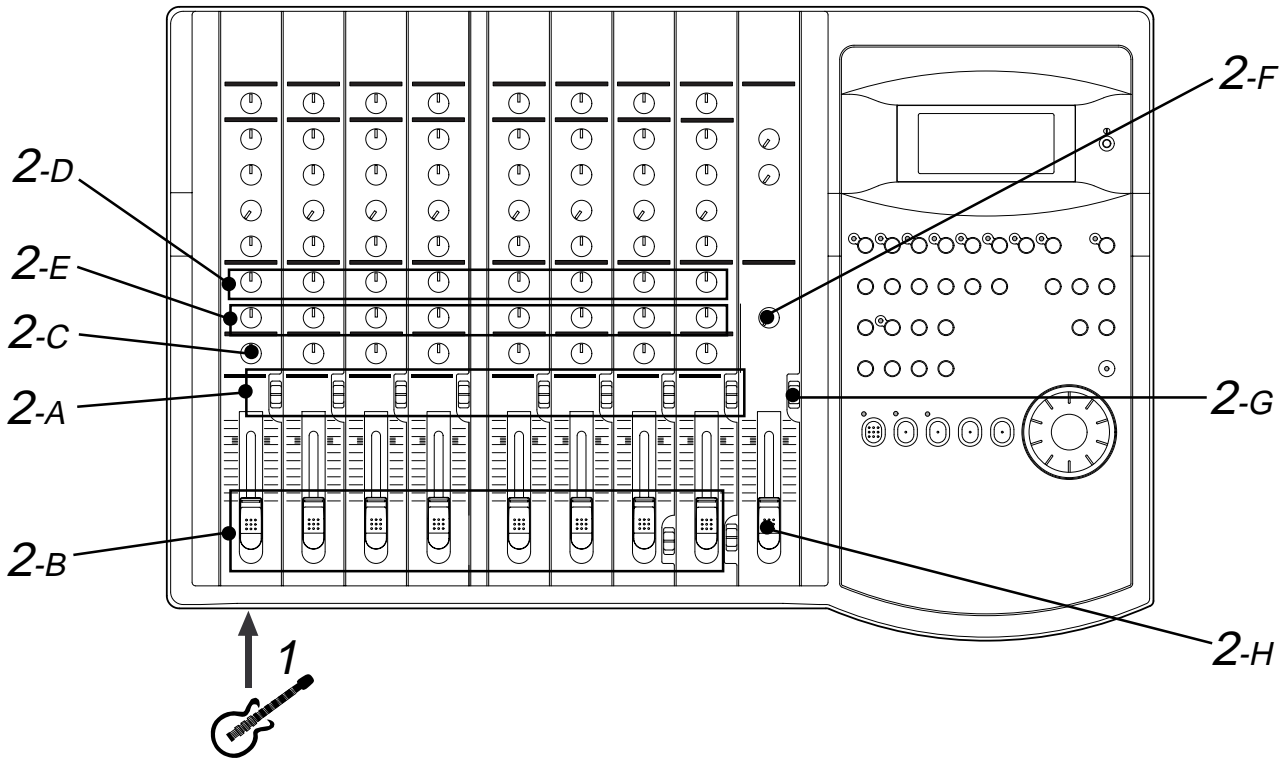
Pressing the AUTO PUNCH IN key enables you to listen to the sound at the AUTO PUNCH IN point (“previewing the sound rise [fade-out]”). Pressing the AUTO PUNCH OUT key enables you to listen to the sound at the AUTO PUNCH OUT point (“previewing the sound fall [fade-in]”).

2. Trim the edit point while auditioning the sound.

- Refer to page 74 for more information on the Preview function.

When you finish storing and adjusting the edit points, you can proceed to the Auto Punch In/Out operation. In this example, we re-record part of the guitar phrase that was already recorded on track 3. First follow the “Preparation” below, then rehearse, and record a take.

Preparation



Connecting the instrument

1. Connect the guitar to input jack 1.

Microphones and some instruments require an input level adjustment.

Connect these to input jacks 7 and 8 (unbalanced jacks on the front panel or balanced connectors on the rear panel) that are equipped with the LEVEL switches.

Setting the mixer section

2. Set up the mixer section as follows:

A	INPUT SEL switch	Channel 1 -> [INPUT] Channel 2-8 -> [OFF]
B	Input fader	Channel 1 -> as you wish Channel 2-8 -> [0]
C	Channel 1 PAN knob	[L] (Turn all the way to left.)
E	MON knob	Channel 1-8 -> Turn toward [TRK]. Adjust the track monitor level.
F	MON PAN knob	Channel 1-8 -> Adjust for easier monitoring.
G	MON SELECTOR	Switch to [MON].
H	Master fader L/R	Rise up to [7-8].

Rehearsing Auto Punch In/Out recording

In Rehearsal mode, the READY track assumes input monitoring mode between the Auto Punch In and Out points, and the sound is not recorded. You can practice Auto Punch In/Out operation repeatedly before you proceed to actual recording. Locate the recording start position slightly before the Auto Punch In point.

<Tips for rehearsal>

Set the preroll value while referring to the "Changing the Initial Settings (SETUP Mode)" chapter. In this way, the FD-8 can locate a point that precedes the Auto Punch In point by the specified preroll value. This enables you to start playback slightly before the Punch In point. (Refer to page 102 for more information on "Changing the Initial Settings.") The FD-8 will repeat playback data between the AUTO RTN START point and the AUTO RTN END point if you set the AUTO RTN START point before the Auto Punch In point and the AUTO RTN END point after the Auto Punch Out point. This allows you to repeat rehearsal. See the "Hint-2."

1. Press the RECORD button while holding down the SHIFT key.

The [RHSL] indicator flashes in the A.PUNCH mode indication area of the display. This means that Auto Punch mode is turned on.

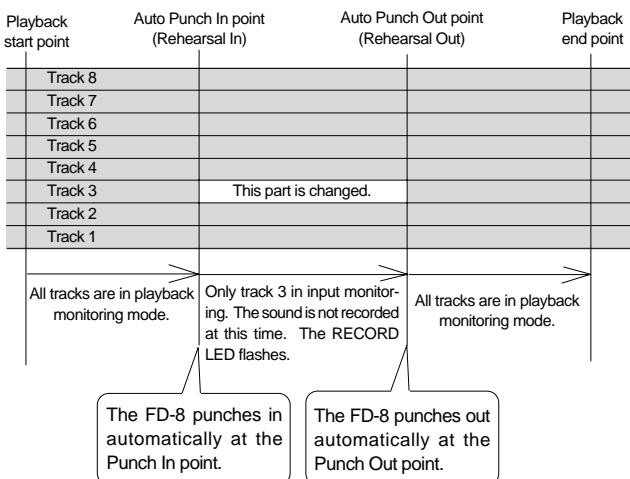


2. Set the track for Auto Punch In/Out to READY.

Press the RECORD RACK select key [3/L] to set track 3 to READY.

3. Start playback on the FD-8 from a point slightly before the Auto Punch In point.

Rehearsal starts, and the FD-8 operates as follows:



4. Play the guitar accompanying the playback sound from tracks 1 - 8 for rehearsal, while adjusting the recording level.

You will hear the guitar performance between the Auto Punch In and Out points. Otherwise, you will hear the recorded guitar sound. Use the channel 1 input fader to adjust the recording level of the guitar. Turn the channel MON knobs toward [TRK] to adjust the playback level of tracks 1-8.

5. When you are satisfied with your rehearsal, press the STOP button.

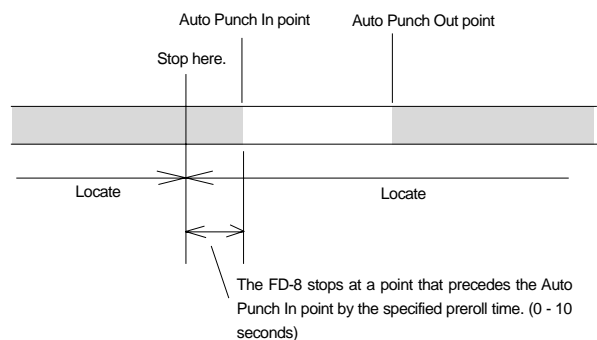
<Hint 1>

Locating a point slightly before the Auto Punch In point

To locate the playback start point for rehearsal, press the AUTO PUNCH IN key, then press the LOCATE key.

The FD-8 displays the time (position) stored in the AUTO PUNCH IN key, and locates the point and stops.

Press the REWIND button to go backward. If you have set the preroll time as described on page 102, you can locate a point that precedes the Auto Punch In point by the specified preroll value. For more information, see "Setting a preroll time" on page 102.



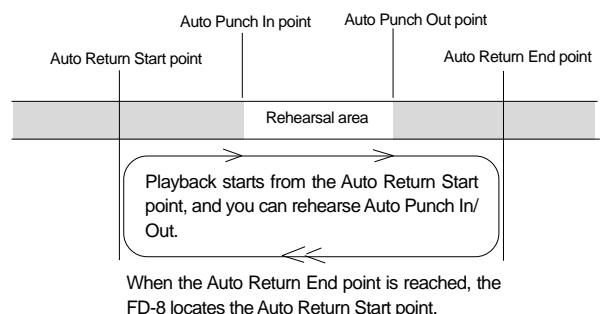
<Hint 2>

Quick and easy operation for repeated rehearsal

Using the Auto Return function and the Auto Play function enables you to rehearse repeatedly.

As shown below, set the AUTO RTN START and END points for Auto Return and Auto Play. In this way, you can repeat rehearsal easily, while checking the recording level and concentrating on your performance.

Refer to page 66 for more information on setting the AUTO RTN START/END points.



Note: If the FD-8 display [Over!] when you turn on Auto Punch mode, the disk does not have enough free space for Auto Punch In/Out. You need to erase part of the Program data, then try again.

Auto Punch In/Out Take

After you are satisfied with your rehearsal, you can proceed to an actual take of Auto Punch In/Out. You can undo or redo Auto Punch In/Out recording if you change your mind. The control panel settings are the same as those for rehearsal.

1. Press the RECORD TRACK select key [3/L] to set track 3 to READY.

2. Locate a point slightly before the Auto Punch In point.

3. Confirm that Auto Punch mode is turned on.

If it is not on, press the RECORD button while holding down the SHIFT key.

4. Press the RECORD button while holding down the PLAY button.

The flashing [RHSL] on the display changes to an illuminated [TAKE], and recording starts.

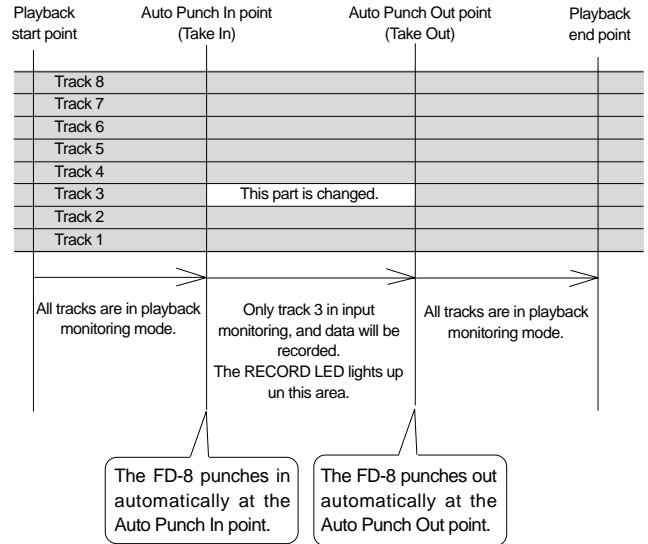


The FD-8 operates as follows. To record, hold down the PLAY button and press the RECORD button.

- The LED of the REC TRACK select key 3/L remains steadily lit between the Punch In and Out points. Otherwise, it flashes.
- When the Auto Punch Out point is passed, the FD-8 cancels Auto Punch mode automatically, and nothing appears in the A. PUNCH display area.

<Caution after Punch Out>

At "Take" of punch out, the punch-in recording track will not immediately enter the repro monitor mode from the input monitor mode enter the repro monitor mode about two seconds after mute playback. This is a functional feature of FD-8 and not a malfunction.



5. When you finish recording, press the STOP button.

6. Play track 3 to check the result of the Auto Punch In/Out operation.

Undo/Redo Auto Punch In/Out recording

You can undo or redo Auto Punch In/Out recording.

Press the UNDO/REDO key after recording is complete to restore the conditions that existed prior to the recording. Press the UNDO/REDO key again to restore the conditions that existed after the recording. Follow the notes below:

Note-1: The Undo/Redo function is effective only when the FD-8 is stopped.

Note-2: The Undo/Redo is not effective if you perform one of the following operations after you finish recording:

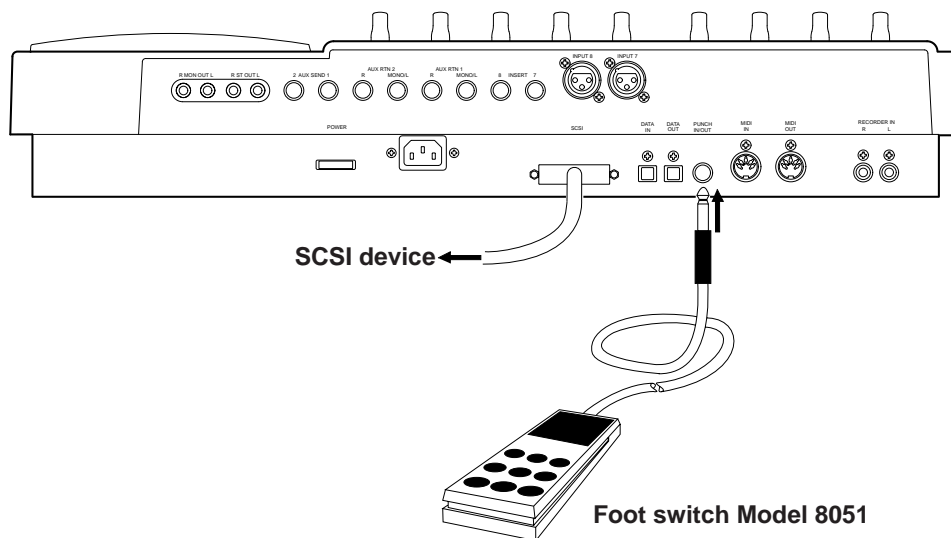
- When a new recording is made.
- While a new editing is executed (such as Copy & Paste, Move & Paste, or Erase).
- When in the AUTO PUNCH ON mode, when the AUTO PUNCH IN point is passed in the PLAY (or RECORD) mode.
- When the power is momentarily switched off.
- When the program is changed.
- When the disk is ejected. (Removable disk only.)

Manual Punch In/Out

This section explains how to perform Manual Punch In/Out using a foot switch (optional Model 8051). You do not need to specify the Punch In/Out points. Instead, you press the foot switch at the Punch In/Out point. Manual Punch In/Out also offers rehearsal and actual takes. You can repeat rehearsal until you are ready. As an example, replace a part of the recorded guitar solo on track 3.

- Initialize the FD-8.
- Select a desired Program for Punch In/Out.

Preparation



Connecting the instrument and a foot switch

1. Connect the guitar to input jack 1.
2. Connect an optional foot switch (Model 8051) to the PUNCH IN/OUT jack on the rear panel.

Setting the mixer section.

3. Set up the mixer control section as explained in the “Auto Punch In/Out” section.

Rehearsing Manual Punch In/Out recording

In Rehearsal mode, the READY track enters input monitoring mode between the Punch In and Out points (the points at which you press the foot switch), and the sound is not recorded. You can practice the Punch In/Out operation repeatedly before you proceed to actual recording.

1. Press the foot switch while holding down the STOP button.

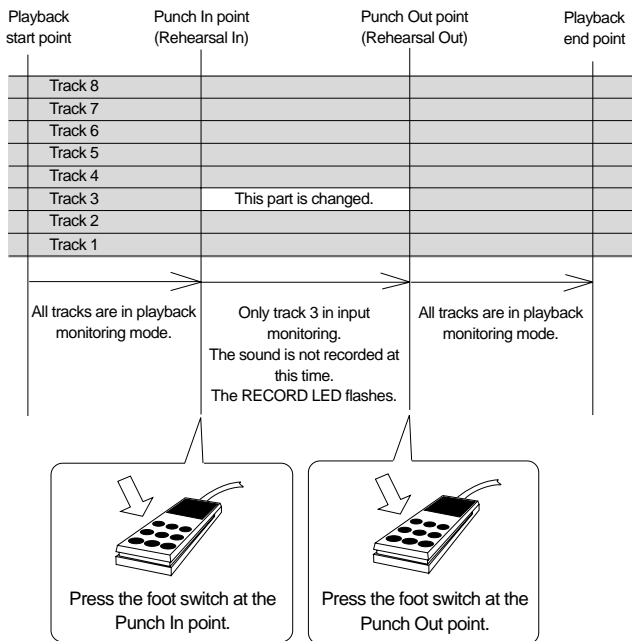
The FD-8 displays [Rehsl On] for a second and enters Rehearsal mode. [RHSL] flashes in the A.PUNCH display area.

A. PUNCH
RHSL

2. Press the RECORD TRACK select key [3/L] to set track 3 to READY.

3. Press the PLAY button to play back from a point slightly before the Punch In point.
4. Play the guitar accompanying the playback of tracks 1 to 8.
Follow the instructions in the “Auto Punch In/Out” section to adjust the recording level and the monitor level.
5. Press the foot switch once at the desired Punch In point, then press the foot switch again at the desired Punch Out point.

The FD-8 operates as follows. You will hear your performance between the Punch In/Out points. Otherwise, you will hear the previously-recorded guitar.



- When you finish rehearsing, press the **STOP** button. If you are still unsatisfied, repeat steps 3-5.

Cancelling Rehearsal mode

- While holding down the **STOP** button, press the foot switch.

[Rehsl Off] appears for a second, the flashing [RHSL] indicator in the A. PUNCH display area disappears, and Rehearsal mode is cancelled.

<Hint>

To rehearse repeatedly, set the AUTO RTN START point slightly before the Punch In point, and the AUTO RTN END point slightly before the Punch Out point.

This will help you concentrate on your performance or check the recording level easily (especially since Manual Punch In/Out involves operating the foot switch operation as well as the FD-8). (See <Hint-2> in the "Rehearsing Auto Punch In/Out recording" for more information.)

Manual Punch In/Out take

You can proceed to record if you are satisfied with the recording level, foot switch timing, and rehearsal.

Note: You cannot record a second take during the Manual Punch In/Out operation without stopping the FD-8. That is, the FD-8 will continue playing after you finish recording a take, but you cannot record another take by pressing the foot switch.

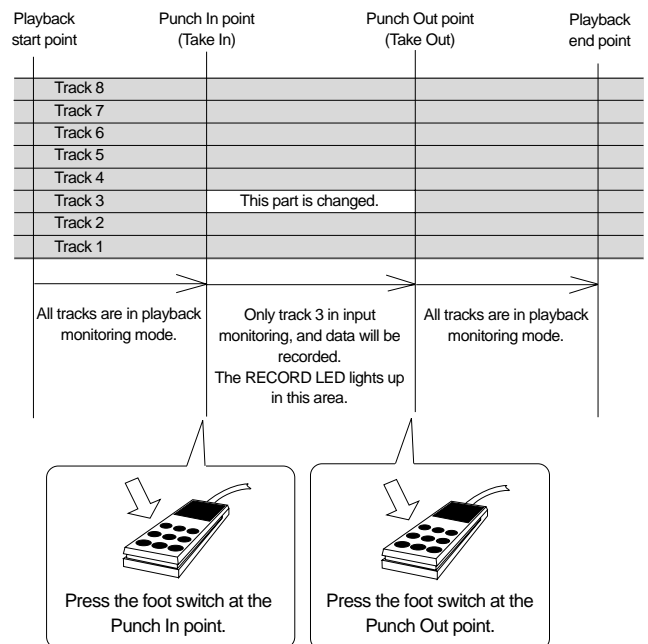
- Confirm that Rehearsal mode is cancelled, and start playing the FD-8 from a point slightly before the desired Punch In point.
- Play the guitar, accompanying the playback of tracks 1 to 8.
- Press the foot switch at the desired Punch In point. Press the foot switch again at the desired Punch Out point.

The FD-8 will operate as follows. The FD-8 enters recording mode at the Punch In point, and cancels recording mode at the Punch Out point.

- Press the **STOP** button.
- Play track 3 and check the result of Punch In/Out.

<Caution after Punch Out>

At "Take" of punch out, the punch-in recording track will not immediately enter the repro monitor mode from the input monitor mode enter the repro monitor mode about two seconds after mute playback. This is a functional feature of FD-8 and not a malfunction.



<Hint>

You can use the PLAY button and the RECORD button, instead of using the foot switch. Follow the steps below.

This method also does not allow you to record another take unless you stop the FD-8 first.

Procedure:

1. Press the PLAY button to start playback from a point slightly before the Punch In point.
 2. Press the RECORD button while holding down the PLAY button at the desired Punch In point. (Punch In recording starts.)
 3. Press the PLAY button at the desired Punch Out point. (Recording is punched out.)
- If you press only the RECORD button in both steps 2 and 3, you can rehearse Punch In/Out.

Undo/Redo Manual Punch In/Out recording

You can undo or redo Manual Punch In/Out recording.

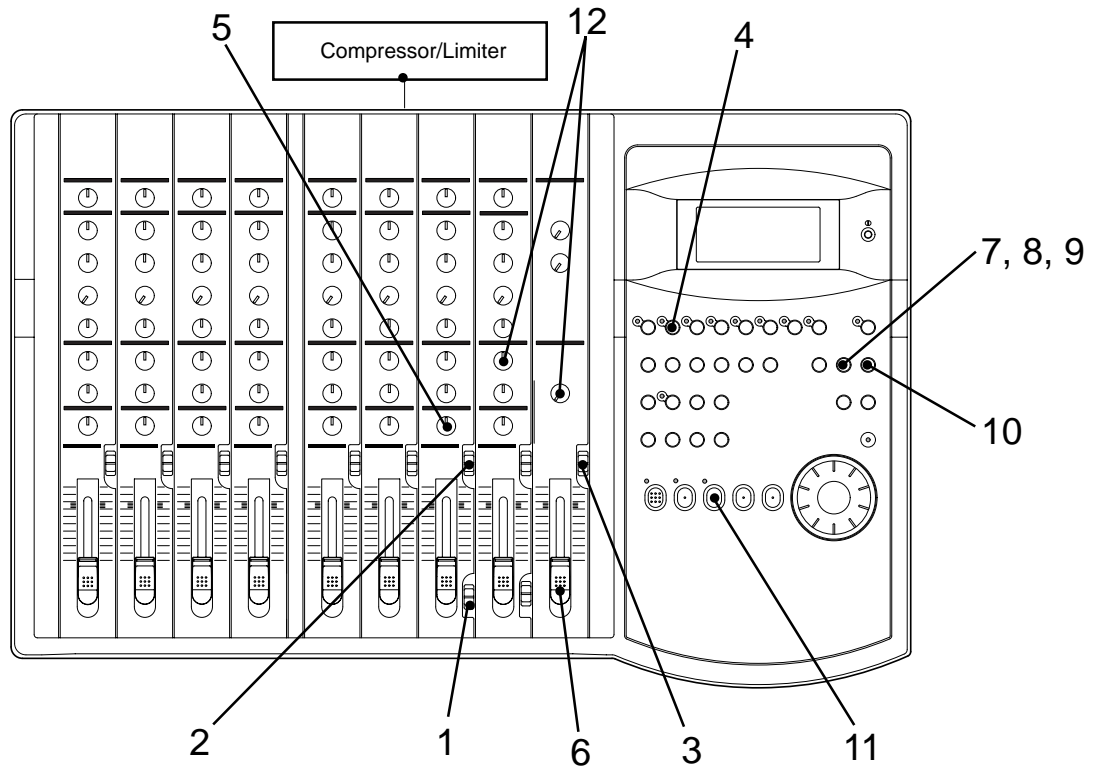
Press the UNDO/REDO key after recording is complete to restore the conditions that existed prior to the recording.

Press the UNDO/REDO key again to restore the conditions that existed after the recording. Follow the notes below:

Note-1: The Undo/Redo function is effective only when the FD-8 is stopped.

Note-2: The Undo/Redo is ineffective if you perform one of the following operations after you finish recording.

- When a new recording is made.
- While a new editing is executed (such as Copy & Paste, Move & Paste, or Erase).
- When in the AUTO PUNCH ON mode, when the AUTO PUNCH IN point is passed in the PLAY (or RECORD) mode.
- When the power is momentarily switched off.
- When the program is changed.
- When the disk is ejected.



Setting the switch and knob

1. Set channel 7 LEVEL switch to [L].
2. Set channel 7 INPUT SEL switch to [INPUT].
3. Set the SELECTOR in the monitor section to [MON].
4. Set the RECORD TRACK select key 2/R to READY.
5. Turn channel 7 PAN knob all the way to [R].
6. Raise the master fader L/R to [7-8].

Creating a Tempo Map

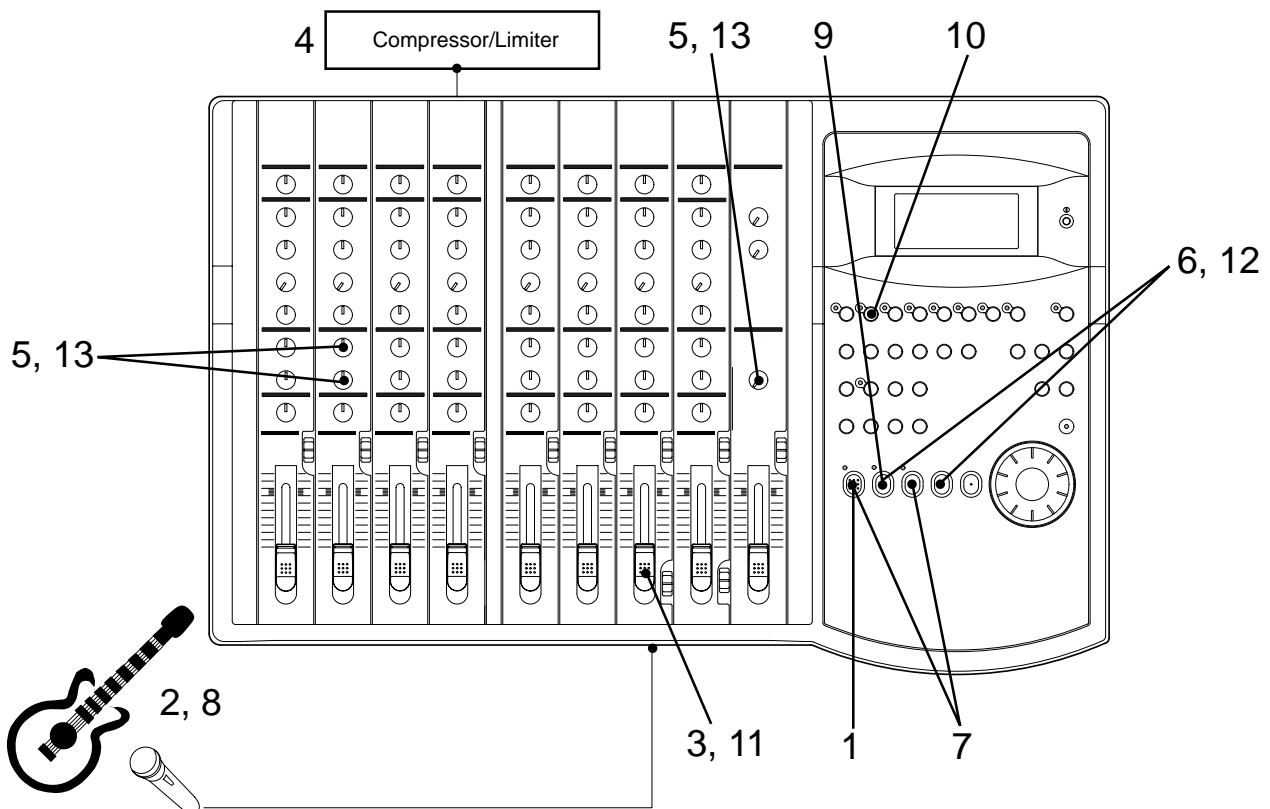
7. Set the time signature using the “Setting a time signature” menu in **SETUP** mode.
Refer to the “Setting a time signature” section on page 98.
8. Set a tempo for a given point using the “Setting a tempo” in **SETUP** mode.
Refer to the “Setting a tempo” section on page 100.

Turning the Metronome function on

9. Turn the Metronome function on using the “Setting the Metronome function” menu in **SETUP** mode.
Refer to the “Setting the Metronome function” section on page 101.

Checking the metronome sound

10. Select the BAR/BEAT/CLK Time Base using the TIME BASE SEL switch.
11. Start playback from the beginning of the Program.
Even if the selected Program does not have any recorded data, track 8 outputs the metronome sound and the FD-8 counts time.
12. Turn the MON knob of channel 8 MON mix section toward TRK, and turn the MASTER knob in the monitor section gradually.
You will hear the metronome output from track 8 using the tempo and time signature set in the Tempo Map.



Monitoring the guitar sound and adjusting the recording level

1. Press the RECORD button.
Track 2 enters input monitoring mode.
2. Play the guitar.
3. Adjust the recording level of the guitar sound using the channel 7 input fader.
As you raise the input fader, level meter 2 will respond.
4. Adjust the output level on the compressor/limiter.
5. Adjust the guitar monitoring level using the channel 2 MON mix section.
Use the channel 2 MON knob to adjust the level, and use the MON PAN knob to adjust the stereo image.

Starting recording

6. Locate the top of the Program.
7. Hold down the RECORD button and press the PLAY button to start recording.
8. Play the guitar in time with the metronome.
The guitar sound is recorded at the recording level adjusted in step 3.

Quitting recording

9. Press the STOP button to stop the recorder.

Checking the recorded sound

10. Set the RECORD TRACK select key 2/R to off.
11. Lower channel 7 input fader.
12. Locate the top of the Program and start playback.
13. Turn the channel 2 MON knob to the left to check the recorded guitar sound.
Since the Metronome function still remains on, you can hear the metronome sound during playback as you turn the channel 8 MON knob.

Note: When you finish using the Metronome function, turn the function off in SETUP mode.

Note: When the Metronome function is on, you cannot record data on track 8, nor can you play data recorded on track 8.

If you wish to re-record the sound, use the Undo/Redo function to re-start recording as explained in the “Basic Recording”. Refer to “Quick Operation Guide.”

Digital Recording

Digital recording from an external digital device

This chapter describes how to digitally record data from a connected digital device (CD, MD, DAT, adat etc.) to tracks on the FD-8. Use the “Setting digital input tracks” menu in SETUP mode to assign incoming digital signals (DATA IN L/R) to tracks. If you have selected adat input in the “Setting digital input tracks” menu, all eight-track data will be digitally recorded from the external adat.

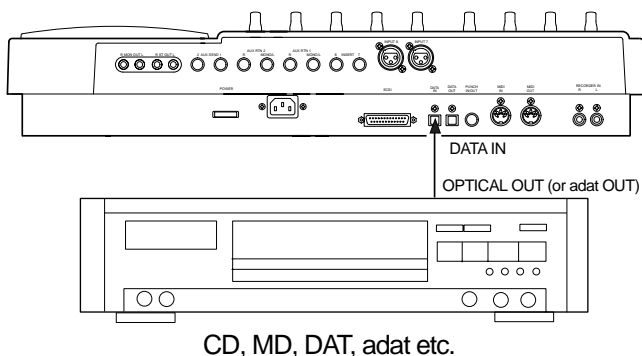
The currently-selected Program will be used for digital recording. The digital input track assignment is shared by all existing Programs.

Note: Input a digital source with a sampling rate of 44.1kHz to the FD-8.

Connecting an external digital device

- * Connect the DATA IN jack of the FD-8 with the OPTICAL OUT jack of an external digital device using an optical cable.

If the digital device has only the COAXIAL (RCA pin) jack as a digital output, use a Fostex COP-1 (an optional optical/coaxial converter).



Selecting a Program to record

- * If multiple Programs exist, first select the desired Program using the Program Change function.

• See page 34 for more information on Program Change.

Setting a recording track

1. Select the desired track using the “Setting digital input tracks” menu in SETUP mode.

You can select any track from tracks 1–8 to assign to L or R. You can also select [AdAt] instead of tracks 1–8 to digitally record all eight-track data from an external adat. When a track is assigned and a correct digital signal is input, the FD-8 displays [DIGITAL] on the display. If incoming digital signal is abnormal, the [DIGITAL] indicator flashes. Refer to “Setting digital input tracks” in the “Changing the Initial Settings (SETUP Mode)” chapter on page 109.

Caution: Do not connect or disconnect an optical cable to or from the DATA IN jack of the FD-8 while a track is assigned as digital input. Otherwise, noise may be induced to the FD-8, affecting the connected digital device.

When you finish setting the parameters in SETUP mode, be sure to press the EXIT/NO key or the STOP key to exit SETUP mode.

2. Press the RECORD TRACK select key of the assigned track to set the track to READY.

Starting and quitting recording

1. Locate the top of the Program.
2. Make sure that [DIGITAL] lights up on the display. Hold down the RECORD button and press the PLAY button to start recording on the FD-8.
3. Start playback on the external digital device. You do not need to adjust the recording level during digital recording. If you are recording data on one of tracks 1–8, set the monitor SELECTOR to [MON] so that you can monitor the recorded signal via the MON mix section of the channel that corresponds to the track.
4. When recording is complete, stop the FD-8 and the digital device.

Note: While a track is assigned for digital input, you cannot use the same track for analog recording via the corresponding input jack. When you finish digital recording, set the “Setting digital input tracks” menu to [L-, r-] (no assign). However, in other tracks not assigned for digital input, it is possible to record analog signals. For example, if tracks 1 and 2 (L-1, r-2) are selected for digital inputs, then digital signals in tracks 1 and 2, and analog signals in other tracks can be recorded, thus making it possible to simultaneously record digital and analog signals on all four tracks (If an MO disc is used for the current drive, only two tracks can be recorded simultaneously.). Refer to page 52. When the “Setup of the digital input track” is set to “AdAt,” please note that tracks 1 ~ 8 will all be assigned to digital input and thus, analog signals cannot be recorded in any of the tracks.

Digital recording to an external device

This section explains how to record digital data from the FD-8 to an external digital device, such as an MD, DAT, CD-R, or adat. You can select any pair combination from Real tracks 1-8 and S-T (STEREO OUT L/R output in the mixer section) for digital output L and R. You can also output all eight-track data to [adat].

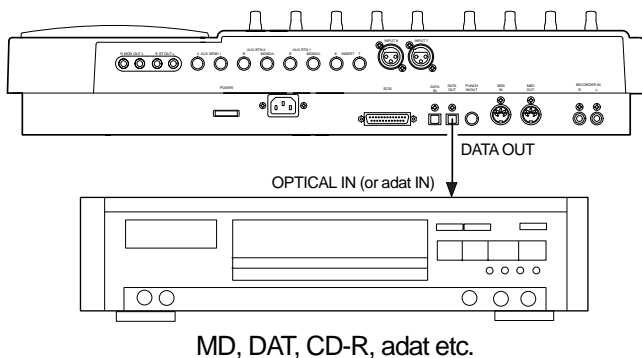
The current Program is used for digital recording. The digital output track assignment is shared by all existing Programs.

Note: Data in the additional track cannot be directly digital recorded externally. In order to digital output the data in the additional track, it must first be transferred to a real track (use the track exchange function). For an explanation of the track exchange function, refer to page 61.

Connecting an external digital device

- * Connect the DATA OUT jack of the FD-8 with the OPTICAL IN jack of an external digital device using an optical cable.

If the digital device has only the COAXIAL (RCA pin) jack as a digital output, use an optional COP-1 (optical - coaxial converter).



Refer to “Setting digital output tracks” in the “Changing the Initial Settings (SETUP Mode)” chapter on page 110 for more information on setting a digital output track.

Note: When setting up the digital output track, the tracks to be assigned to L and R cannot be the same, such as [L-4] and [r-4]. If setup is executed by mistakenly selecting the same track numbers for L and R, the number setup for the L channel will be given priority and “□” will be setup automatically for R. In other words, L channel will be setup to the specified track and R channel will be setup to R of STEREO OUT.

When you finish setting the parameters in SETUP mode, be sure to press the EXIT/NO key or the STOP key to exit SETUP mode.

Starting and quitting recording

1. Locate the top of the Program.
2. Start recording on the external digital device.
3. Press the PLAY button on the FD-8 to start playback. Digital data is output from the selected track and recorded on the external digital device.
4. When recording is complete, stop the FD-8 and the digital device.

Selecting a Program to record

- * If multiple Programs exist, first select the desired Program using the Program Change function.

Setting a digital output track

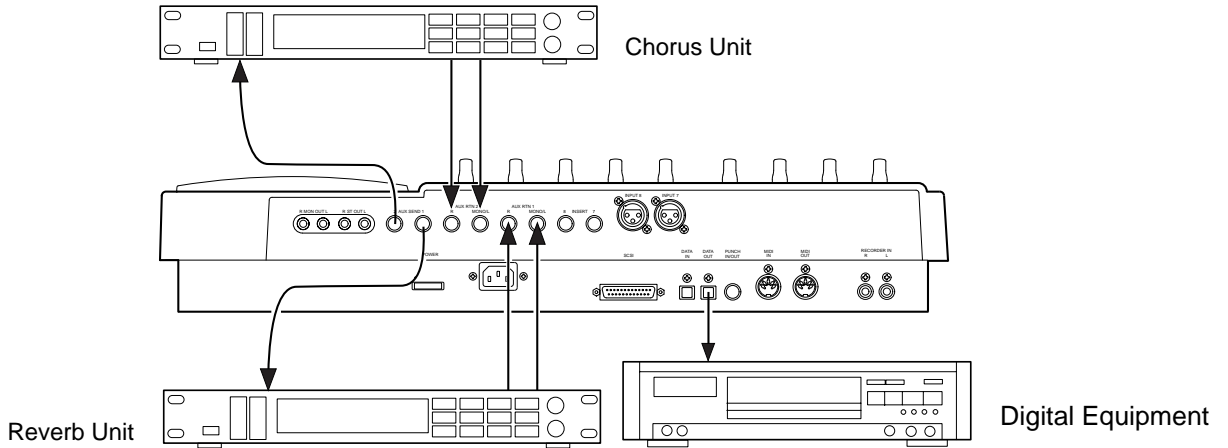
1. Select the desired track using the “Setting digital output tracks” menu in SETUP mode.

You can select any track from tracks 1-8 or L - □/r - □ to assign to L or R. You can also select [AdAt] instead of these tracks to digitally record all eight-track data to an external adat.

If you assign [L - □, r - □] (STEREO OUT L and R), the STEREO OUT L/R output of the FD-8 will have priority, which enables you to perform digital mixdown as described later.

Digital mixdown

As described in the previous section, you may mix down digital signals from tracks 1-8 to an external digital device using the procedure described in the basic mixdown section, in which you set [L-□, r-□] for digital output tracks. Refer to the “Basic Multitrack Recording” chapter for information on how to connect effect units.

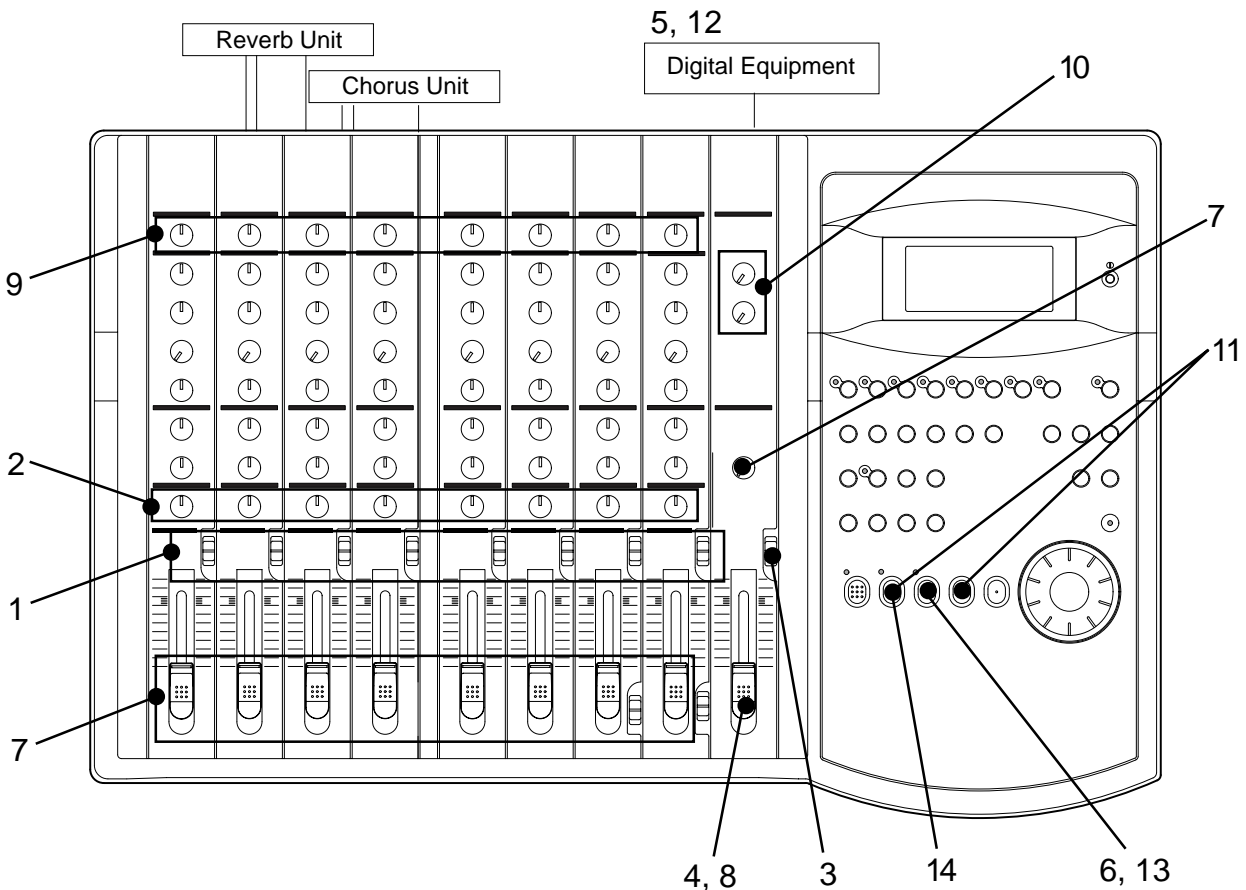


Connecting an external digital device

- * Connect the DATA OUT jack of the FD-8 with the OPTICAL IN jack of an external digital device using an optical cable.
- * Input and output of both reverb and chorus are connected to the FD-8 AUX SEND 1, 2 and the AUX RTN 1, 2.

Assigning output tracks

- * Use the “Setting digital output tracks” menu in SETUP mode to select [L-□, r-□] as output tracks. Refer to “Setting digital output tracks” of the “Changing the Initial Settings (SETUP Mode)” chapter.



Setting the switch and knob on the FD-8

1. Set the INPUT SEL switches of channels 1-8 to [TRK].

In this way, the output from recorded tracks 1-8 will be routed to the corresponding input channel faders for equalization and effect processing.

2. Set the channel PAN knobs accordingly.

There is no rule on the position of the PAN knobs. The settings will vary depending on the type of instrument you recorded or the feel of your song. You can, for example, pan a given instrument to the left and the vocal to right. Follow your intuition.

3. Set the SELECTOR in the monitor section to [L/R].

4. Raise the master fader L/R to [7-8].

Setting the output level and the master recorder

5. Set the master recorder to recording standby mode.

You should be able to check the recording level.

6. Press the PLAY button to play back the Program from the beginning.

7. Raise the channel faders and gradually turn the MASTER knob in the monitor section to monitor the sound.

Use the channel faders to adjust the track playback levels while monitoring the sound. At this time, check the level meters L and R and adjust the faders so that the [OL] section of the meter will not light up with the maximum level.

8. When you obtain a satisfactory balance, use the master fader L/R to adjust the final output level.

Also adjust the input level on the master recorder.

Settings for the effect units

9. Turn the AUX knob for the channel signal to which you wish to apply effects toward [AUX 1] or [AUX 2].

Turn the knob toward [AUX 1] to apply reverberation; turn it toward [AUX 2] to apply chorus.

10. Use the AUX RTN 1 and AUX RTN 2 knobs to adjust the input level from the effect units to the stereo bus L/R.

Mixdown

11. Hold down the STOP button and press the REWIND button to locate the beginning of the Program.

12. Start recording on the master recorder.

Adjust the input level on the master recorder so that its level meters indicate almost the same level as the FD-8's level meters L/R.

13. Press the FD-8's PLAY button to play the Program from the beginning.

Operate the master faders L/R to fade the mixdown sound in and out.

Quitting mixdown

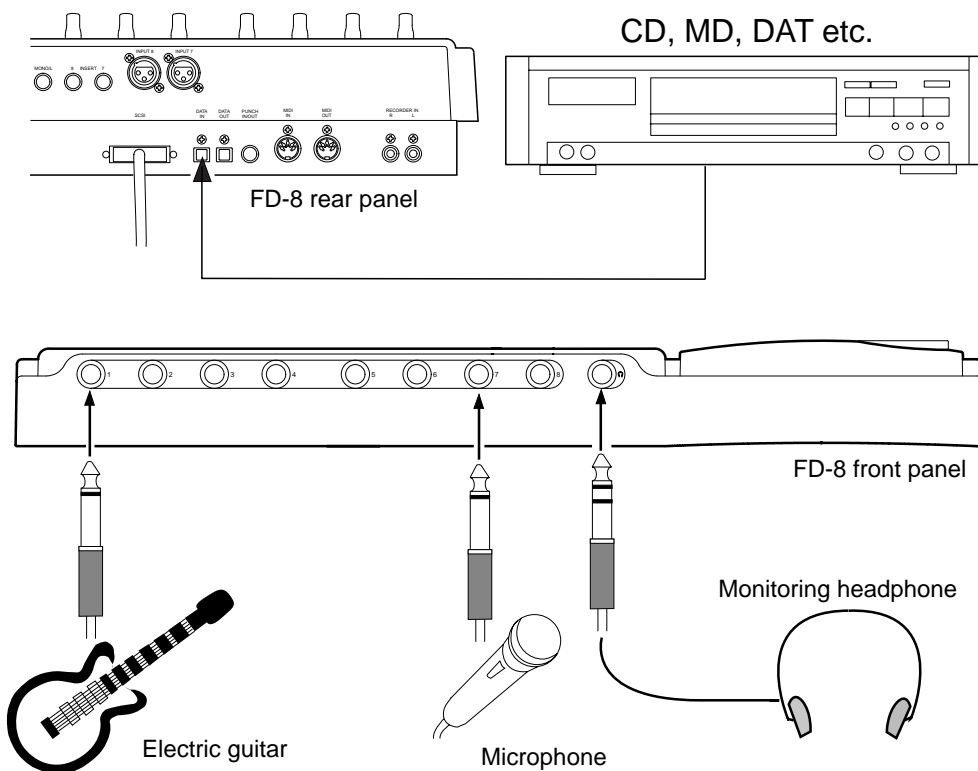
14. Stop the master recorder and the FD-8.

Digital and analog simultaneous recording

While you are recording S/P DIF digital signals (except for adat digital signal) on some tracks, you can record analog signals on other tracks. In this way, you can record two S/P DIF digital inputs (L and R) and two analog signals on four tracks.

This section explains how to record S/P DIF digital signals from CD, MD, or DAT to tracks 1 and 2, and record analog signals from a guitar and vocal to tracks 3 and 4. Before recording, initialize the FD-8.

Note: This type of recording is possible on removable disks (such as an EZ disk, zip disk), fixed disk, or optional 2.5-inch internal hard disk. You cannot perform this type of recording if you are using an MO disk as the recording media.



Connecting an external digital device and musical instruments

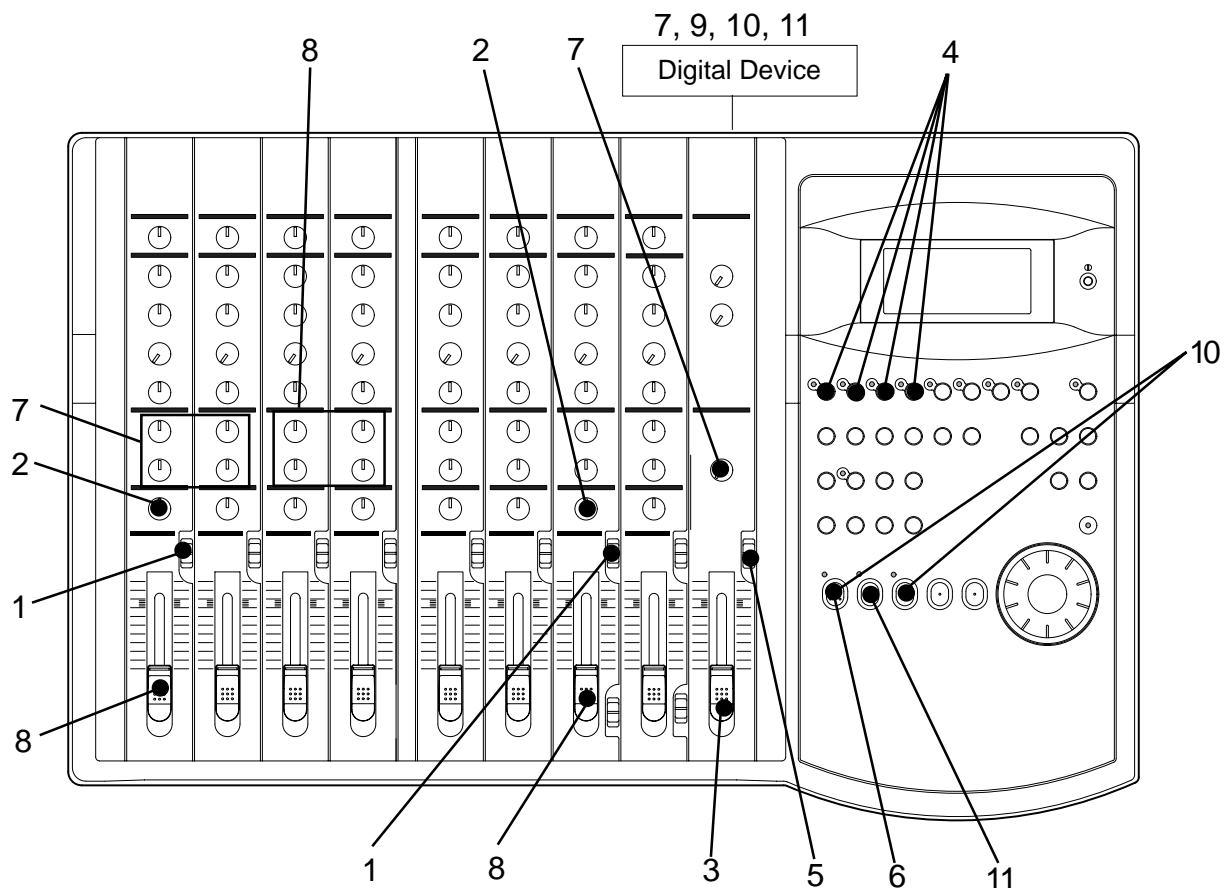
1. Connect the DATA IN jack of the FD-8 with the OPTICAL OUT jack of an external digital device using an optical cable.
If the digital device has only the COAXIAL (RCA pin) jack as a digital output, use a Fostex COP-1.
2. Connect the guitar to input jack 1 (or to an empty channel).
3. Connect the microphone to input jack 7 or 8.
Set the LEVEL switch to L.

Starting the recording Program

1. If multiple Programs exist, first select the desired recording Program.

Setting a recording track

1. In the "Setting digital input tracks" menu in SETUP mode, set [L-1] and [r-2], then exit SETUP mode.
Now inputs L and R from the external digital device are assigned to tracks 1 and 2.
When you finish setting the parameters in SETUP mode, be sure to press the EXIT/NO key or the STOP key to exit SETUP mode.



Settings on the FD-8

1. Set the INPUT SEL switches for channels 1 and 7 to [INPUT].
2. Turn channel 1 PAN knob all the way to [L] and turn channel 7 PAN knob all the way to [R].
Now the guitar signal is sent to stereo bus L and the vocal signal to stereo bus R.
3. Raise the master faders L/R to [7–8].
4. Press RECORD RACK select keys 1/L, 2/R, 3/L, and 4/R to set tracks 1–4 ready for recording.

Monitoring digital inputs

5. Set the SELECTOR in the monitor section to [MON].
6. Press the RECORD button.
The tracks ready for recording enter input monitoring mode.
7. Play the connected digital device.
You do not have to adjust the input level from the digital device on the FD-8. You can monitor the digital signals by turning channels 1 and 2 MON knobs to [TRK], and turning the MASTER knob in the monitor section gradually. At this time, turn channel 1 MON PAN knob all the way to [L], and channel 2 MON PAN knob all the way to [R].

Adjusting the recording level according to the digital input

8. While observing the level meter and monitoring the digital input sound, adjust the recording level of the musical instrument and vocal.
As you raise channels 1 and 7 input faders gradually, the level meters 3 and 4 will respond. At this time, adjust these input faders so that the meters 3 and 4 will respond according to the level of level meters 1 and 2. Use channels 3 and 4 MON mix sections to adjust the monitoring level of the guitar and vocal sound.
9. When you finish adjusting the recording level, stop the external digital device and locate the beginning of the Program.

Four-track simultaneous recording

10. Press and hold down the RECORD button, and press the PLAY button to start recording on the FD-8 and start playing the digital device.
The digital device signal and the guitar and vocal performance will be recorded simultaneously.
11. When recording is finished, stop the FD-8 and the digital device.

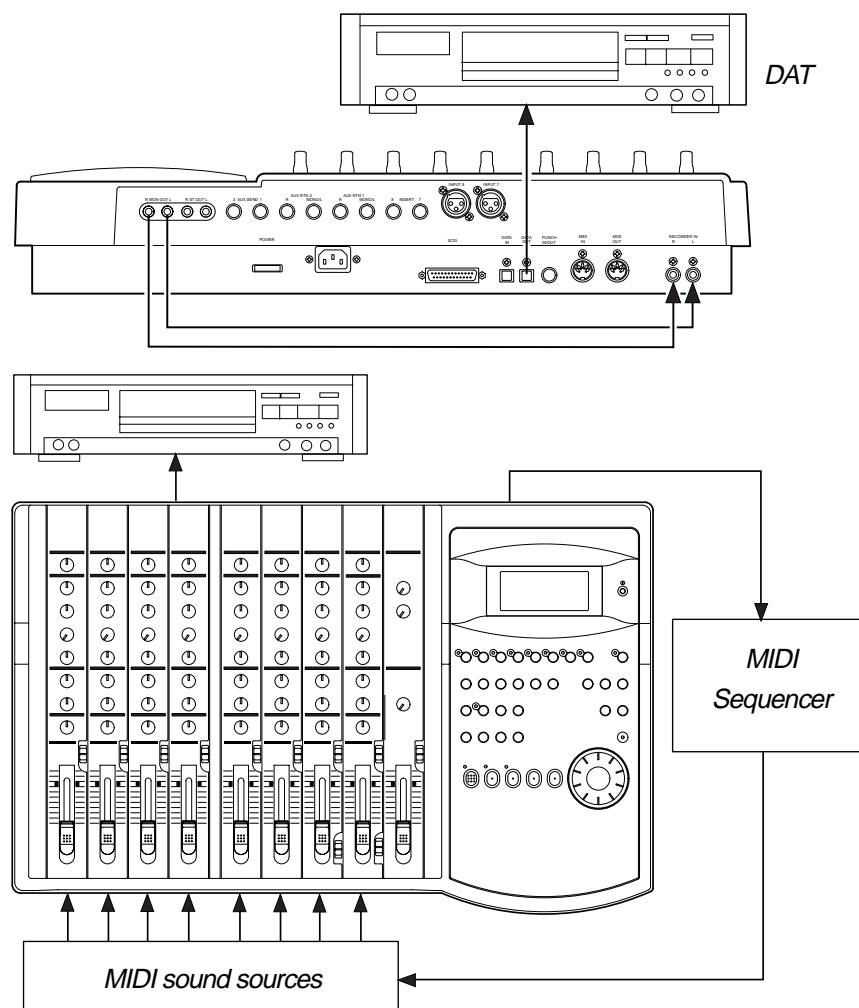
How to use the RECORDER IN jack

The following explains the various functions of the RECORDER IN jack. There are two ways to use the RECORDER IN jack.

1. Synchronizing an external MIDI sound source with the performances recorded on tracks 1 ~ 8 and digitally mixing down a maximum of sixteen channels of sound sources.
2. Directly recording external sound sources without routing them through a mixer.

Sixteen channels of digital mixdown

In this method, the RECORDER IN (L, R) jacks of the FD-8 are directly connected to the MON OUT (L, R) jacks and the monitor SELECTOR switched to [L/R+MON]. Then, the monitor bus L, R signal and the stereo bus L, R signals are both simultaneously output from MON OUT L, R and input to RECORDER IN L, R. As shown in the drawing below, an external MIDI sound source is input to INPUT jacks 1~8, and then each channel INPUT fader is raised, and performances recorded on tracks 1~8 are applied to each channel MON mix section, and played back using MIDI sync of both performances. With this method, a maximum of sixteen channels (Tracks 1~8 and MIDI sound) of sound sources are mixed and sent to the RECORDER IN L, R from MON OUT L, R, and digitally mixed down in an outboard digital device (DAT).



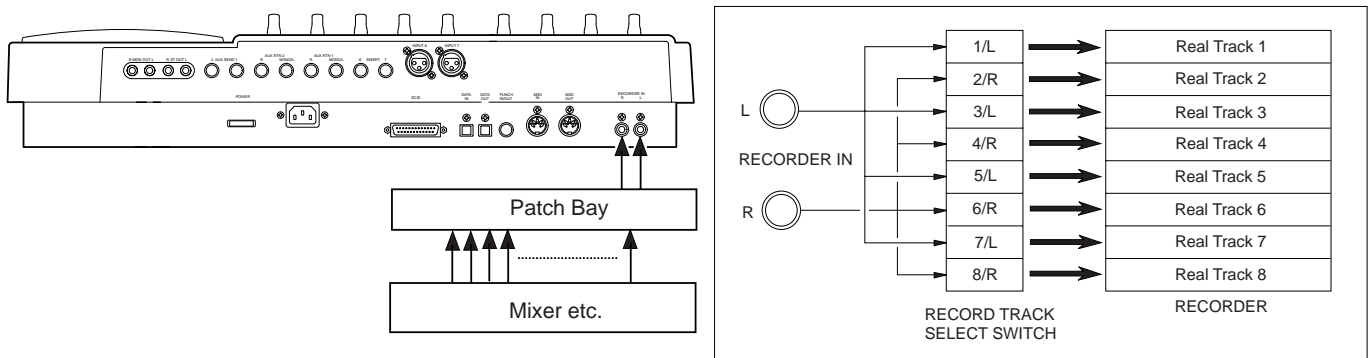
For details on digital mixdown by synchronizing with a MIDI sound source, please refer to "MIDI clock sync system" of "MIDI synchronization" on page 77.

Direct recording of an external sound source

Here, an external sound source is directly input to the RECORDER IN jack of the FD-8 and recorded in the recorder section without passing through a mixer.

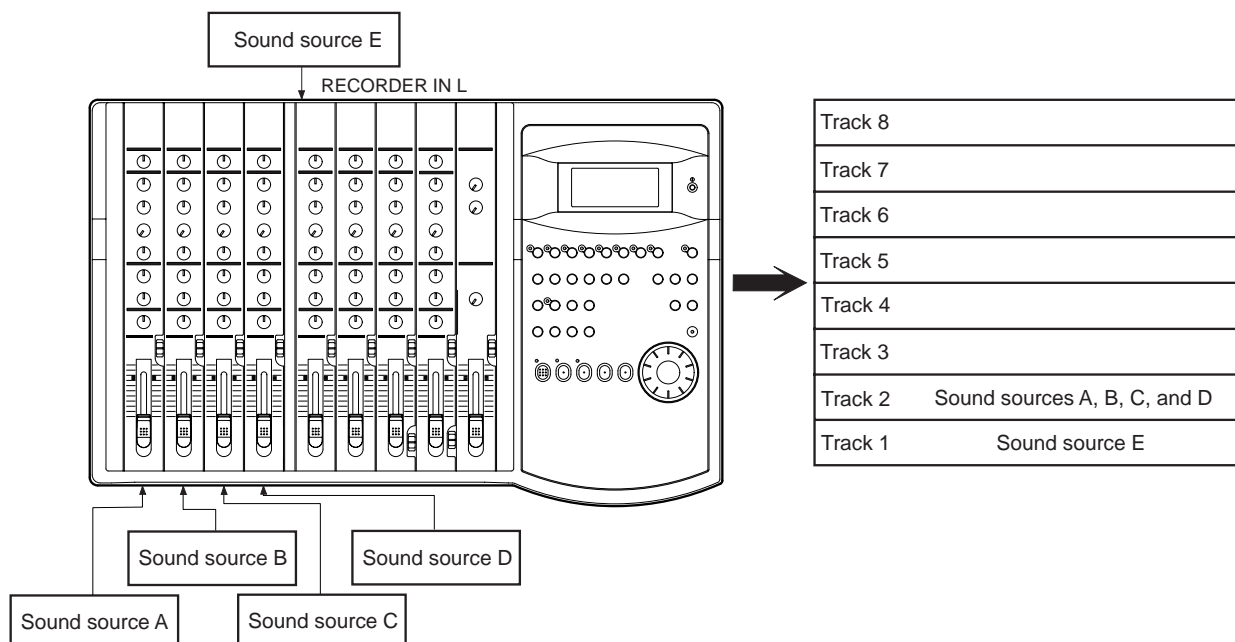
In this case, if an external input is connected to L and R of the RECORDER IN jack, it will not be possible to record through the mixer section.

In the illustration below, the signal input to L of RECORDER IN is sent to tracks 1, 3, 5, and 7, and the signal input to R of RECORDER IN is sent to tracks 2, 4, 6, and 8. Any two tracks are selected for recording. If the connection is made from the mixer group out, using a patch bay will facilitate connections from the front panel as shown in drawing below. The recording level is adjusted at the external equipment side and, by setting the monitor section SELECTOR to [MON] at the FD-8 side, sound can be monitored using the MON mix section of the channel corresponding to each track.



<More applications for using RECORDER IN>

If an external sound source is connected to both L and R of RECORDER IN, recording cannot be done via the INPUT fader. If only one jack (L or R) is connected, the track corresponding to the jack not connected can be recorded simultaneously via the INPUT fader. For example, if sound source E is connected to only L of RECORDER IN, another sound source applied via the INPUT fader can be recorded on any one of tracks, 2, 4, 6, or 8 corresponding to R of RECORDER IN to which nothing is connected. In other words, because the FD-8 can simultaneously record two tracks, a sound source from RECORDER IN can be recorded on one track and sound source routed via the INPUT fader can be simultaneously recorded on the other track.



Editing Tracks

The FD-8 features speedy, non-linear, non-destructive editing of independent audio tracks and uses a Zip, EZ, MO disk or fixed hard disk as the recording media. The following edit functions enable you to edit tracks. Press the EDIT key on the control panel to access the edit menu.

<Edit functions>

Copy & Paste

You can copy a specific range of data from a specific track and paste it to the same or a different track.

Move & Paste

You can move a specific range of data from a specific track and paste it to the same or a different track.

Erase

You can erase a specific range of data from a specific track or from all tracks.

Track Exchange

You can swap data between tracks. Monaural track data can be swapped between Real tracks 1–8 and Additional tracks 9–24. Multiple-track data can be swapped between Real tracks 1–8 and Additional tracks 9–16, and Additional tracks 17-24 by eight-track unit.

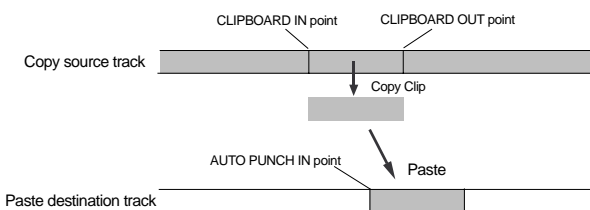
Note: These edit functions are available for the currently-selected Program. You can perform Copy & Paste, Move & Paste, and Erase operations (except for Track Exchange) for data recorded in the Real tracks. If the disk contains multiple Programs, you need to select the desired Program first to perform the track edit operation. Do not select another Program until you finish the edit operation. Otherwise, you may lose or incorrectly edit another Program.

Copy & Paste and Move & Paste

Copy & Paste and Move & Paste might seem like the same function. However, they are different, as shown in the diagram. Remember this difference when you start using these functions.

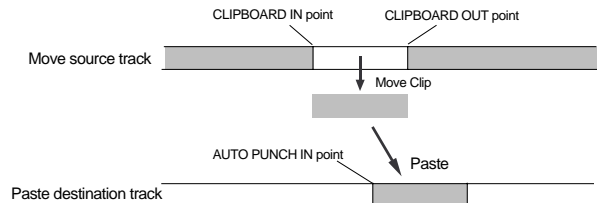
• Copy & Paste

Using the Copy & Paste function enables you to copy a specific range of data from a specific track to the clipboard as shown below (this is called [Copy Clip] operation on the FD-8), then paste the data at a specific point in a specific track. The number of copy source tracks and the number of destination tracks are the same. That is, if you copy mono track data, you can paste it to a mono track. If you copy adjacent odd/even tracks (e.g., track 1 and track 2), you can paste it to adjacent odd/even tracks. The data on the clipboard remains as it is. You can paste it as many times as you wish.



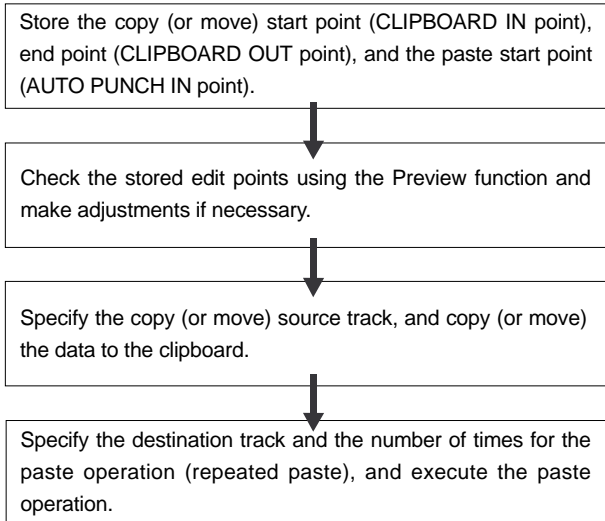
• Move & Paste

Move & Paste is almost the same as Copy & Paste. As shown in the figure, it allows you to move a specific range of data from a specific track to the clipboard (this is called [Move Clip] on the FD-8), and paste it to a destination track. The difference from Copy & Paste is that the data on the source track and the clipboard will be erased when you paste the data to the destination. That is, you cannot paste the moved data repeatedly.



As shown in the drawing, points for copy or move are called the CLIPBOARD IN point for the copy (or move) starting point, and CLIPBOARD OUT point for the ending point, and the paste starting point is called the AUTO PUNCH IN point.

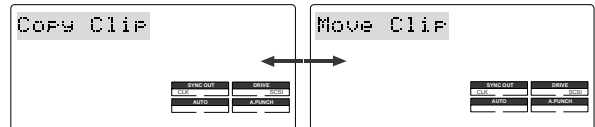
Follow the steps below to perform the Copy & Paste or Move & Paste operation.



Note: If you select non-adjacent tracks, such as tracks 1 and 3, or tracks 1, 2, and 4, the copied (or moved) data will be pasted back to the copy (or move) source tracks.

2. Press the EDIT key repeatedly until [Copy Clip (or [Move Clip])] flashes on the display.

Select [Copy Clip] to execute Copy & Paste.
Select [Move Clip] to execute Move & Paste.



3. Press the EXECUTE/YES key.

The copy or move operation will complete immediately. The display briefly indicates [COMPLETED !], then flashes the [Copy Paste] message (or the [Move Paste] message). The FD-8 enters standby mode for the paste operation. The LEDs of the selected RECORD TRACK select keys continue to flash.



This is indicated after copy/clip.



This is indicated after move/clip.

Note: Pressing the EXECUTE/YES key without selecting a track in Step 1 will cause the display to indicate an alarm message [Select TRK !]. Select a track, then press the EXECUTE/YES key.

Now the sound data to be pasted has been copied (or moved) to the clipboard, you can check the data on the clipboard by following the steps below. If there is no problem with the data, you can proceed to the paste operation.

Storing the edit points

1. Refer to the “Storing and editing the locate points to the memory keys” section for information on storing the copy (or move) start and end points, and the paste start point.

Store the copy (or move) start point to the CLIPBOARD IN key, the end point to the CLIPBOARD OUT key, and store the paste start point to the AUTO PUNCH IN key.

• See “Storing and editing the locate points to the memory keys” on page 66.

Checking and adjusting the edit points

After you store the edit points, you can check them on the display by pressing the corresponding keys. You may also adjust the points. This section explains how to preview and fine-tune the edit points using the Preview function.

1. While the recorder section is stopped, press and hold down the SHIFT key and press the memory key for which you wish to check the edit point.

You can preview “fade in” at the CLIPBOARD IN point, “fade out” at the CLIPBOARD OUT point, and “fade out” at AUTO PUNCH IN point.

2. Trim the edit point while previewing.

• Refer to “Preview Function” on page 74 for more information.

Executing Copy (or Move)

1. Press the RECORD TRACK select key of the copy (or move) source track to set it READY.

Select from mono tracks or adjacent odd-even tracks (1-2, 3-4, 5-6, 7-8).

Checking the clipboard data

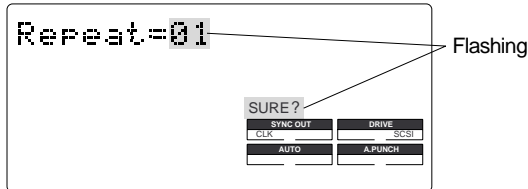
* Hold down the STOP button and press the PLAY button. The FD-8 indicates whether the sound data on the clipboard is a copied data or moved data ([Copy Clip] or [Move Clip]) and plays the data (this is called clipboard playback). The sound being played back can be heard if the MON knob of the channel corresponding to the copied (or moved) track, is rotated toward “TRK,” and the monitor section MASTER knob is raised. During playback, the RECORD TRACK LED of the copied (or moved) track will blink.

* Press the EDIT key again to get ready for the paste operation. [Copy Paste] or [Move Paste] flashes on the display.

Executing Paste

4. Press the EXECUTE/YES key again.

The display indication enables you to set the number of the paste operations. The number and [SURE ?] flash. At this time, the flashing RECORD TRACK select key LED becomes continuously lit.



5. Select a destination track to paste data.

All selected tracks' LEDs light up. You can select only mono tracks as the destination of a copied or moved mono track. If you copied or moved adjacent odd-even tracks, you can select only adjacent odd-even tracks as the destination. If you do not select any tracks, the data will be pasted back to the copy or move source track.

6. Turn the JOG dial to enter the number of repeats (Repeat=**).

You can enter up to 99. However, this is automatically limited by the available recording space on the disk. That is, if the disk has enough free space, you can set up to 99 repeats. If the disk has only a small amount of free space, the JOG dial allows you to set a lower number of repeats.

7. Press the EXECUTE/YES key.

[Copy Paste] (or [Move Paste]) flashes and the duration of the pasted data appears as a negative number on the display. This number will count down as the paste operation proceeds.

When the paste operation is complete, the flashing [Copy Paste] (or [Move Paste]) lights up continuously, and [COMPLETED !] is displayed.

Note: If you try to execute the paste operation by pressing the EXECUTE/YES key when the disk has insufficient free space, [Over !] appears on the display and edit mode is cancelled. In this case, you need to delete unnecessary data or Programs. Refer to the following section, "Erase," and to "Deleting a Program" on page 35 for more information on erasing.

8. Press the STOP button or the EXIT/NO key.

The FD-8 exits edit mode and displays the previous Time Base indication.

9. Turn off the RECORD TRACK select key of the copy (or move) source track.

Undo/Redo Paste

You can undo or redo a Copy & Paste and Move & Paste operation.

- To restore the data that existed prior to the paste operation, press the UNDO/REDO key.
- To restore the pasted data after you undo the paste operation, press the UNDO/REDO key again.

Note: The Undo/Redo function is effective only when the FD-8 is stopped.

Note: If you perform one of the following operations after you use the Copy & Paste or Move and Paste operation, the Undo/Redo function will no longer be effective.

1. When a new recording is made.
2. When a new editing is executed (such as Copy & Paste, Move & Paste, Erase).
3. While in the AUTO PUNCH ON mode, when the AUTO PUNCH IN point is passed in the PLAY (or RECORD) mode.
4. When the power is momentarily switched off.
5. When the program is changed.
6. When the disk is ejected.

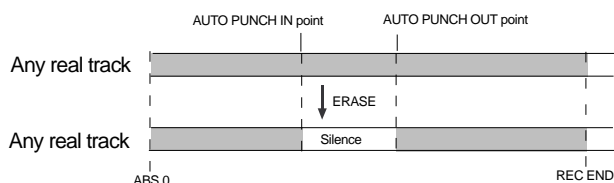
Erase

There are two methods for erasing data. Understand the difference between these methods before you use the Erase function.

* If multiple Programs are set on the disk, first select the desired Program. Do not select another Program until you finish the erase operation.

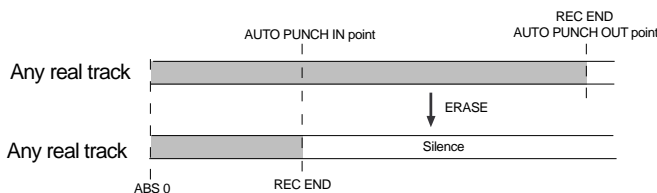
• Erasing a specified part of the data between ABS 0 and REC END

You may erase a specified part of the data between ABS 0 and REC END (the end point of the recording) in the currently-selected Program. (The erased part is replaced with silence.) You can erase data on a mono real track or multiple real tracks. To erase data on an additional track, you need to move the data to a real track, then erase it. As shown below, the REC END point (the end point of recording) is not affected. The erased area is replaced with silence. As a result, the REMAIN time and space will increase. (You will have more recordable space on the disk.)

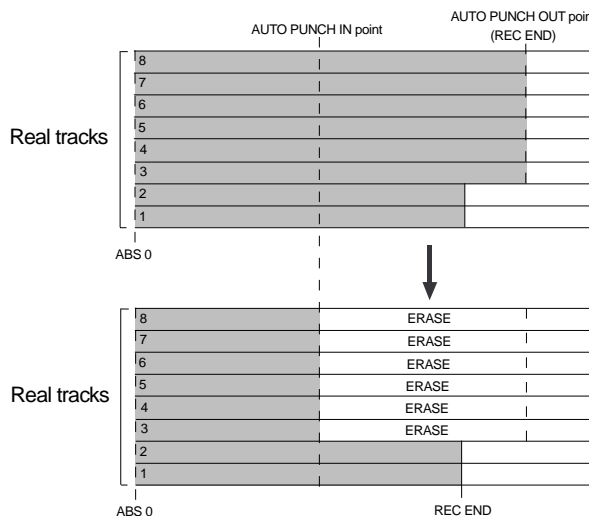
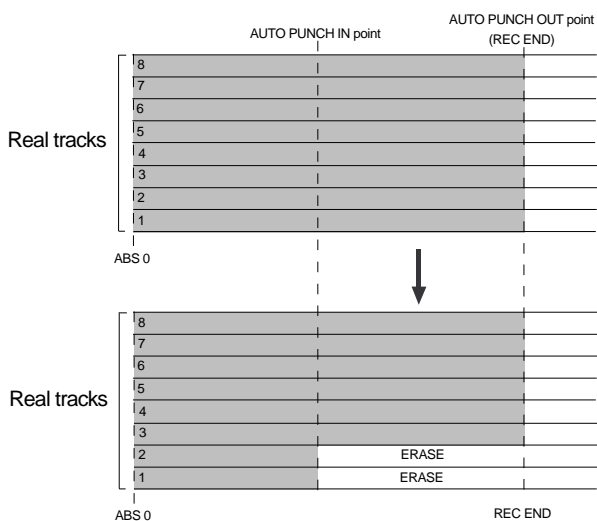


• Erasing data from a specified point to REC END

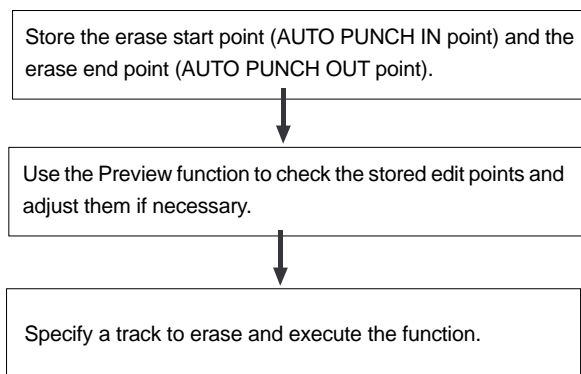
You may erase all data in the range from a specified point to REC END in the currently-selected Program. You can erase data on a mono real track or multiple real tracks. To erase data on an additional track, you need to move the data to a real track, then erase it. When you erase all tracks' data, the REC END point will move backward. However, if you erase data on a mono track or multiple tracks (but not all tracks), the REC END point may not be affected. (Refer to the note below.) After the erase operation, the REMAIN time and space will increase.



Note: If all real tracks contain data as shown below, erasing data on tracks 1 and 2 will not affect the position of REC END. On the other hand, if all Real tracks contain data as shown below, erasing data on tracks 3 - 8 will move up REC END to the end point of tracks 1 and 2.



Follow the steps below to erase data:



Storing the edit points

1. Refer to the “Storing and editing the locate points to the memory keys” section for information on storing the erase start and end points.

Store the erase start point to the AUTO PUNCH IN key, and the end point to the AUTO PUNCH OUT key.

- If you wish to erase the data from a specific point, store the REC END or later point as the erase end point. Refer to the <Note> for information on storing the REC END point.
- See “Storing and editing the locate points to the memory keys” on page 66.

Checking and adjusting the edit points

After you store the edit points, you can check them on the display by pressing the corresponding keys. You may also adjust the points.

1. While the recorder section is stopped, press and hold down the SHIFT key and press the memory key for which you wish to check the edit point.

You can preview “fade-out” at the AUTO PUNCH IN point and “fade-in” at AUTO PUNCH OUT point.

2. Trim the edit point while previewing.

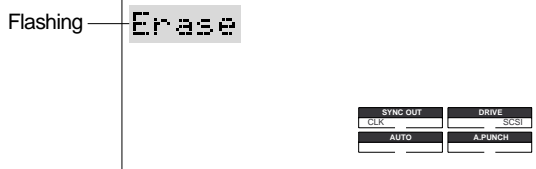
- Refer to “Preview Function” on page 74 for more information.

Executing Erase

1. Press the RECORD TRACK select key of the track to erase to set it READY.

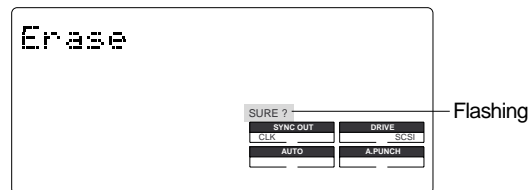
You can select a mono track, multiple tracks, or all tracks.

2. Press the EDIT key repeatedly until [Erase] flashes on the display.



3. Press the EXECUTE/YES key.

The flashing [Erase] message lights up steadily, and [SURE ?] flashes.



- To cancel the erase operation, press the STOP button or the EXIT/NO key while [SURE ?] flashes on the display.

4. Press the EXECUTE/YES key again.

The FD-8 starts erasing the data and [Erase] flashes. When the erase operation is completed, [COMPLETED !] lights up.

5. Press the STOP button or the EXIT/NO key.

The FD-8 exits edit mode and displays the previous Time Base indication.

- To erase the data in its entirety from the tracks, you can also use the Program Delete function to erase the entire Program. In either case, you can expand the recordable area on the disk. Use either one of the erase operations to erase unnecessary data if the FD-8 displays an alarm message indicating insufficient recordable space for Auto Punch In/Out, Copy & Paste, or Move & Paste.
- Refer to “Deleting a Program” on page 35 for more information on the Program Delete function.

Undo/Redo Erase

You can undo or redo the Erase operation.

- To restore the data that existed before you erased it, press the UNDO/REDO key.
 - To restore the data after you undo the Erase operation, press the UNDO/REDO key again.
- When you press the UNDO/REDO key, the FD-8 will undo or redo the operation immediately, and display [Undo!] or [Redo !] and [COMPLETED !].

Note: The Undo/Redo function is effective only when the FD-8 is stopped.

Note: If you perform one of the following operations after you use the Copy & Paste or Move and Paste operation, the Undo/Redo function will no longer be effective.

1. When a new recording is made.
2. When a new editing is executed (such as Copy & Paste, Move & Paste, Erase).
3. While in the AUTO PUNCH ON mode, when the AUTO PUNCH IN point is passed in the PLAY (or RECORD) mode.
4. When the power is momentarily switched off.
5. When the program is changed.
6. When the disk is ejected.

Track Exchange

The Track Exchange function enables you to swap mono track data or multiple track data of the current Program between Real tracks and Additional tracks in units of single or multiple tracks.

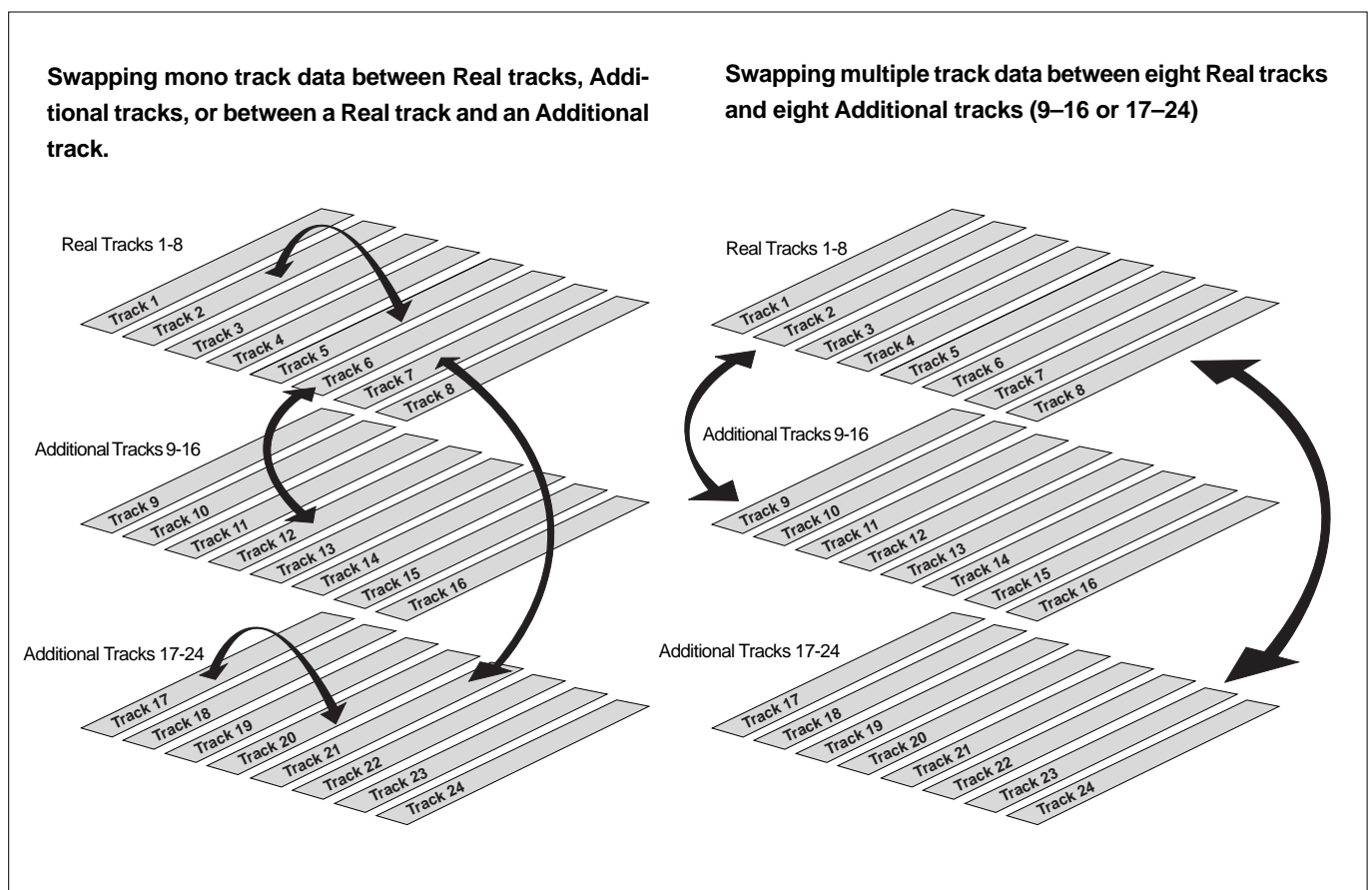
You can swap mono track data between Real tracks, Additional tracks, or between a Real track and an Additional track. You can swap multiple track data between eight Real tracks (1–8) and Additional tracks (9–16 or 17–24).

Refer to the diagrams below for information on how data on the tracks can be moved using this function.

The Track Exchange function also enables you to move Real track data to an empty Additional track (to empty the original Real track) so that you can use the Real track for a new recording. This capability lets you use tracks more flexibly.

You need to move data on an Additional track back to a Real track to audition the data, since data on an Additional track cannot be played in real-time.

You can also use this function when you wish to check the REC END point of an Additional track, as described in the “Erase” section.



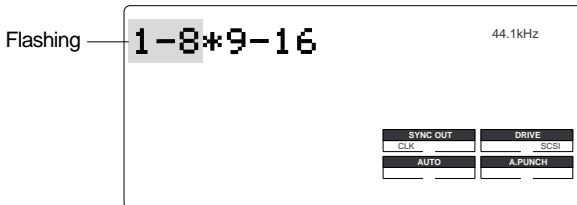
Executing Track Exchange

1. While the FD-8 is stopped, press the EDIT key repeatedly until [TRK Exchg] flashes on the display. Alternatively, you can press the EDIT key, then use the JOG dial.



2. Press the EXECUTE/YES key.

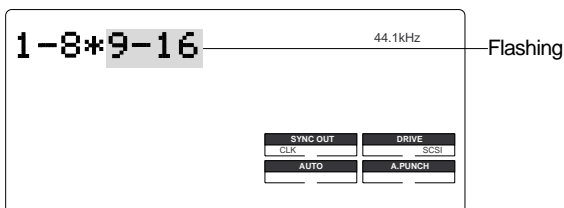
The display shows the track selection. The current display shows that you can swap eight-track data between Real tracks 1-8 and Additional tracks 9-16. If you wish to select other tracks, follow the steps below.



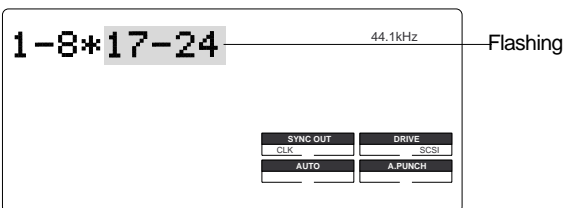
3. Select the tracks to swap data.

- Selecting Real tracks 1-8 and Additional tracks 17-24:

1. Press the HOLD/> key, the REWIND button, or the F FWD button to move a flashing cursor on [1-8] (left) to [9-16](right).



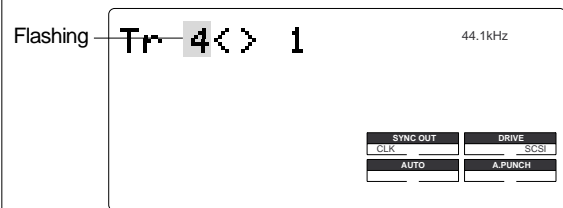
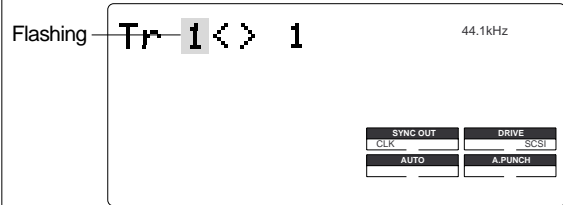
2. Turn the JOG dial to change flashing [9-16] to flashing [17-24].



- Swapping mono track data between any two tracks

1. When [1-8] is flashing, turn the JOG dial.

Turning the JOG dial allows you to select a mono track from [1], [2], [3], [4]..... [24] in the left column. The right column continues a mono track. For example, if you select [4] in the left column, the display indicates [4<>1], meaning you can swap data between tracks 4 and 1.



2. To select a number in the right column, press the HOLD/> key, the REWIND button, or the F FWD button to move the flashing cursor to the right column, then use the JOG dial to select the desired number.

* When you swap data between mono tracks, the indications [4<>1] and [1<>4], for example, mean the same thing — swapping data between tracks 1 and 4.

Note: If you select the same tracks for swapping mono track data, the setting is ignored. The FD-8 will indicate [Select Err] for a short moment, then return to the previous display.

4. Press the EXECUTE/YES key.

[Exchange] lights up and the swapping operation is completed immediately. The FD-8 indicates [COMPLETED !], then returns to the previous Time Base display.

* You cannot play data or check the REC END point on the Additional tracks. To do so, you need to move the data to a Real track.

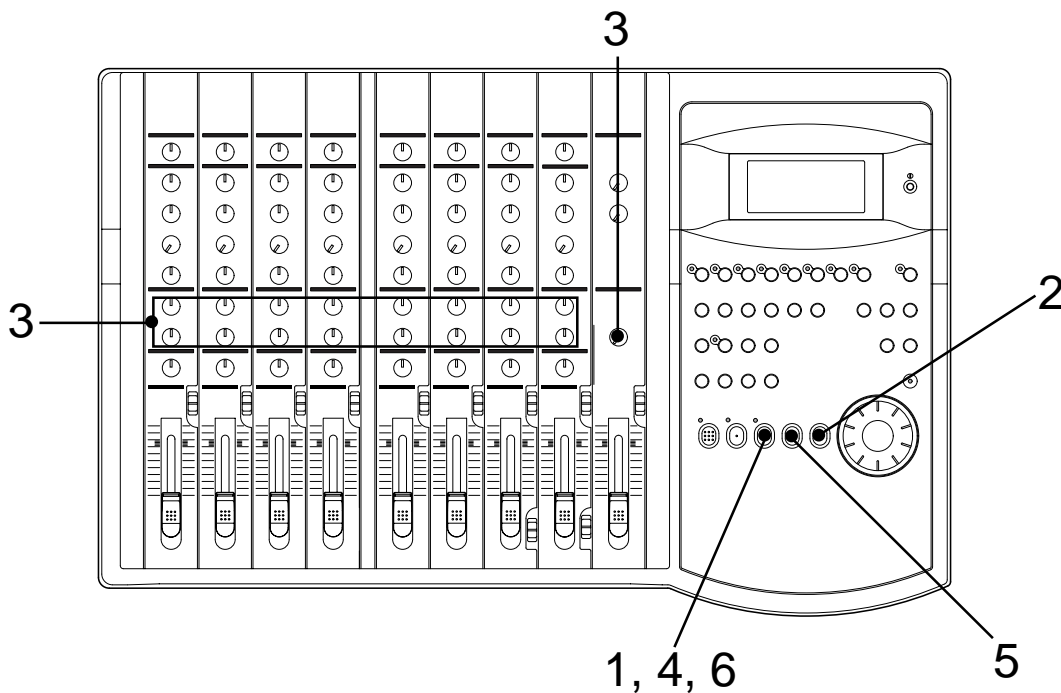
If you load back-up data from the external DAT recorder, adat machine, or backup SCSI drive, the data maintains the same condition as when you previously saved it to DAT, adat, or backup SCSI drive.

Cue & Review Function

This chapter explains how to use the “Cue & Review function” with the REWIND button, the F FWD button, and the JOG/SHUTTLE feature, and also explains digital Scrubbing with the scrub mode function. Using this function enables you to fast forward or rewind at different speeds while the recorder section is playing or stopped. During a cue and review operation, you will hear the sound recorded on the disk, which makes it easy for you to locate the desired point.

Cue & Review function using the REWIND and F FWD buttons

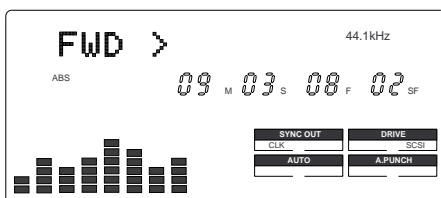
You may cue & review the audio data at three-times speed while the recorder is playing.



1. Press the PLAY button to play the audio data.

2. Press the F FWD button during playback.

[FWD>] appears on the display, and the FD-8 cues in the forward direction at three-times speed.

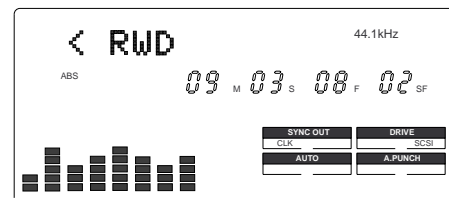


3. To adjust the monitor sound, use the corresponding channel MON mix section.

4. Press the PLAY button again to restore the original play back speed.

5. Press the REWIND button instead of the F FWD button.

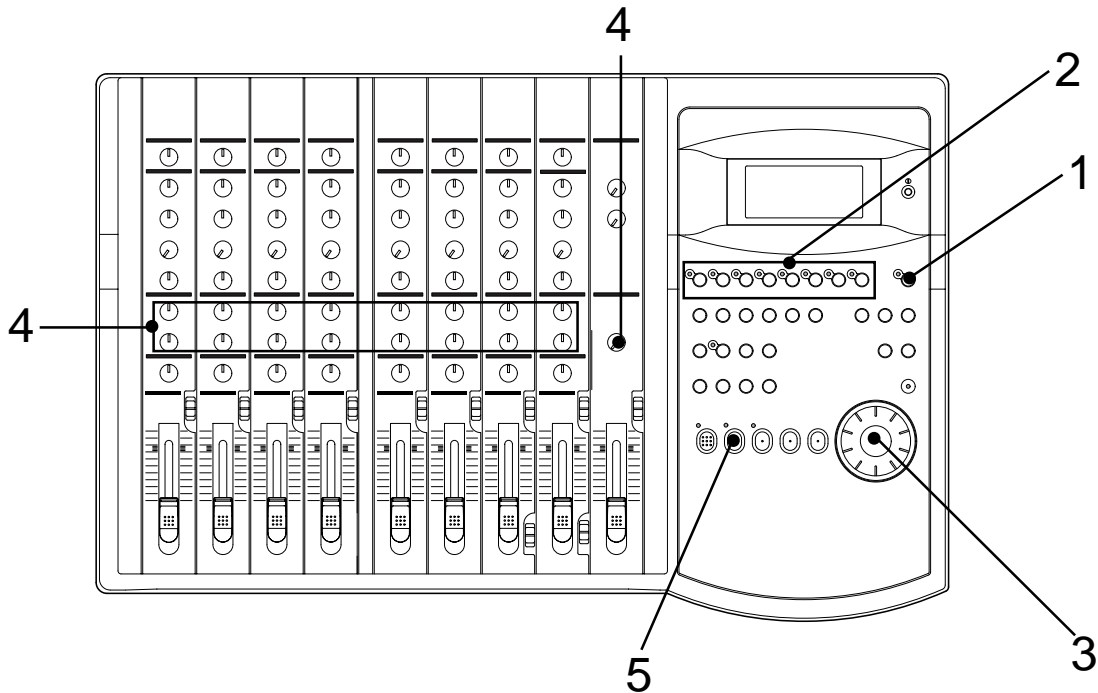
[<RWD] appears on the display, and the FD-8 cues in the reverse direction at three-times speed.



6. Press the PLAY button to restore the original playback speed.

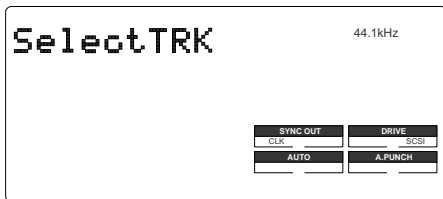
Digital scrubbing using SCRUB mode

You may perform digital scrubbing while the recorder section is stopped.



1. Press the SCRUB key while the recorder section is stopped.

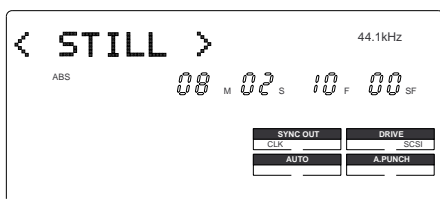
The SCRUB key's LED lights up. The FD-8 enters Scrub mode and displays [Select TRK], instructing you to select the desired track.



Note: You can select one track at a time. If you try to select two or more RECORD TRACK select keys, the FD-8 will ignore your operation.

2. Press the desired RECORD TRACK select key to select a track for digital scrubbing.

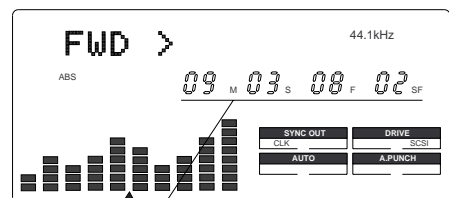
The screen changes, indicating that the recorder is in "STILL" status (Scrub mode is "still"). (The selected RECORD RACK key's LED flashes.)



3. Turn the JOG dial to perform digital scrubbing.

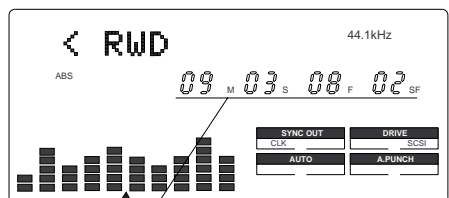
The envelope of data recorded on the selected track appears during digital scrubbing.

<Turning the JOG dial in the forward direction>



playback point

<Turning the JOG dial in the reverse direction>



playback point

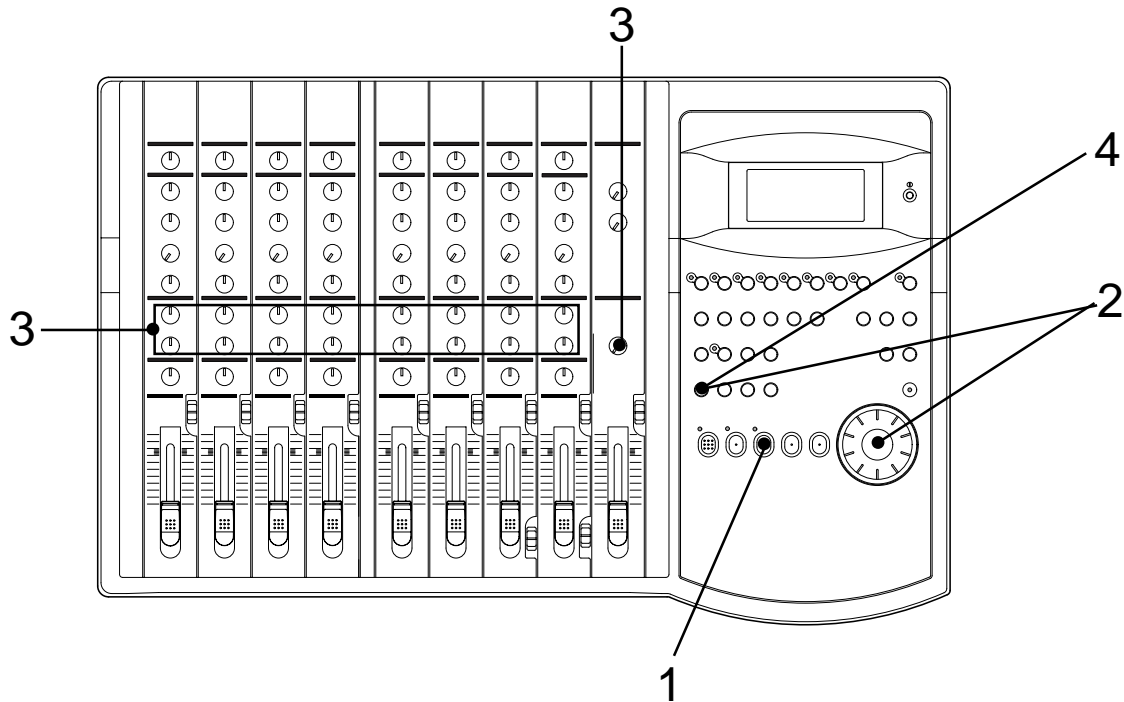
4. To adjust the monitor sound, use the corresponding channel MON mix section.

5. Press the STOP button to cancel digital scrubbing.

Scrub mode is cancelled, and the SCRUB LED and the RECORD TRACK LED turn off.

Cue & Review function using the SHUTTLE feature

You may cue and review data at a speed from normal to 64-times speed, using the SHUTTLE feature while the recorder is playing.



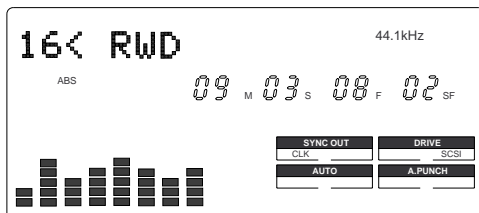
1. Press the PLAY button to start playback.

2. Hold down the SHIFT key and turn the JOG dial clockwise or counter-clockwise.

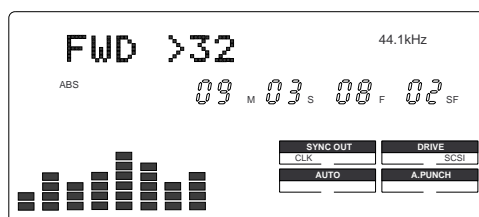
Turning the JOG dial clockwise will change the cueing speed. Turning the JOG dial counter-clockwise will change the reviewing speed.

The FD-8 displays the selected cue or review speed, which you can select from normal, two-times, four-times, eight-times, 16-times, 32-times, and 64-times speed.

As long as you are holding down the SHIFT key, playback continues at the selected speed.



<Display of 16-times review>



<Display of 32-times cue>

3. To adjust the monitor sound, use the corresponding channel MON mix section.

4. Release the SHIFT key to cancel the cue and review operation.

The recorder resumes playback at the original speed.

Note: The cue and review operation does not affect pitch. Because the FD-8 performs this function by skipping part of data during playback.

Note: When the beginning of the disk is reached during the review operation, the FD-8 starts normal playback, even if you are still holding down the SHIFT key. When the end of the disk (ABS time: 23H 59M 59S) is reached during the cue operation, the FD-8 stops and the PLAY button LED flashes.

Storing a Locate Point (Edit Point)

You can store time information (time or bar/beat/clock) in each memory key. The stored time information will be used to locate a point in data in the recorder section, or as an edit point to perform the Auto Punch In/Out, Copy & Paste, Move & Paste, or Erase function. This chapter describes how to store data in the memory keys and edit the stored data. Data stored in the memory keys is used in the following operations:

AUTO PUNCH IN key	<ul style="list-style-type: none"> * Locating the AUTO PUNCH IN point. * Recording start point for the Auto Punch In/Out operation. * Paste start point for the Copy & Paste or Move & Paste operation. * Erase start point for the Erase operation.
AUTO PUNCH OUT key	<ul style="list-style-type: none"> * Locating the AUTO PUNCH OUT point. * Recording end point for the Auto Punch In/Out operation. * Erase end point for the Erase operation.
CLIPBOARD IN key	<ul style="list-style-type: none"> * Locating the CLIPBOARD IN point. * Copy start point for copying or moving data to the clipboard during the Copy & Paste or Move & Paste operation.
CLIPBOARD OUT key	<ul style="list-style-type: none"> * Locating the CLIPBOARD OUT point. * Copy end point for copying or moving data to the clipboard during the Copy & Paste or Move & Paste operation.
AUTO RTN START key	<ul style="list-style-type: none"> * Locating the AUTO RTN START point. * Locate end point from AUTO RTN END in Auto Return or Auto Repeat modes.
AUTO RTN END key	<ul style="list-style-type: none"> * Locating the AUTO RTN END point. * Locate start point to AUTO RTN START in Auto Return or Auto Repeat modes.

<Note on storing the locate point>

When you set the IN/OUT points for Auto Punch In/Out, IN/OUT points for Copy & Clip/Move & Clip, and START/END points for Auto Return/Auto Repeat, make sure that IN points precede the OUT points and START points precede the END points.

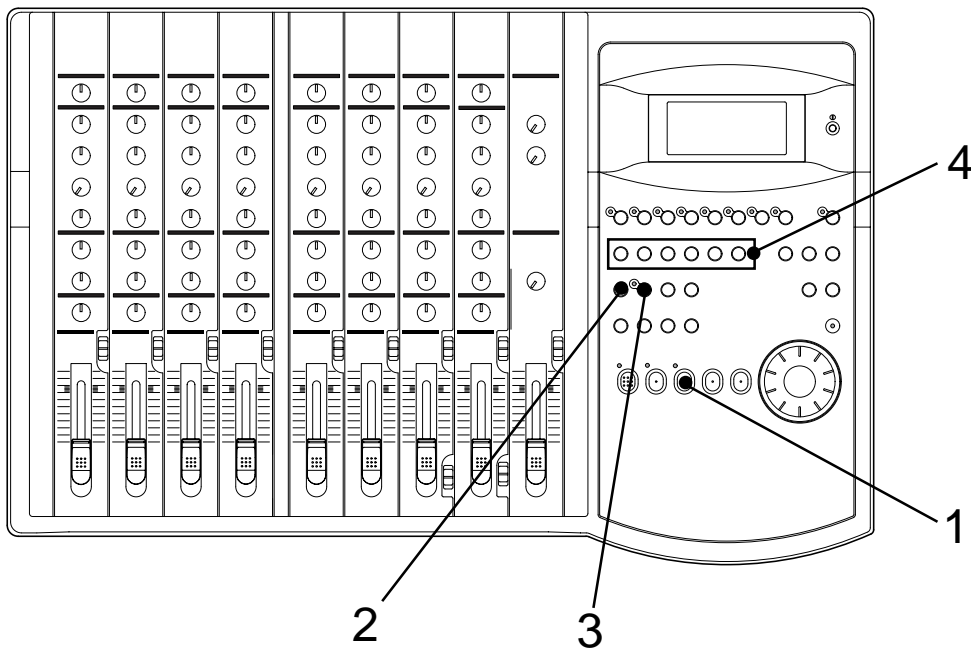
- You can store locate points for each Program. (You need to select a Program first.)
- The data can be also saved or loaded even after the Song data is saved or loaded.
- All locate points stored in the memory keys will be maintained after you turn off the FD-8. In addition to the memory keys, you can store data in the LOCATE key in real-time. The LOCATE key always stores the point most recently located by the FD-8. That is, data in the LOCATE key is overwritten by new data each time the FD-8 locates a point. You can also edit the data in the LOCATE key. Refer to the following pages for more information on how to edit data.

Storing and editing the locate points to the memory keys

- Select the desired Time Base using the TIME BASE SEL key if you wish to use a Time Base other than ABS.
- The stored or edited locate points are used only in the currently-selected Program.

Storing in real-time

You can store the locate point (in the ABS, MTC, or BAR/BEAT/CLK Time Base) in real-time while the FD-8 is playing.



1. Press the PLAY button to play back data.

2. When the point you wish to store is reached, press the HOLD/> key.

The time value or bar/beat/clock value of the point is captured. The FD-8 enters data edit mode.

3. Press the STORE key.

The STORE LED lights up.

4. Press the desired memory key.

The STORE LED turns off.

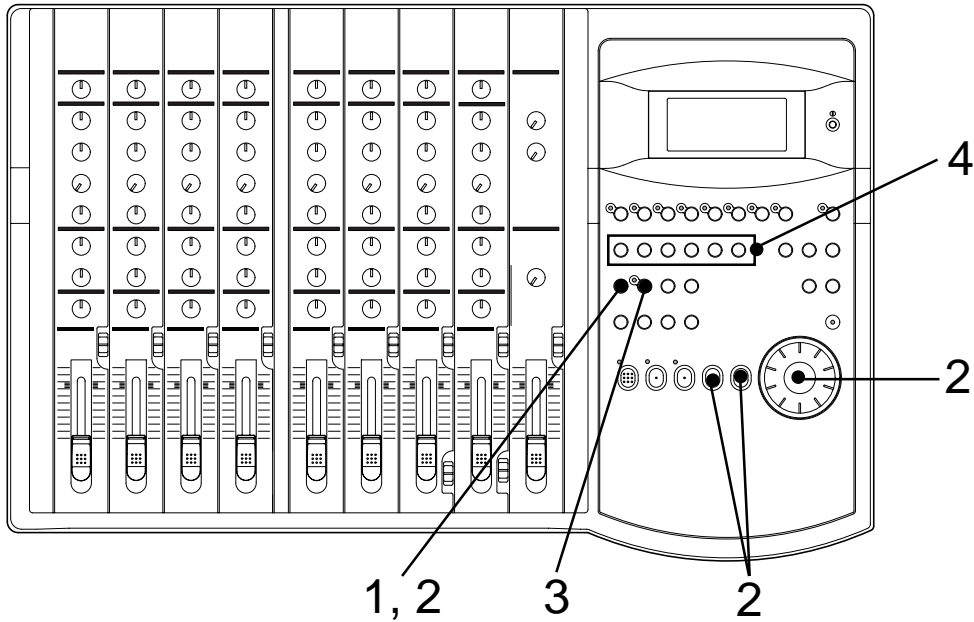
The captured time value (or bar/beat/clock value) is stored in the memory key. After the data is stored, the FD-8 displays the previous Time Base and continues playback.

- If you set "BAR/BEAT Resolution mode" in SETUP mode to ON, the FD-8 will round off the CLK value of the captured bar/beat/clock value. That is, the locate point will be at the beginning of the beat (00). Refer to page 111 for more information.

- You can omit Step 2 above to speed operation.

Editing and storing locate data

If you know the position of the desired locate point, follow the steps below.



1. Press the HOLD/> key while the FD-8 is stopped.

The currently-displayed time value (or bar/beat/clock value) is captured and the FD-8 enters data edit mode.

2. Press the HOLD/> key, REWIND button, or the F FWD button to move the flashing cursor on the time value digit, and use the JOG dial to increase or decrease the value.

3. Press the STORE key.

The STORE LED lights up.

4. Press the desired memory key.

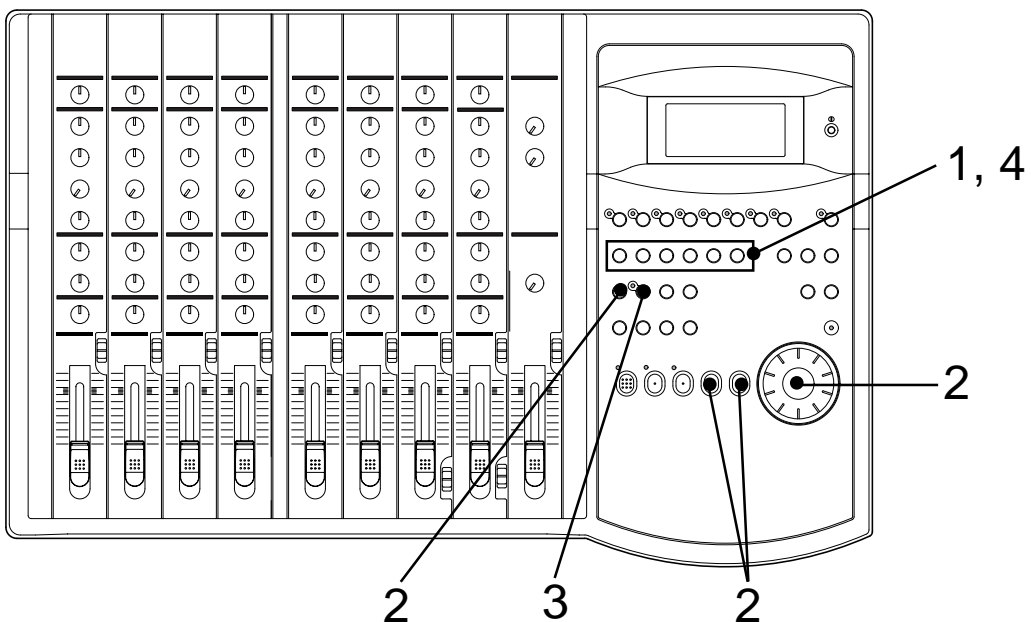
The STORE LED turns off.

The input time value (or bar/beat/clock value) is stored in the corresponding memory key.

- Press the STORE key instead of the HOLD/> key in Step 1 above and omit Step 3 to speed operation.

Editing and storing data

You can recall data stored in the memory key, edit it, and store it. again



1. While the FD-8 is stopped, press the memory key that stores the data you wish to edit.

The stored data appears on the display and the FD-8 enters data edit mode.

2. Press the HOLD/> key, REWIND button, or the F FWD button to move the flashing cursor to the time value digit, and use the JOG dial to increase or decrease the value.

3. Press the STORE key.

The STORE LED lights up.

4. Press the memory key that you pressed in Step 1 again.

The STORE LED will turn off. The edited data is stored, and the FD-8 displays the previous Time Base indication.

- You can store the edited data in a memory key other than the one you pressed when you recalled the data. For example, you can recall the AUTO PUNCH IN point data, edit it, and store it to the AUTO PUNCH OUT key.

- Refer to page 41 for more information on Auto Punch In/Out.

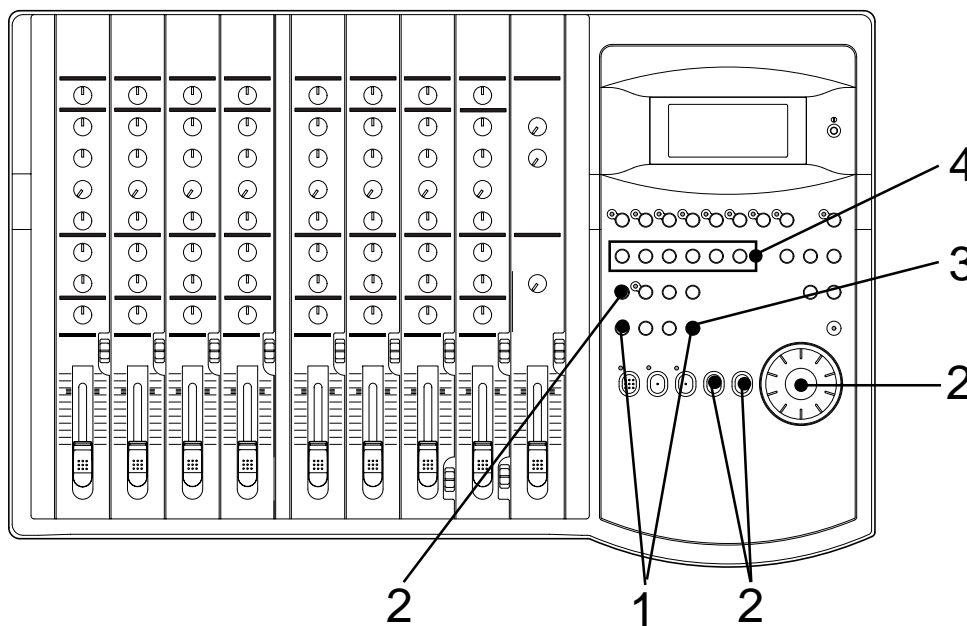
- Refer to pages 56 and 59 for more information on Copy & Paste, Move & Paste, and Erase.

- Refer to page 70 for more information on Auto Return and Auto Repeat.

- You can also use the Preview function to edit the stored locate points (edit points). Refer to "Preview Function" on page 74 for more information.

Editing the data stored in the LOCATE key

You can recall the last located point and edit the value. You can use the edited value to locate the point later or store it to another memory key.



1. Press the SHIFT and LOCATE keys simultaneously while the FD-8 is stopped.

The last located point stored in the LOCATE key appears on the display and the FD-8 enters data edit mode.

If no data is stored (that is, if the FD-8 has not located any point since the power was turned on), 00H 00M 00S 00F 00SF appears and "00" of the digits "00S" flashes.

2. Press the HOLD/> key, REWIND button, or the F FWD button to move the flashing cursor to the time value digit, and use the JOG dial to increase or decrease the number to the desired value.

3. To located the edited point, press the LOCATE key.

When you execute the Locate function, the locate point is stored as locate data in the LOCATE key.

4. To store the edited data to another memory key, input the desired value, press the STORE key, then press the desired memory key.

The data is stored to the corresponding memory key. The data stored in the LOCATE key will not change.

Note: You cannot preview the data stored in the LOCATE key, unlike other memory keys.

Locate Function

The FD-8 locates the desired edit point immediately (that is, it moves the current position of the data in the recorder section). Locate points include edit points (in ABS time, MTC time, or in bar/beat/clock) that are stored for the Copy, Move, Paste, Erase, and Auto Punch In/Out operations.

They also include the top of a Program (ABS 0), the recording end point in a Program (REC END), and a direct locate point for which you can specify the time.

You can also use the Auto functions, such as Auto Play, Auto Return, and Auto Repeat, with the Locate function.

Direct Locate

The Direct Locate function enables you to locate the following points:

- **Locate the beginning of the Program (LOCATE ABS 0)**

Press the REWIND button while holding down the STOP button. The FD-8 will immediately locate the beginning of the currently-selected Program.

- **Locate the recording end point of the Program (LOCATE REC END)**

Press the F FWD button while holding down the STOP button. The FD-8 will immediately locate the end point of the currently-selected Program.

- **Locate the position stored in one of the memory keys**

Press the desired memory key, then press the LOCATE key. The FD-8 will locate the point (edit point) stored in the corresponding memory key immediately.

- **Locate a specified point**

Refer to "Editing and storing locate data" in the chapter "Storing a Locate Point (Edit Point)" for information on how to edit the data and on pressing the LOCATE key instead of the STORE key. The point at specified time value (or bar/beat/clock value) will be located immediately.

- **Locate the last-located point**

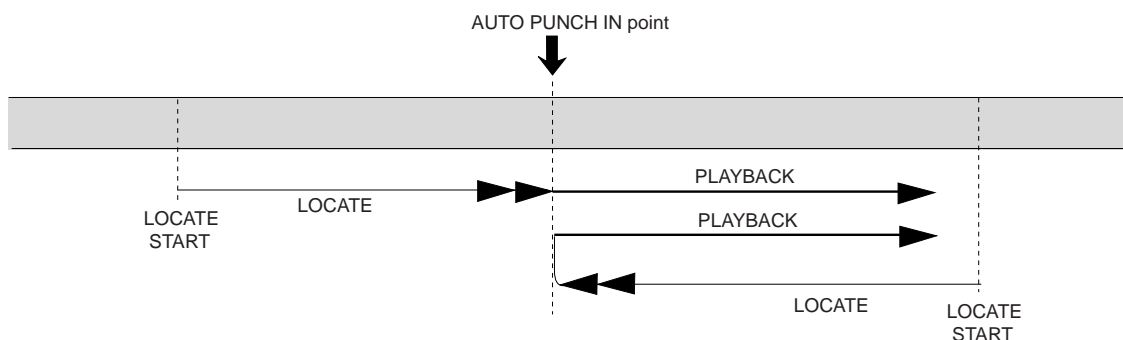
Press the LOCATE key. Since the LOCATE key always stores the last-located point (excluding LOCATE ABS 0 and LOCATE REC END), just press the LOCATE key to locate the last-located point again.

Auto Play

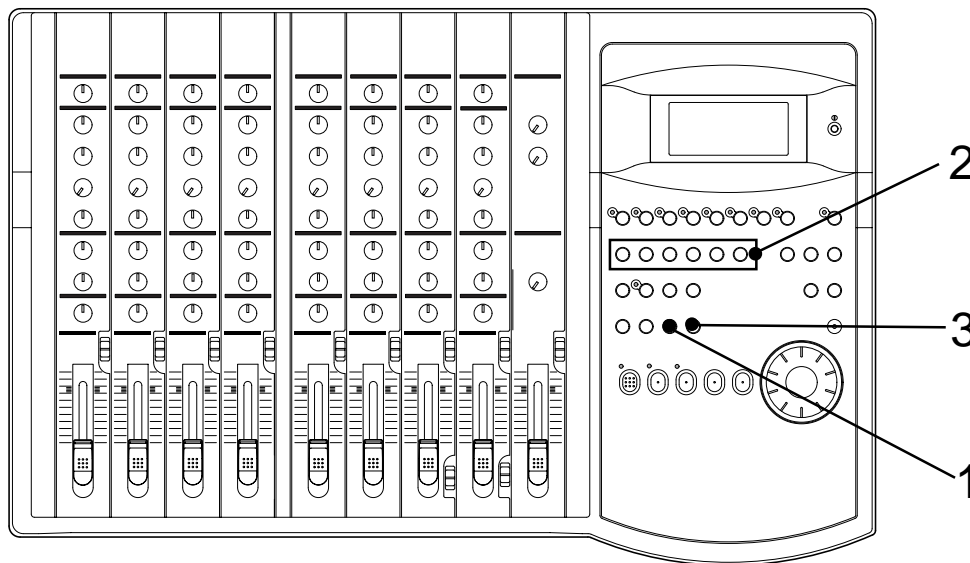
The Auto Play function allows the FD-8 to start play back automatically from the located point. AUTO PLAY mode should be turned on before you execute the Direct Locate function described above.

Note: This function is effective within 24 ABS hours. Therefore, if playback continues over the recording end point, the FD-8 will still continue counting the time. Also, when the FD-8 locates ABS REC END, it will continue counting the time from the recording end point. (However, the FD-8 does not access the disk after reaching the recording end point.)

<Example: Operation at locating to the AUTO PUNCH IN point.>



Executing the Auto Play function



1. Press the **AUTO RTN/AUTO PLAY** key to turn on the **[PLAY]** indicator on the bottom of the display.



2. Press the desired memory key.
3. Press the **LOCATE** key.

The FD-8 locates the point and plays as shown in the diagram.

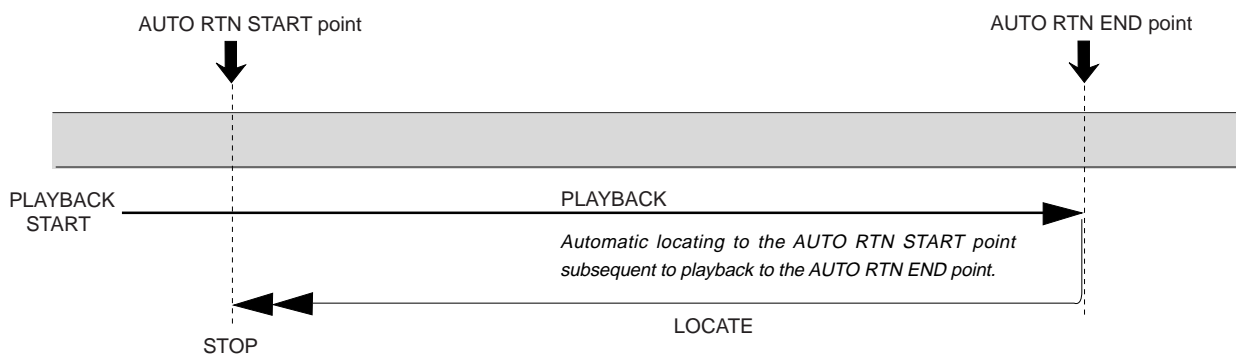
• You can set a preroll time in the [Preroll ?] menu in SETUP mode so that the FD-8 will start playback preroll time before the locate point.
 You can set the preroll time from 0 to 10 seconds. Refer to the chapter "Changing the Initial Settings (SETUP Mode)" on page 102.

Auto Return

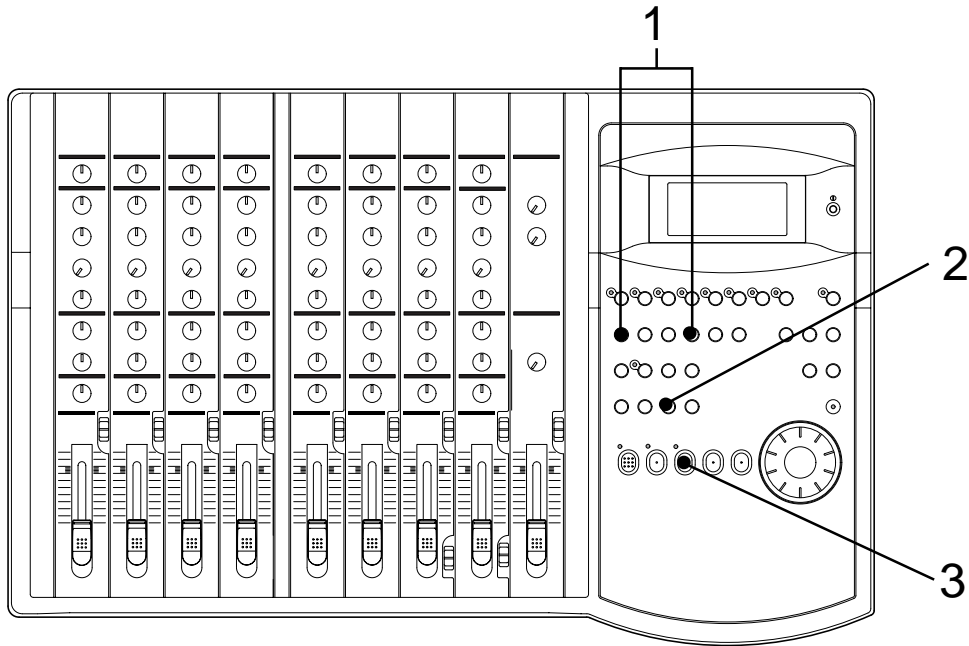
This function allows the FD-8 to play data up to the **AUTO RTN END** point, then automatically locate the **AUTO RTN START** point as shown in the diagram below.

To enable this function, **AUTO RTN** mode should be on and the **AUTO RTN START** point and **AUTO RTN END** point should already be set.

<Operation of the Auto Return mode.>



Executing the Auto Return function



1. Store the AUTO RTN START and AUTO RTN END points.

Refer to the chapter “Storing a Locate Point (Edit Point)” on page 66 for information on storing the desired points in the AUTO RTN START key and the AUTO RTN END key.

2. Press the AUTO RTN/AUTO PLAY key to turn on the [RTN] indicator at the bottom of the display.



3. Start playback a little before the AUTO RTN END point.

The FD-8 operates as shown in the diagram.

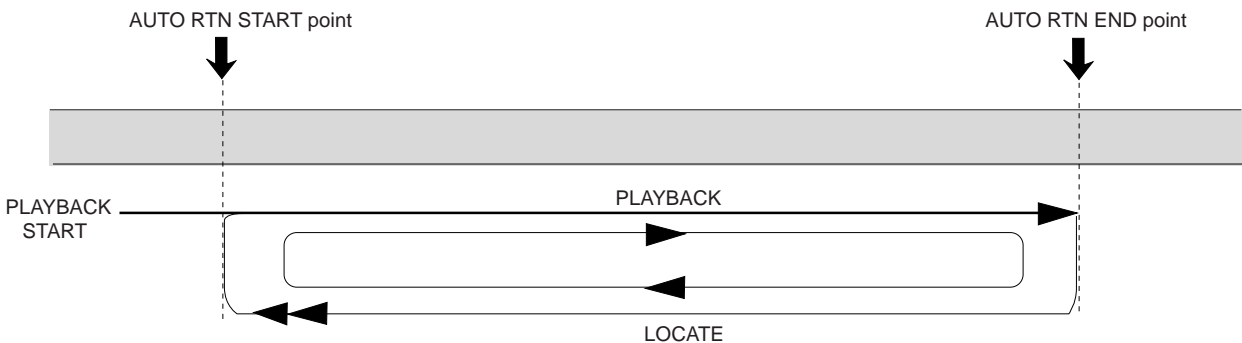
- You can set a preroll time in the [Preroll ?] menu in SETUP mode so that the FD-8 will start playback preroll time before the locate point. You can set the preroll time from 0 to 10 seconds. Refer to the chapter “Changing the Initial Settings (SETUP Mode)” on page 102.

Auto Repeat

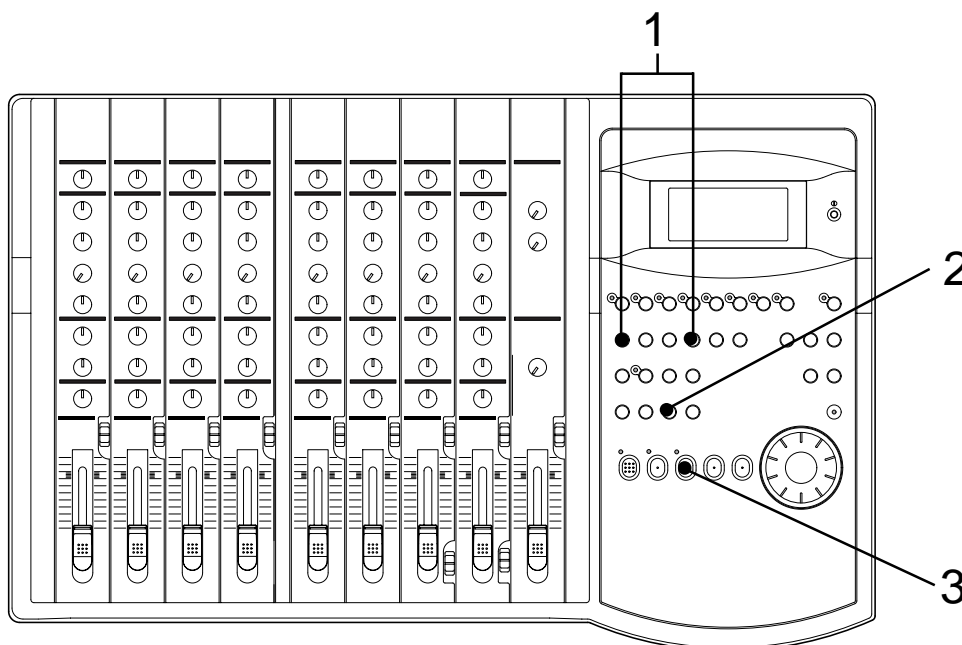
The Auto Repeat function allows the FD-8 to repeat playback up to the AUTO RTN END point, automatically locate the AUTO RTN START point, then play up to the AUTO RTN END point until you cancel the function by pressing the STOP button. To enable this function, both AUTO PLAY mode and AUTO RTN mode should be turned on, and the AUTO RTN START point and the AUTO RTN END point should already be set.

Using this function will facilitate the Auto Punch In/Out and Manual Punch In/Out rehearsal. See “Hint” after the following section.

<Operation of the Auto Repeat mode.>



Executing the Auto Repeat function



1. Store the AUTO RTN START and AUTO RTN END points.

Refer to the chapter “Storing a Locate Point (Edit Point)” on page 66 for information on storing the desired points in the AUTO RTN START key and the AUTO RTN END key.

2. Press the AUTO RTN/AUTO PLAY key to turn on the [PLAY RTN] indicator on the bottom of the display.



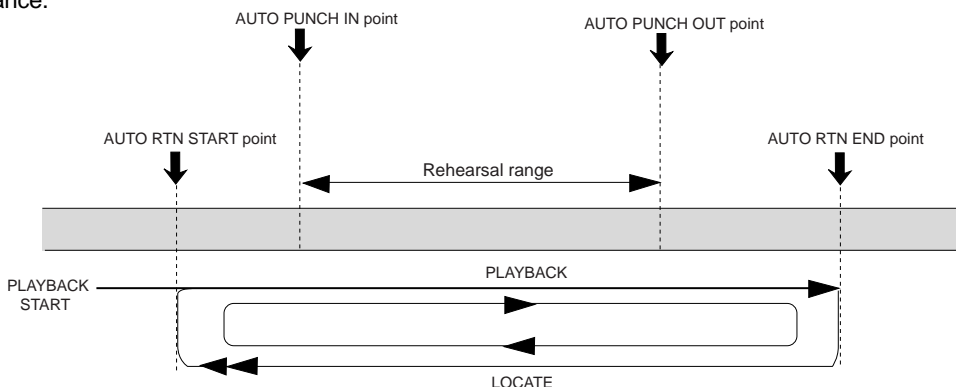
3. Start playback a little before the AUTO RTN START point.

The FD-8 operates as shown in the diagram, and stops at the AUTO RTN START point.

- You can set a preroll time in the [Preroll ?] menu in SETUP mode so that the FD-8 will start playback preroll time before the locate point. You can set the preroll time from 0 to 10 seconds. Refer to the chapter “Changing the Initial Settings (SETUP Mode)” on page 102.

<Hint>

You can make repeated Auto Punch In/Out rehearsal much easier and quicker by using the Auto Repeat function. Set the AUTO RTN START point prior to the AUTO PUNCH IN point, and set the AUTO RTN END point after the AUTO PUNCH OUT point. The recorder will repeat the operation automatically so you can concentrate on your rehearsal. Cancel Auto Repeat mode before you record a take. The FD-8 will play this range repeatedly for rehearsal, which makes it easy for you to check the recording level and practice your performance.



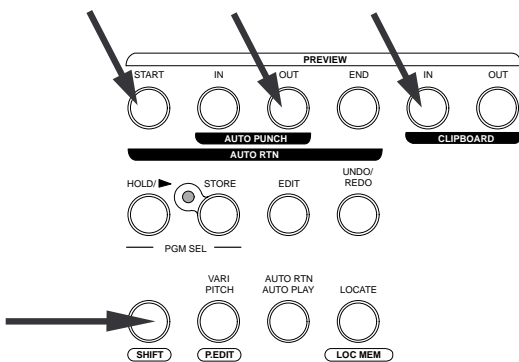
Preview Function

The preview function enables you to repeatedly audition the rise (fade in) or the fall (fade out) of the sound data at a locate point (edit point) that is stored in the AUTO PUNCH IN/OUT, AUTO RTN START/END, or CLIPBOARD IN/OUT key. This is also called “point rehearsal.”

With this function, you can check the locate points in real-time. You can also use this function to fine-tune the position of the locate points while previewing the sound. This function is effective only when the FD-8 is stopped.

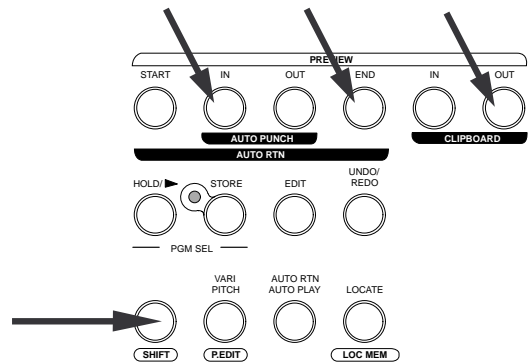
- **Previewing the rise of the sound (fade in)**

While holding down the SHIFT key, press the AUTO RTN START key, the AUTO PUNCH OUT key, or CLIPBOARD IN key.

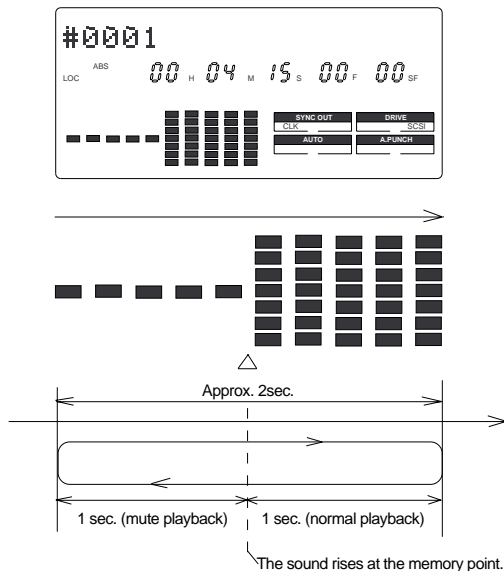


- **Previewing the fall of the sound (fade out)**

While holding down the SHIFT key, press the AUTO END START key, the AUTO PUNCH IN key, or the CLIPBOARD OUT key.

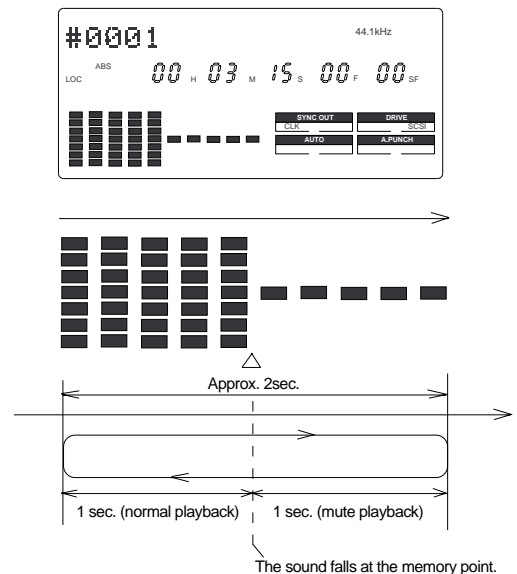


<Display indication during the Preview operation>



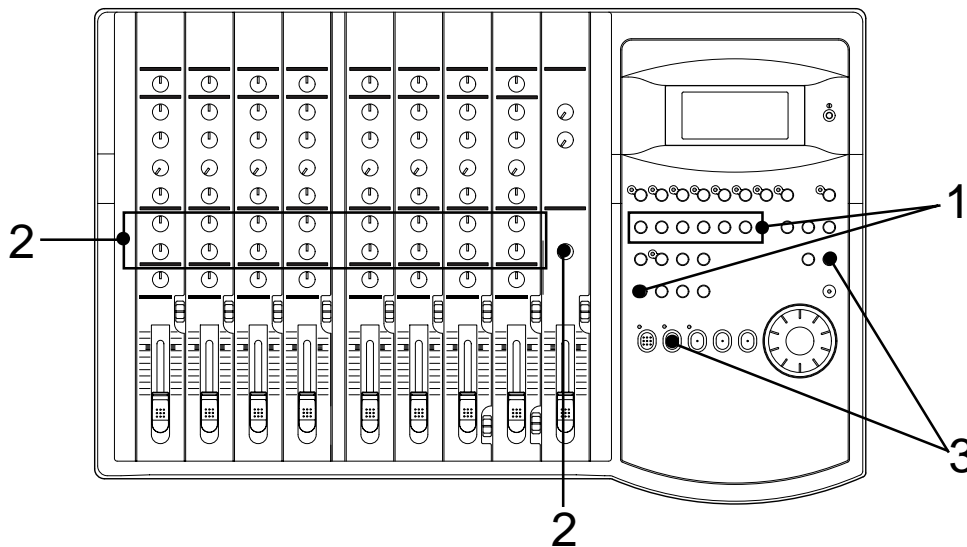
The FD-8 repeats playback the “rise sound” at the locate point (edit point). As shown in the diagram, one-second of data prior to the locate point is muted during playback. The mute is off (fade in) at the locate point and the sound is played back for one second. The FD-8 will repeat this operation until you quit the Preview function.

<Display indication during the Preview operation>



The FD-8 repeats playback of the “fall sound” at the locate point (edit point). As shown in the diagram, one-second of data prior to the locate point is played back, then muted (fade out) at the locate point. The muted playback continues for one second. The FD-8 will repeat this operation until you quit the Preview function.

Executing the Preview function



1. Press the desired memory key while holding down the SHIFT key when the FD-8 is stopped.

Pressing the desired memory key will enable you to preview the sound at the locate point (edit point) stored in the corresponding memory key.

Memory key	Operation
AUTO PUNCH IN key AUTO RTN END key CLIPBOARD OUT key	The FD-8 plays the fall (fade out) of the sound at the locate point stored in the keys.
AUTO PUNCH OUT key AUTO RTN START key CLIPBOARD IN key	The FD-8 plays the fall (fade in) of the sound at the locate point stored in the keys.

2. To adjust the monitor sound, use the corresponding channel MON mix section and MON MASTER knob.

Note: If data stored in each memory key is in the initial state, all memory keys will be in ABS time 00H 00M 00S. In other words, the program head value is in the memory. Should fade out preview be executed in this condition, the [Void Data!] message and memory data [00H 00M 00S] will alternately flash in the display as a warning. However, for fade in preview, this will function as the memory data [00H 00M 00S] point.

3. Press the STOP button or the EXIT/NO key.

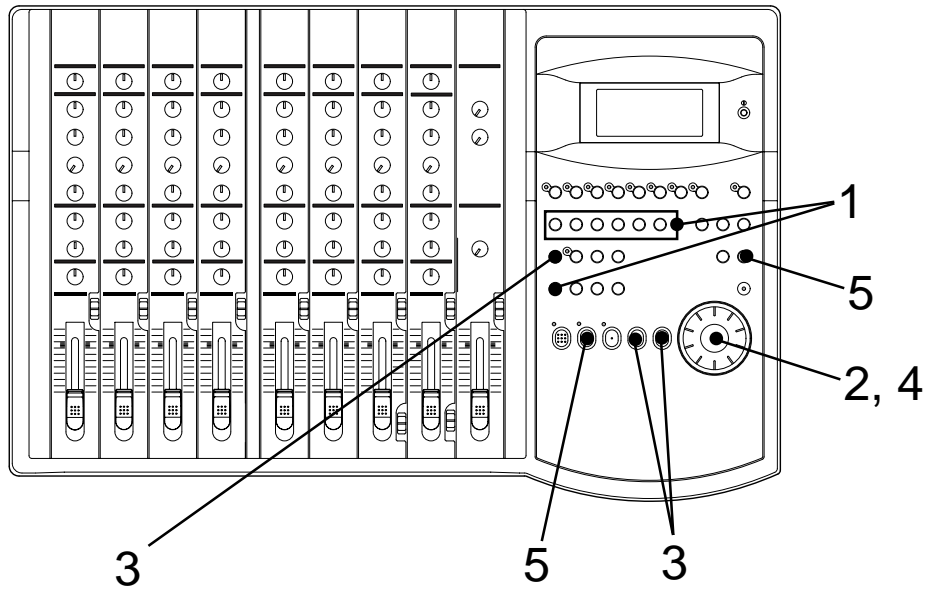
Trimming the sound while previewing

You can trim the position of the locate point (edit point) using the JOG dial while you preview the sound. At this time, you can also adjust the size of the trimming steps (the amount of offset controlled by the JOG dial). Trimming allows you to fine-tune the position of the locate point stored in the memory keys while previewing the sound.

Use this function to change the Auto Punch In/Out points, the start point of Copy & Paste and Move & Paste, and the start and end points of the Erase function.

<Notes>

- You can audition the result of trimming during the next preview. That is, if you trim the position while previewing the sound for the first time, you can check the result when you preview the sound next time.
- If the locate point is shifted outside the range of the preview playback as a result of trimming, [Void Data!] and the locate point indication appear alternately. In this case, you cannot use the Preview function. Trim the position again so that it will be within the playback range.
- When Auto Punch mode is turned on and you trim the Auto Punch In or Auto Punch Out point while previewing the sound with [Void Data!] indicated on the display, Auto Punch mode will be cancelled.



1. Start previewing the sound by following the steps described on the previous page.

2. Use the JOG dial to trim the position.

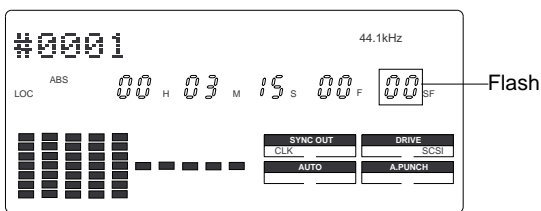
When previewing starts, the unit of JOG trimming flashes on the screen. For example, value of SF (sub-frame) flashes if ABS Time Base or MTC Time Base is selected. CLK (clock) flashes if BAR/BEAT/CLK is selected. The flashing value also indicates the position you can trim.

3. To change the unit of trimming, press the HOLD/> key, the REWIND button, or the F FWD button.

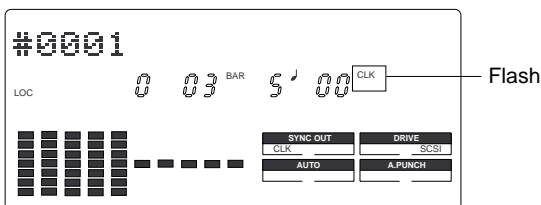
These buttons will change the trimming unit as follows:

	Time Base	
	ABS or MTC	BAR/BEAT/CLK
HOLD/> key or F FWD button	SF → H → M → S → F	CLK ← BAR ← J
REWIND button	SF ← H ← M ← S ← F	CLK → BAR → J

Example: Time Base is ABS (value of SF flashes.)



Example: Time Base is BAR/BEAT/CLK (CLK flashes.)



4. Trim the position at the selected unit (digit).

5. Press the STOP button or the EXIT/NO key.

The trimmed locate point (edit point) data will be stored in the corresponding memory key.

MIDI Synchronization

MIDI clock sync system

You can configure the sync system to use a stand-alone sequencer synchronizing as a MIDI clock slave by inserting time signature settings and tempo settings at any position in a song using a programmable Tempo Map of the FD-8. In this system, the recorder output of the FD-8 is routed to the input channel faders, and up to four MIDI sound sources connected to the input jacks are routed to the MON mix section. In this way, you can mix down up to eight channel sound sources without using an external mixing console. You can also mix down digital signals to an external digital master recorder by connecting MON OUT (L/R) of the FD-8 to RECORDER IN.

- Initialize the FD-8 before the operation.
- If multiple Programs exist, select the desired Program first.

Connecting and setting an external device

1. Connect the MIDI OUT jack of the FD-8 to the MIDI IN jack of the MIDI sequencer.
2. Set the MIDI sequencer to “MIDI clock slave” mode, and connect the MIDI sound source (played automatically) to the input jack of the FD-8.
3. Connect the effect units, if desired.

Setting MIDI SYNC OUT

1. In the “Setting MIDI sync output signal” menu in SETUP mode, select “MIDI clock (Clk)” for the MIDI sync signal output.

If you wish to use the Metronome function, turn the “Setting the metronome function” menu in SETUP mode to ON.

- See pages 101 and 103 for more information.

Creating a Tempo Map

1. Specify time signatures for the measures using the “Setting a time signature” menu in SETUP mode. Then, specify the tempo for given measures and beats using the “Setting a tempo” menu in SETUP mode.

- See pages 98 and 100 for more information.

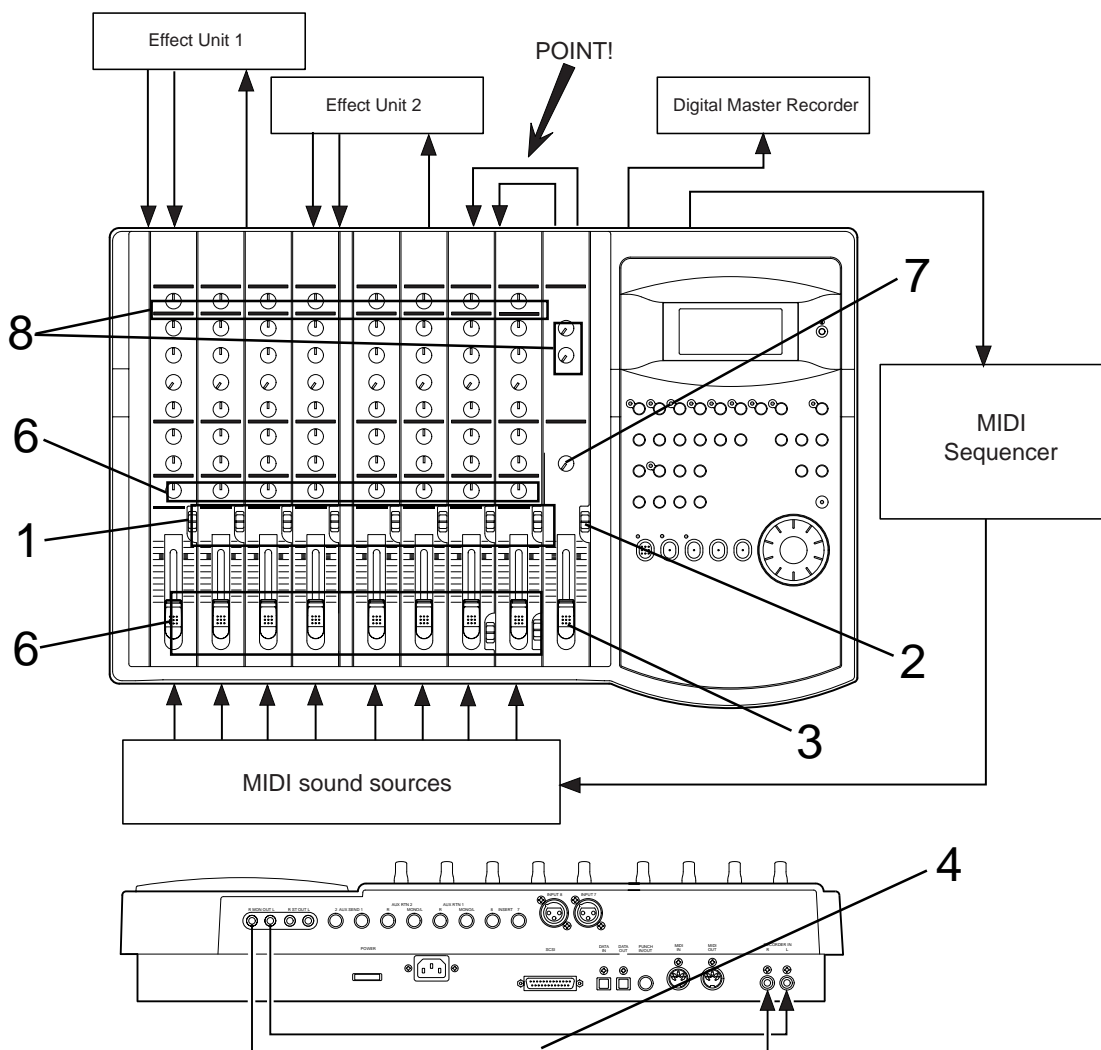
2. Play the FD-8 in play mode to see if the MIDI sequencer synchronizes to the FD-8 according to the Tempo Map. At this time, select the BAR/BEAT/CLK Time Base to see if the MIDI sequencer synchronizes correctly.

Overdubbing

1. Overdub the syncing MIDI sound sources to tracks 1-8 as described in the “Quick Operation Guide.” You can also record a MIDI sound source as a guide.

Mixing down while syncing MIDI sound sources

When you finish overdubbing, proceed to mixdown. As shown in the diagram, use the connected MIDI sound sources as virtual tracks, synchronize them to the FD-8, and mix down digital signals while applying effects.



1. Set the channel 1-8 INPUT SEL switches to [TRK].
2. Set the SELECTOR in the monitor section to [L/R+MON].
3. Raise the master faders L/R to [7-8].
4. Connect the MON OUT (L/R) jacks and the RECORDER IN jacks directly.
This connection will route the L/R+MON signals output from MON OUT (L/R) to the DAT OUT jacks via the RECORDER IN jacks for mixdown. (The L/R+MON signals include the playback signals from tracks 1-8 and eight MIDI sound sources.)
5. Set the "Setting digital output tracks" in SETUP mode to [L- □, r- □].
6. Use the input channel faders and the PAN knobs to adjust the playback levels and stereo image of tracks 1-8.
Turn the MON knob in the MON mix section of the corresponding channels toward [INPUT] to adjust the input level of the MIDI sound sources, and use the MON PAN knob to adjust the stereo image.
7. Use the MASTER knob in the monitor section to adjust the final output level for mixdown.
8. If you wish to apply effects to a track, turn the AUX knob and AUX RTN knob of the corresponding channel to adjust the effect amount and balance.

• See page 110 for more information.

MTC sync/Machine Control system

This section explains a synchronization system controlled by a computer using MMC (MIDI Machine Control) and controlled by MTC (MIDI time code) output from the FD-8.

The FD-8 adds a given offset value to the ABS time on the disk and outputs the information as MTC of a given frame rate. In addition, the FD-8 can receive external MMC and Fostex System Exclusive Message (FEX) to perform certain operations. Changing the device ID number included in the messages transmitted from the computer allows you to control various operations on the FD-8 individually. Use the “Setting the MIDI device number” menu in SETUP mode to set the device ID number.

- Initialize the FD-8.
- If multiple Programs exist, select the desired Program first.

Connecting an external device

1. Connect the MIDI IN jack and MIDI out jack to the MIDI OUT/IN jacks of the computer (using a MIDI interface).
The computer should be running sequence software that supports MMC and MTC.
2. Set the sequence software to MTC slave mode and MMC output mode, and select the desired MTC frame rate.
3. Connect the MIDI sound sources and effect units accordingly, in the manner as explained in the “MIDI clock sync system” section.

Setting MIDI SYNC OUT

1. Set the MIDI sync signal to be output to “MTC (Mtc)” in the “Setting MIDI sync output signal” menu in SETUP mode.
At this time, select [Mtc] for Time Base for convenience.

- Refer to page 103 for more information on SETUP mode.

Setting MTC OFFSET

1. Set the time offset from the ABS time (less than six hours) in the “Setting an MTC offset value” menu in SETUP mode.

- See page 104 for more information.

Setting a frame rate

1. Select the same MTC frame rate as that for the sequence software in the “Setting an MTC frame rate” in SETUP mode.

- See page 104 for more information.

Setting the device ID number

1. Set the same device ID number as the MMC device number for the sequence software and the FEX device number in the “Setting the device ID number” menu in SETUP mode.

You do not set a number if the sequence software transmits [7Fh], which means [ALL DEVICE].

- See page 112 for more information.

Checking synchronization and Machine Control

1. Operate the FD-8 in play mode, and check to see if the sequence software synchronizes to the MTC output from the FD-8.

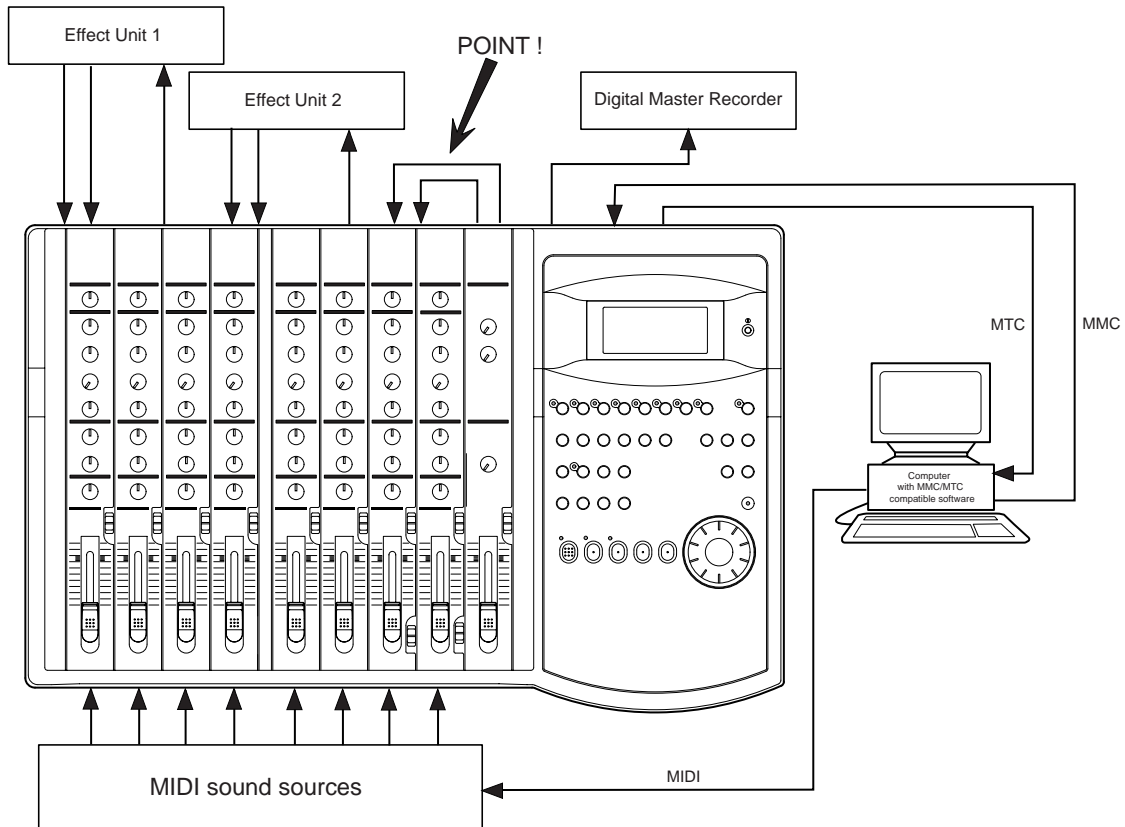
Check to see if the FD-8 plays, stops, and locates points correctly when it is controlled from the computer.

Overdubbing

1. Overdub on tracks 1 - 8 as explained in “Overdubbing” of the “MIDI clock sync system” section.

Mixing down while syncing the MIDI sound sources

1. Synchronize the output from tracks 1-8 with eight MIDI sound sources, and mix down while applying the effects, as explained in “Mixing down while syncing MIDI sound sources” in the “MIDI clock sync system” section.



<Please read this>

About MMC REC Out function:

If you use the MMC REC Out function, operating the FD-8 will cause the MIDI OUT connector to output the MMC command that corresponds to the operation.

For example, pressing the PLAY button while pressing the RECORD button will output the MMC REC command from the MIDI OUT connector. The following commands are output:

These MMC commands are output only when you operate the buttons on the FD-8. They are not output when the FD-8 receives external MMC commands.

You cannot turn off the MMC REC Out function. Whenever you perform any of the operations described above, the corresponding command is output. This is something you should note. If the sequencer connected to the FD-8's MIDI OUT is in record mode and you operate the FD-8, the corresponding MMC command will be recorded in a track on the sequencer. Then, if MIDI data is sent from the sequencer to the FD-8, the MMC command recorded in the sequence data will cause the FD-8 to enter record mode.

Operation on the FD-8	Output MMC command (Device No. =7F fixed)
RECORD + PLAY buttons	REC command
Punch in operation in TAKE mode of Auto Punch In/Out.	
Punch in operation via a footswitch.	
RECORD button On/OFF.	Input monitor ON/OFF command
Rehearsal In in rehearsal mode of Auto Punch In/Out.	
Rehearsal In via a footswitch.	REC EXIT command
PLAY button	
Punch Out in TAKE mode of Auto Punch In/Out.	
Punch Out via a footswitch.	STOP command
STOP button	

Sync system in Slave mode

You can set up the system in which the FD-8 in Slave mode synchronizes to an external master MIDI device. In this example, a master device is a computer running sequence software.

Note: Make sure to use an external MIDI device that is able to output MTC as a master device.

- Initialize the FD-8 before you start the operation.
- If multiple Programs exist, select the desired Program first.

Connecting an external device

1. Connect the MIDI OUT jack of a computer running sequence software to the MIDI IN jack of the FD-8.

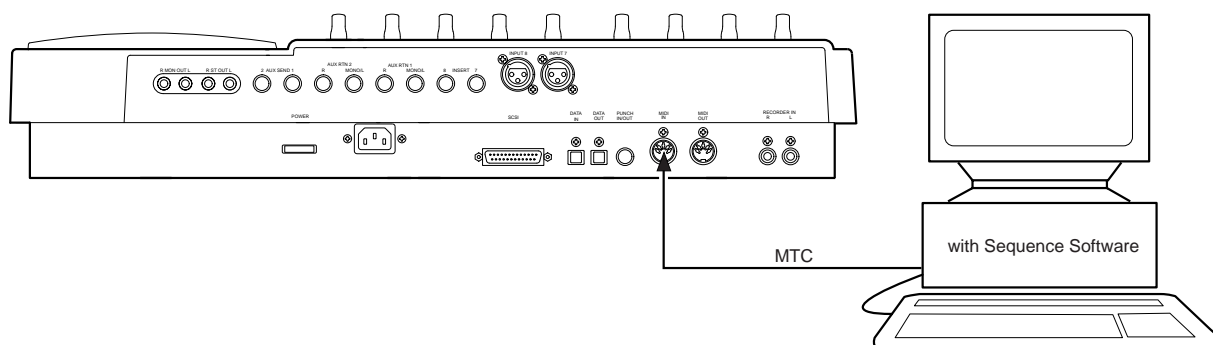
The connected computer should be running sequence software that supports MMC/MTC.

Setting up the external device

1. Set the following items on the sequence software.

- Set up the sequence software to output MTC.
- Set a frame rate of MTC.
- Check the start time of the song.

* Refer to the instruction manual that comes with the external device for more information.



Setting the FD-8

1. Set the frame rate of the sequence software, as described in the “Setting an MTC frame rate” menu in SETUP mode.

* See “Setting an MTC frame rate” on page 104 for more information.

2. Set an offset time value in the “Setting an MTC offset value” menu in SETUP mode.

* See “Setting an MTC offset value” on page 104 for more information.

3. Set the desired mode in the “Setting Offset mode” menu in SETUP mode.

* See “Setting Offset mode” on page 105 for more information.

4. Turn Slave mode [on] in the “Setting the Slave mode” menu in SETUP mode.

* See “Setting the Slave mode” on page 106 for more information.

5. Set the slave type to [VAri] in the “Setting the Slave type” menu in SETUP mode.

* See “Setting the Slave type” on page 107 for more information.

6. Press the TIME BASE SEL key to display the MTC Time Base.

<Notes on setting MTC-related parameters>

The MTC offset time and MTC offset mode determines whether or not MTC (MTC offset time) is output at ABS 0 or 001BAR 1J 00CLK. Follow the guide below, according to the start time of the song of the sequence software.

- **Offset mode = ABS:**

Set the MTC offset time to three seconds prior to the start time of the song of the sequence software. The FD-8 does not chase and lock to incoming MTC immediately. To synchronize the FD-8 from the beginning of the song, you need to set a preroll time and play the song a little before the top of the song of the sequence software.

- **Offset mode = BAR J:**

You can set the MTC offset time to the start time of the song.

As explained previously, the ABS 0 position is [-002BAR 1J 00CLK], which allows for synchronization from the top of the song. The duration of two measures changes depending on the setting of the time signature and the tempo of the first measure. (Example: slow tempo = longer duration)

Checking the chase and lock operation

1. When you play the sequence software, the [MTC] indicator on the display lights up, and the flashing [SLAVE] lights up continuously, which indicates that chase and lock is complete.

At this time, make sure that MTC output from the sequence software is being displayed on the FD-8.

2. When you stop the sequence software, MTC transmission is interrupted and the FD-8 stops.

The [SLAVE] indicator on the display starts flashing.

3. While the sequence software is fast forwarding or rewinding, the FD-8 remains stopped. As soon as you start play back or record, the FD-8 immediately performs the chase and lock operation.

- If the FD-8 does not chase and lock correctly, check the connecting cables and settings.

Note: The FD-8 can chase and lock to MTC only when the speed variation of MTC sent from the master device (computer) is within +/-5.6%. Within this range, the FD-8 will use the Vari Pitch function internally to chase MTC. If this range is exceeded, the FD-8 cannot chase and lock. If the speed variation of the master device is large, play the sequencer before recording so that the FD-8 will learn the speed of the master device. In this way, the FD-8 will lock to time code quicker next time.

Recording

You can record data on the FD-8 while the FD-8 is chasing and locking to the sequence software signals.

<Hint>

About the option "Vari" in the "Setting the Slave type" in SETUP mode:

If the FD-8 chases and locks to only an incoming MTC, Vari Pitch is applied all the time. Under this condition, if the FD-8 outputs digital signals to a connected digital device, the device may not be able to accommodate the FD-8's speed variation (MTC speed variation of the master device), resulting in interrupted signal input at the digital device.

To solve this problem, set the "Setting the Slave type" menu to "Free." This will cause the FD-8 to follow its internal clock after it finishes the chase and lock operation, supplying stable digital signals to the external digital device.

With the "Free" setting, if the MTC offset between the master and slave devices exceeds "10 frames," the slave device interprets this as out of lock, and tries to chase and lock again (re-chase operation). During the re-chase operation, the audio output will be muted and digital signal transmission is also interrupted. If the offset is within 10 frames, the slave device will continue running while recognizing the offset.

Note: If you set the "Setting the Slave type" menu to "Vari," the FD-8 applies Vari Pitch all the time to chase MTC.

However, if a digital input track is assigned in the "Setting digital input tracks" in SETUP mode, the FD-8 will sync to incoming digital signals (external word clock sync). This means that the FD-8 will not apply Vari Pitch during chasing even with the "Vari" setting. The FD-8 will sync to incoming digital signals after it locks MTC.

Sync system with “adat” by the slave mode

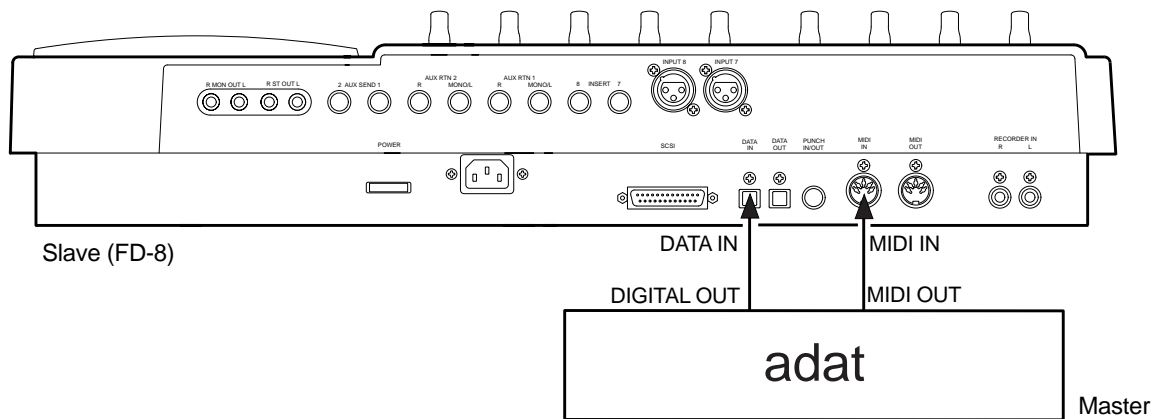
This section will explain the sync system using “adat” equipment.

- * Initialize FD-8.
- * Confirm the program.
- * Set adat and FD-8 to the same sampling frequency.

Equipment connections

Make connections, respectively, adat DIGITAL OUT to FD-8 DATA IN, and adat MIDI OUT to FD-8 MIDI IN.

Note: In order to slave operate adat equipment and the FD-8, the best setting is to supply “adat” digital signals together with MTC from the master unit.



Setup of adat (master)

1. Setup for output of MTC.
2. Setup the MTC frame rate to be output.
3. Check the MTC time to be output.
4. If necessary, set to allow output of “adat” digital signals.

This is unnecessary for the adat.

* Refer to the adat Owner's Manual for details.

Setting on the FD-8 (slave)

1. Set the same frame rate as the adat for the “MTC frame rate setting” in the Setup mode.

* Refer to “MTC frame rate setting” in Setup mode on page 104 for the operation and more information.

2. Select a desired mode for “MTC offset mode setting” in the Setup mode. (*)

* Refer to “MTC Offset mode setting” in Setup mode on page 105 for the operation and more information.

3. “MTC offset time setting” in Setup mode allows you to set the MTC time to start the Chase lock operation. (*)

* Refer to “MTC Offset time setting” in Setup mode on page 104 for the operation and more information.

4. Set Slave mode [on] for “Slave mode setting” in Setup mode, and select [AdAt] as a slave mode type for “Slave mode type setting” in Setup mode.

* Refer to "Slave mode setting" in Setup mode on page 106 and "Slave mode type setting" in Setup mode on page 107, for the operation and more information.

5. Press the TIME BASE SEL key to select the MTC indication for the Time Base.

<Note on setting the MTC offset time>

"MTC offset time setting" and "MTC offset mode setting" determine at which point (ABS 0 or 001BAR/1 ↓ /00CLK) the MTC (MTC offset time) is output. Refer to the following, depending on the song start time set in your sequence software, to set the MTC output from the FD-8.

* Offset mode: ABS

When the master drive (adat) outputs the specified MTC (MTC offset time), the slave FD-8 will start the Chase-Lock operation. Remember that it will take a little time for the FD-8 to start chase-lock after the MTC is input.

Setting the MTC offset time will allow the Chase-Lock operation to start from the specified point of the master device.

For example, when the master device (adat) outputs MTC as 00H 00M 00S 00SF ~ 00H 40M 00S 00SF, if the FD-8 offset (ABS mode) is 00H 20M 00S 00SF, the FD-8 ABS time will lock from 23H 40M 00S 00SF, and if the frame rate setting is 30 frame, lock will disengage temporarily at 23H 29M 59S 29SF. Later on, it will lock again at ABS time in the vicinity of 00H 00M 03S. This is an indication that the ABS time 24H is set as access maximum time in the FD-8 and that return to "0" is not continuous. Should no overshooting of 24H occur in the ABS time, overshooting of 24H with a random MTC OFFSET can be carried out correctly.

* Offset mode: BAR ↓

As described previously, the FD-8 uses "-002BAR/1 ↓ /00CLK" as an "ABS 0" point, there is enough time until the Chase Lock starts, and Chase Lock will be complete by the specified MTC offset time. The time length of the two bars before the Chase Lock will vary depending on the setting in the first bar for the "Time signature setting" and the "Tempo setting." Setting the MTC offset time will also allow the Chase Lock operation to start from the specified point of the master device.

Note: After this setting, check the following items on the FD-8:

* [SLAVE] is flashing on the display: When the Chase Lock operation is complete, this indicator will light.

* [DIGITAL] lights up on the display: The units is syncing to the external digital signal.

Note: Do not connect or remove the optical cable from the DATA IN connector while Slave mode is on. Otherwise, the unit may generate noise, affecting the connected external devices.

Checking Chase Lock

1. When the master device (adat) is played, the [MTC] in the display on the slave device (FD-8) will light, the [SLAVE] will light in the display, and Chase Lock will be complete.

Check to make sure the display shows the correct MTC time.

2. When you stop the master device, the MTC transmission from the master device will be interrupted and the slave machine will also stop.

The illuminated [SLAVE] will flash.

3. While the master device is in fast forward or rewind mode, the slave machine will remain stopped.

When you start playing the master device, the slave machine will start the Chase Lock operation.

Note: The FD-8's re-chase window is "10 frames' fixed. That is, when the MTC of the master device and the MTC of the slave machine slip from each other by 10 frames or more, the slave machine will interpret this as being out of sync, and it will try to lock with the master device again (this is called a "re-chase" operation). During the re-chase operation, audio output will be muted. If slippage is within 10 frames, the slave machine will continue running while accepting the slippage. Since the master device supplies a digital signal to the slave machine in this system, the slave machine will not perform the re-chase operation after chase lock is complete.

* If the Chase Lock operation or control is not correct, check all connections, cables, and settings.

Recording

You may perform recording while the adat and the FD-8 are chase-lock.

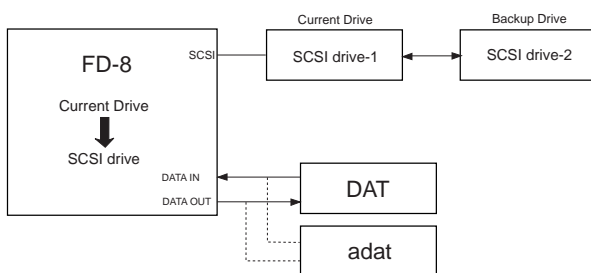
Saving and Loading Song Data

Outline of the save/load operation

The FD-8 has a Save/Load function for song data, which enables you to save the recorded song data (including SETUP data) to a connected backup media, such as a DAT machine or adat. You can also load the saved data from a DAT or adat to the current drive disk in the FD-8. You can save and load one Program at a time to and from a DAT, adat, or SCSI drive.

The following diagram shows different methods (depending on the current drive type) for saving data to connected media, and how to load data to the FD-8. Select the appropriate connections depending on the type of connected media.

Using a SCSI drive as the current drive:



Note: You can save and load data between two SCSI drives, regardless of the recording mode used for the disks.

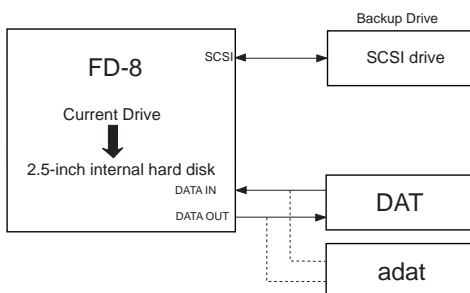
Note: You can save and load data to and from a DAT or adat only if the current drive is a SCSI fixed disk and it has been formatted in Mastering mode. You cannot perform the save/load operation if the disk has been formatted in Normal mode.

Note: Be sure to set the ID number for a backup SCSI drive to "6."

The connection should follow one of these cases:

- * Transferring data between SCSI drive-1 and SCSI drive-2
- * Transferring data between SCSI drive-1 and a DAT (See "Note.")
- * Transferring data between SCSI drive-1 and an adat (See "Note.")

Using an optional 2.5-inch internal hard disk as the current drive:



Note: You can save and load data to and from a DAT or adat only when the current drive has been formatted in Mastering mode. You cannot perform the save/load operation if the disk has been formatted in Normal mode. However, you can save and load data to and from a SCSI drive, regardless of the recording mode used for the disk.

Note: If you are using an optional 2.5-inch internal hard disk as the current drive, you can connect only a SCSI backup disk to the SCSI terminal on the FD-8 (the ID number should be set to "6."). If you connect a SCSI drive disk set up as a current drive disk (the ID is set to any number other than "6.") and you turn on the power to the drive, the FD-8 will recognize this SCSI drive as the current drive.

The connection should follow one of these cases:

- * Transferring data between a 2.5-inch internal hard disk and a SCSI drive
- * Transferring data between a 2.5-inch internal hard disk and a DAT (See "Note.")
- * Transferring data between a 2.5-inch internal hard disk and an adat (See "Note.")

<Notes on connection>

If the connected DAT (preferably a professional model) features sync operation with external clock and its "INPUT (or EXTERNAL SYNC)" sync mode switch is set to OPTICAL, trying to load data with both digital I/Os connected as shown in the diagram may cause a digital clock loop to form and loading may fail.

In this case, set the sync mode of the DAT to INTERNAL, or disconnect the optical cable from the DATA OUT of the FD-8 before loading data. This type of problem will not occur during the save operation since the DATA IN connector of the FD-8 is not effective.

<Notes on DAT machines and the save and load operations>

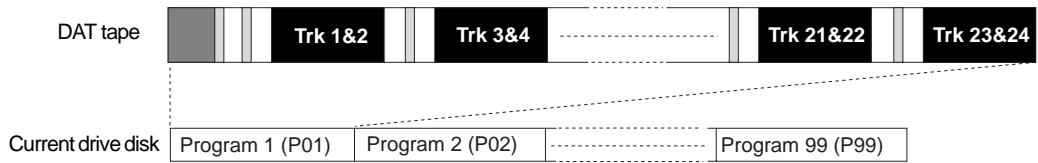
You may use a DAT machine that can record digital data in S/P DIF format without compression in 16bit/44.1kHz mode. You cannot use media that uses a compression recording technique, such as an MD or DCC, media that automatically adjust the space between songs, such as a CD-R, media that converts sampling rate, or via Adat optical connectors. You can use media that features SCMS (Serial Copy Management System) if it satisfies the requirements described above. The following DAT models have been confirmed to operate with the FD-8. Basically, any DAT machine that has digital in/out connectors in S/P DIF format will work for the save and load operation. However, some models (except those listed below) may cause errors.

Fostex: D-5, Pioneer: D-05

The save and load operations using a SCSI drive, DAT, or adat are described below:

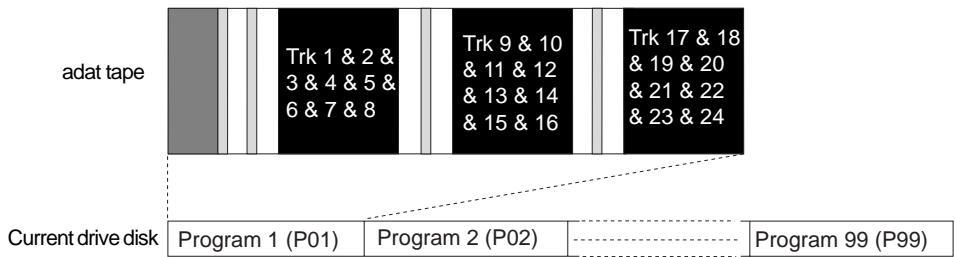
*** Using a DAT (S/P DIF digital signal) (Saving/loading individual Program data: only in Mastering mode)**

Following about five seconds of pilot signal (shown in gray in the diagram below), song data in the current drive is output to a connected DAT. Two tracks of audio data (shown in black in the diagram) are output. To save data from Real tracks 1-8, two-track data will be output four times, which takes twice as much time as the song duration (ABS 0 to REC END). To save all data including Additional tracks 9-24, two-track data will be output twelve times, which takes twelve times the song duration. Saved data is also loaded two tracks at a time.



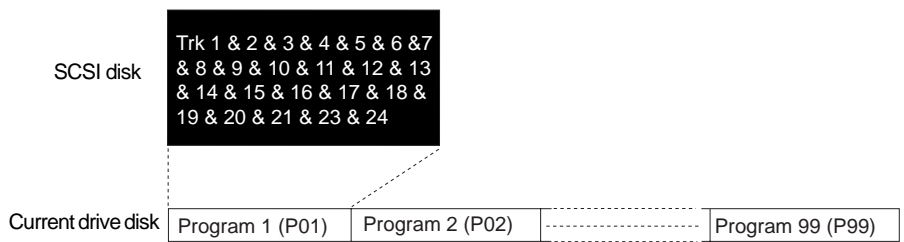
*** Using an adat (adat digital signal) (Saving/loading individual Program data: only in Mastering mode)**

After about five seconds of pilot signal (shown in gray in the diagram below), song data in the current drive is output to a connected adat. Eight-track audio data (shown in black in the diagram) is output. To save the data from Real tracks 1-8, data will be output once, which takes the same amount of time as the song duration (ABS 0 to REC END). To save all data including Additional tracks 9-24, eight-track data will be output three times, which takes three times the song duration. Saved data is also loaded eight tracks at a time.



*** Using a SCSI disk (Saving/loading individual Program data: in any mode)**

All Real track data and Additional track data is output simultaneously to a SCSI disk as shown in black in the diagram. Therefore, saving and loading a Program takes much less time relative to a DAT or adat. No pilot signal or beep is recorded. If the available disk space is smaller than the song data size, you may use multiple disks (up to 99 disks) to save and load an entire song.



*** The following items can be saved and loaded as song data:**

Memory data (CLIPBOARD IN/OUT, AUTO RTN START/END, AUTO PUNCH IN/OUT points)

Time base (ABS, MTC, or BAR/BEAT/CLK)

SETUP mode: * Time signature setting (BAR BEAT), * Tempo setting, * Click On/Off setting, * Preroll time setting,
* MIDI sync out setting, * MTC frame rate setting, * MTC offset time setting, * MTC offset mode setting,
* Rec protect On/Off setting, * Slave mode On/Off setting, * Slave type setting

*** The following items cannot be saved and loaded as song data:**

Auto Play mode and Auto Return mode On/Off setting

Vari-pitch mode On/Off setting, and Pitch data

SETUP mode: * Digital In setting, * Digital Out setting, * Bar/Beat Resolution On/Off setting, * Device ID setting

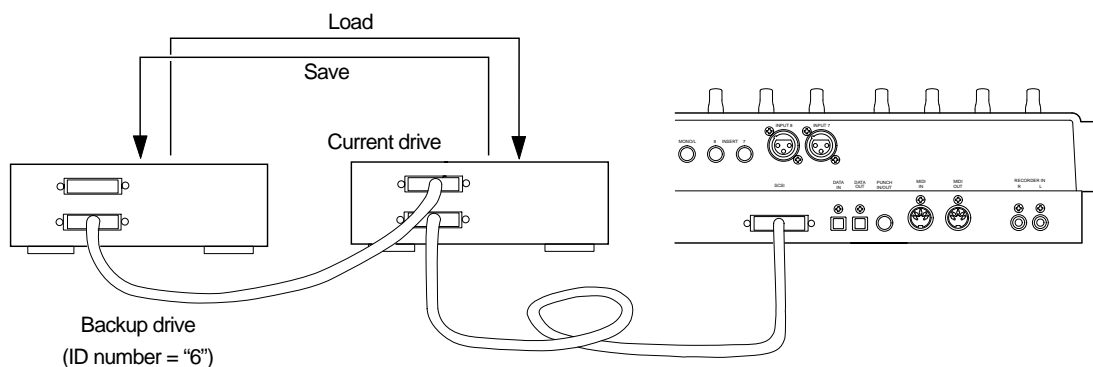
Saving and loading data using a SCSI drive as the current drive

If the current drive is a SCSI drive (removable disk or fixed disk), you can save and load data to and from a backup SCSI drive, DAT, or adat. If the backup drive is a SCSI drive, the save and load operations are not limited by the type of recording mode used for the current drive. If you are using a DAT or adat as a backup drive and using a fixed disk as the current drive, the fixed current drive should be formatted in Mastering mode to enable saving and loading.

Saving/loading data using another SCSI drive

This section explains how to save and load data to and from a removable current SCSI drive and a backup SCSI drive. Turn off the power to all connected devices before you make connections.

Note: Unlike the save/load operation using a DAT or adat, you cannot abort the save/load operation that uses a SCSI drive. Nor can you monitor audio data during the operation. Also, you cannot load data to a disk formatted in a recording mode that differs from that on the backup disk. For example, you cannot load data from a backup disk in Normal mode to a disk in Mastering mode.



SCSI drive connection and preparation

* Connect your backup SCSI drive to the SCSI connector on the current SCSI drive. Be sure to attach a terminator on the second SCSI drive to terminate the SCSI chain.

* Be sure to set the ID number for the backup SCSI drive to "6."

* Prepare the disk recorded as the current drive and a backup disk (unformatted disk).

<Title of data to be saved to a backup SCSI disk>

Data recorded in the current drive has a name, such as Program 1 or Program 2. (These titles appear abbreviated, such as [P01], [P02]).

On the other hand, a backup disk manages data using different titles, such as Backup 1 or Backup 2. (These appear abbreviated, such as [B01] or [B02] on the display.)

For example, Program 1 (P01) on the current drive disk is saved as Backup 1 (B01) for the backup disk.

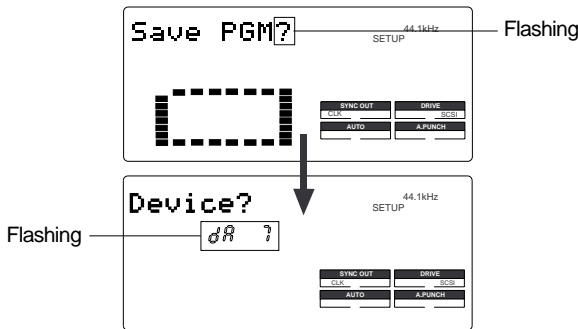
Saving data

* You can back up data using the “Save PGM ?” menu in SETUP mode. The following procedure assumes that a recorded disk has been inserted in the current SCSI drive, Program 1 (P01) has been selected, and an unformatted disk will be used as the backup disk.

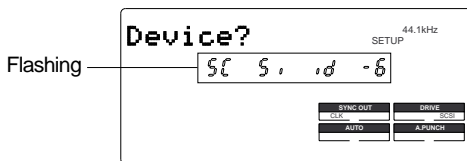
<[Save PGM ?] menu>

- * Output signal options: [AdAt], [dAT], [SCSi id-6]
- * Program options: P01 - P99 (an individual Program)
- * Track options: When using an adat or DAT: tracks 1–8, tracks 1–16, Tracks 1–24; When using a SCSI disk: All tracks will be automatically selected.

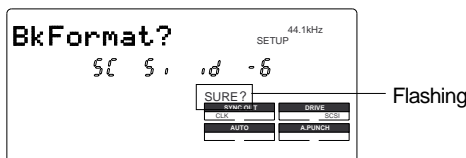
1. Insert an unformatted disk into the backup drive.
2. Press the SETUP key to enter SETUP mode, then use the JOG dial to select [Save PGM ?] menu.
3. Press the EXECUTE/YES key.
[Save Device ?] appears and the selected output signal option flashes. ([dAT] flashes.)



4. Turn the JOG dial to select a flashing [SCSi id-6] to select the connected SCSI drive as a save destination.



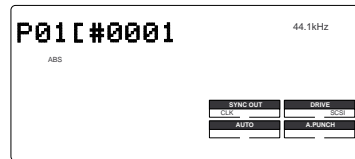
5. Press the EXECUTE/YES key.
The FD-8 recognizes that a disk in the backup drive is unformatted, and displays [Unformat ?], then proceeds to the [Bk Format?] menu (backup disk format) in SETUP mode, then displays the following.



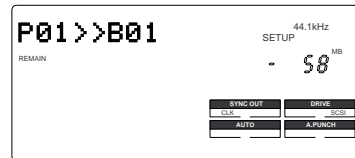
6. Press and hold down the RECORD button, and press the EXECUTE/YES key.
The FD-8 displays the following and starts formatting the disk. The unformatted disk area size will count down as the format operation progresses.



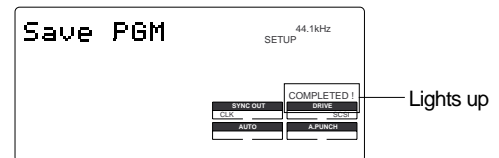
When the formatting operation is completed, [COMPLETED !] lights up, [SCSi id-6] flashes, then the FD-8 displays the following. This example shows that the data to be saved is Program 1 on the current drive. If the current drive has multiple Programs, use the JOG dial to select the desired Program.



7. Use the JOG dial to select the desired Program and press the EXECUTE/YES key.
The save operation starts and the following indication appears. This example shows that Program 1 data is being saved as Backup data 1. As the save operation progresses, the REMAIN value (e.g.: -58MB) counts down.



When the save operation is completed, [COMPLETED!] lights up and the following indication appears.



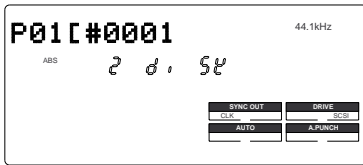
8. Press the EXIT/NO key to exit SETUP mode.
The FD-8 displays ABS 0 of the Program on the current drive.

Note: The backup data will use the number of the saved Program. (e.g., if you save P01 [#0001] data, the backup data will be named as B01[#0001].) You cannot edit the title of the backup data.

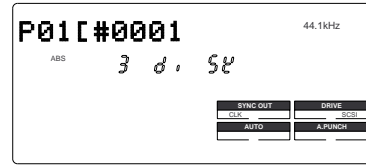
The above procedure assumes that the saved data size is smaller than the available space of the backup disk. You can use only one backup disk. To save data larger than a single backup disk, refer to the next <Memo> for information on saving data using multiple backup disks.

<Memo>

If Program data to be saved is larger than the space available on one backup disk, the FD-8 tells you how many backup disks you need when you select a Program in Step 6 of the previous procedure.



(e.g.)
Two backup disks are required.



(e.g.)
Three backup disks are required.

When you set the first disk, the save operation starts. When the disk is full, the FD-8 automatically ejects the disk and displays [Ins. Disk 2] (meaning "Please set the second disk.").

Set the second disk to continue the save operation.

Note: Mark the disks so that you can identify the order of the disks and you will be able to insert the disks in the correct order to perform the load operation.

Loading data

* You can load data using the "Load PGM ?" menu in SETUP mode. The following procedure assumes that the backup disk has been inserted into the backup SCSI drive, and a formatted disk has been inserted into the current drive.

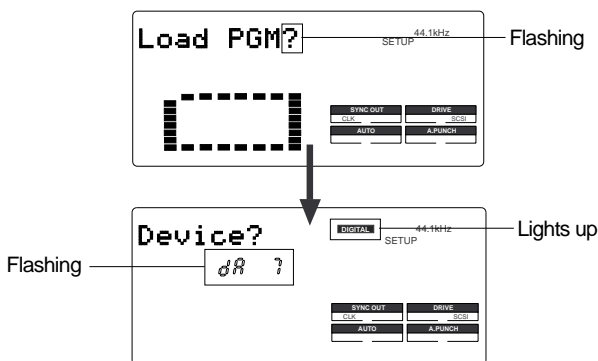
<[Load PGM ?] menu>

- * Input signal options: [AdAt], [dAT], [SCSi id-6]
- * Program options: P01 - P99 (an individual Program)
- * Track options: When using an adat or DAT: tracks 1–8, tracks 1–16, Tracks 1–24;
When using a SCSI disk: All tracks will be automatically selected.

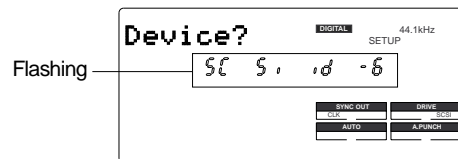
1. Press the **SETUP** key to enter **SETUP** mode, then use the **JOG** dial to select **[Load PGM ?]** menu.

2. Press the **EXECUTE/YES** key.

[Load Device ?] appears, [DIGITAL] lights up, and the selected input signal option flashes. ([dAT] flashes.)

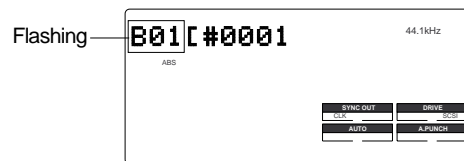


3. Turn the **JOG** dial to select a flashing **[SCSi id-6]** to load data from the connected SCSI disk.



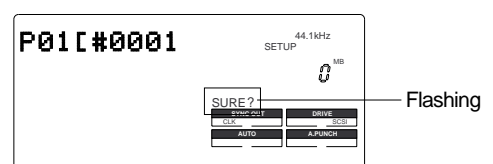
5. Press the **EXECUTE/YES** key.

The saved backup number (B01) flashes. This means that B01 on the backup disk is selected to load. If only this backup file exists on the disk, turning the JOG dial will allow you to select [B01] or [Eject]. Select [Eject] if you wish to change the disk. If there are multiple backup files on the disk, using the JOG dial allows you to select the desired backup data (B01, B02, B03, etc.) or [Eject].



6. Press the **EXECUTE/YES** key.

The FD-8 indicates that the load destination disk (current drive disk) does not have any data, then indicates a flashing [SURE?].

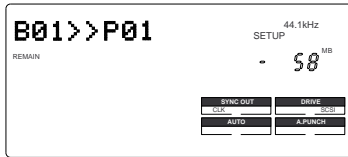


At this time, using the JOG dial allows you to select the load destination Program.

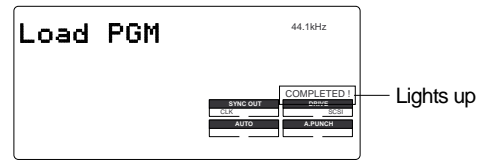
Since there is only one Program in the destination disk in this example, you can select only [P01]. If the destination disk contains multiple Programs, see the following <Memo>.

7. Use the JOG dial to select the load destination Program and press the EXECUTE/YES key.

The FD-8 starts loading data. Backup data [B01] is loaded to Program [P01] on the current disk. As the operation progresses, the REMAIN value counts down.



When the load operation is completed, [COMPLETED !] lights up.



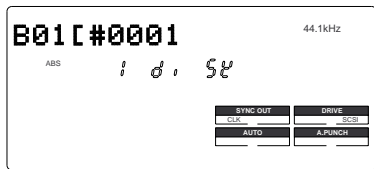
8. Press the EXIT/NO key to exit SETUP mode.

The Time Base display of the loaded Program appears.

9. Press the EJECT button on the backup drive to eject the backup disk.

<Memo>

If you saved one Program to multiple backup disks, the FD-8 indicates that the disk in the drive is the “first” disk, as follows:

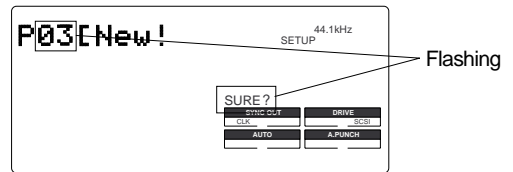


Confirm that this message appears, and execute the load operation. When data in the first disk is loaded, the FD-8 automatically ejects the disk and displays [Inst. Disk 2], meaning “Please insert the second disk.” Insert the second disk and continue the load operation.

Note: Make sure that you insert the disks in the correct order. If you insert the wrong disk, the FD-8 displays [Wrong disk] and ejects the disk. Follow the disk markings you made during the save operation.

<Memo>

If the load destination disk contains multiple Programs, the FD-8 asks whether you wish to set up a new Program in Step 6 of the procedure above. ([03] and [SURE ?] flash.) This is because the existing Programs may already contain data. If you do not mind overwriting the existing data with the loaded data, select the desired Program number as the load destination.



In the above display example, the FD-8 asks you if you wish to create a new Program 3, since Programs 1 and 2 on the current drive disk contain data.

Saving/loading via a DAT or adat

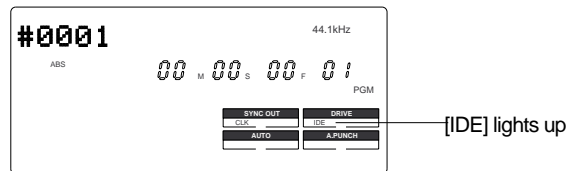
To use a DAT or adat to save and load data, the current SCSI drive disk should be a fixed disk that is formatted in Master mode. Refer to the “Saving/loading data using an 2.5-inch internal hard disk as the current drive” section for a detailed procedure of the save/load operation.

Saving/loading data using an 2.5-inch internal hard disk as the current drive

If you are using an optional 2.5-inch IDE internal hard disk as the current drive, you can save and load data to and from a DAT, adat, or backup SCSI drive disk.

<Note on the save/load operation using an optional 2.5-inch IDE internal hard disk>

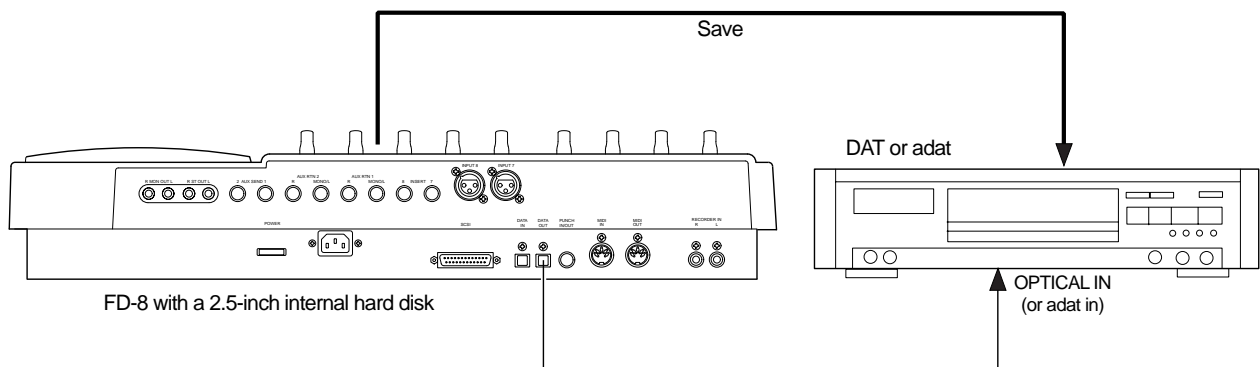
When you are using an optional 2.5-inch IDE internal hard disk for the save and load operation, make sure that [IDE] lights up in the current drive section of the display. If a SCSI drive is connected to the FD-8 as the current drive, disconnect the SCSI drive. Alternatively, turn off the power to the SCSI drive before you turn on the power to the FD-8.



Saving song data via a DAT or adat

This section explains how to save data from an optional 2.5-inch IDE internal hard disk (current drive) to a DAT or adat. You can simultaneously save two tracks of data from an individual Program to a DAT, or eight tracks to an adat. Be sure to turn off the power to the all devices before you make connections.

Note: The current drive disk should be formatted in Mastering mode to enable you to save data to a DAT or adat.



DAT (or adat) connection and preparation

* Connect DATA OUT from the FD-8 to the OPTICAL IN on a DAT, or to adat in on an adat using an optical cable. If you are using S/P DIF digital signal (DAT), use an optional Fostex COP-1 (optical-coaxial converter) to connect a DAT that is equipped with only a COAXIAL (RCA) digital input.

* After all connections have been made, turn on the power to all devices, and insert a tape into a DAT (or adat). Make sure that the tape's "write-protect tab" is closed so that it can be recorded, and that the tape is rewound to the beginning.

* Set the sampling frequency of a DAT (or adat) to the same value as the FD-8 (44.1kHz).

* Set the DAT or adat so that it will accept S/P DIF digital input (or adat digital input). Some models may have to be set so that they will synchronize with the incoming digital signal. Refer to the manual that came with your DAT or adat for more information.

Note: Depending on whether you use a DAT or an adat, you need to switch between S/P DIF digital signal (OPTICAL) and adat digital signal for the DATA IN/OUT jacks. These signals are completely different, although they use the same jack configuration.

Saving data

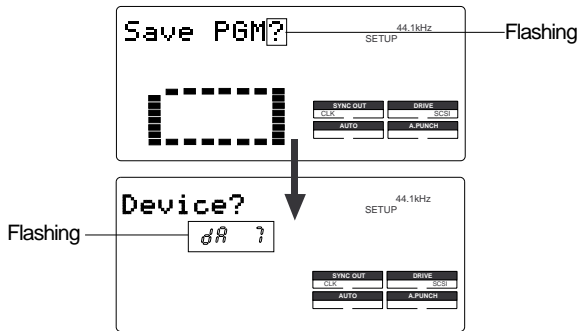
* You can back up data using the “Save PGM ?” menu in SETUP mode.

The following procedure assumes that Program 1 on the 2.5-inch IDE internal hard disk (current drive) contains performance data.

<[Save PGM ?] menu>

- * Output signal options: [AdAt], [dAT], [SCSi id-6]
- * Program options: P01 - P99 (an individual Program)
- * Track options: When using an adat or DAT: tracks 1–8, tracks 1–16, Tracks 1–24;
When using a SCSI disk (SCSi id-6): All tracks will be automatically selected.

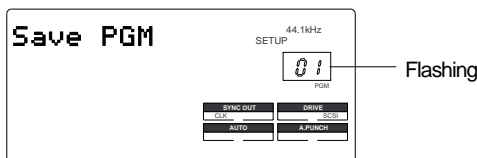
1. Press the **SETUP** key to enter **SETUP** mode.
2. Use the **JOG** dial to select **[Save PGM ?]** menu, then press the **EXECUTE/YES** key.
[Save Device ?] appears and the selected output signal option flashes ([dAT], [AdAt], or [SCSi id-6].)



3. Use the **JOG** dial to select the desired digital signal for the save operation ([dAT] or [AdAt]).

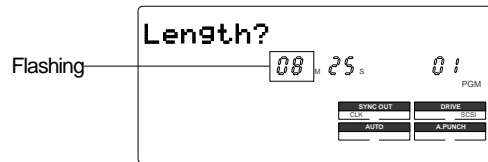
[AdAt]	Select this to save data in the adat digital signal format to a connected adat.
[dAT]	Select this to save data in the S/P DIF digital signal format to a connected DAT.

4. Press the **EXECUTE/YES** key.
The number of the Program selected before the FD-8 entered SETUP mode flashes on the display, indicating that you can select a Program to save.



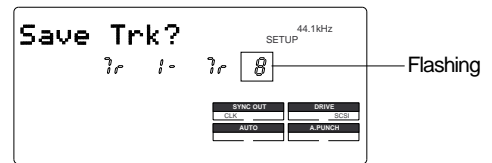
5. Use the **JOG** dial to select a Program to save.
If multiple Programs exists in the current drive disk, turn the **JOG** dial to change the Program number.

6. Press the **EXECUTE/YES** key.
The FD-8 displays the total time of the selected Program. You can edit this total time value. That is, you can shorten the time required for the save operation.
For example, if the duration of the Program is 8 minutes 25 seconds, you can edit this time value to 5 minutes. (You can edit up to 59 minutes 59 seconds.)
This is useful when the backup tape lacks adequate space.



To edit the time value, use the **HOLD/>** key, **REWIND** button, or **F FWD** button to move the flashing cursor to the desired digit, and turn the **JOG** dial to change the value. (The above example shows you can edit the minute value.)

7. Press the **EXECUTE/YES** key.
The FD-8 displays the track selection screen. First, Real tracks 1–8 appear. Turn the **JOG** dial to change number “8” to the desired number.



8. Use the **JOG** dial to select the desired tracks.
Options are Tr 1–8, Tr 1–16 (Real track 1–8 and Additional track 9–16), or Tr 1–24 (Real track 1–8 and Additional track 9–24).

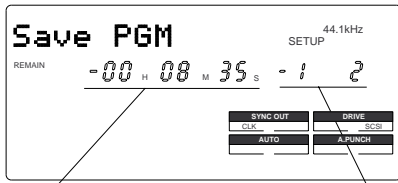
9. Press the **EXECUTE/YES** key.
The display changes as follows.
This means “Start recording on the DAT (or adat)!”



10. Start recording on the DAT (or adat).
At this time you could set a **START-ID** or a locate point at the recording start point so that you will be able to find the top of the Program to load later.

11. Press the **EXECUTE/YES** key.
The FD-8 starts saving data and displays the total time required for the save operation. The time value starts counting down a few seconds later.

Before the value starts counting down, the FD-8 is transmitting a pilot signal that will be a reference of the tape position during the load operation. Actual data recording starts when the count down starts.



This value represents the total duration of the Program being saved, and counts down as the save operation progresses.

This area shows which tracks are currently being saved. During the save operation to the DAT, it indicates tracks 1–2, then changes to 3–4, 5–6, etc. in two-track steps. During the save operation to adat, it indicates tracks 1–8, then 9–16, and 17–24, according to the track selection in Step 8.

A DAT records two tracks at a time. An adat records eight tracks at a time. Level meters 1 and 2 indicate the level of signal output to a DAT. Level meters 1–8 indicate the level of signal output to an adat. When the save operation is completed, [COMPLETED !] lights up and the FD-8 stops. Stop recording on the DAT (or adat).

12. Press the EXIT/NO key or the STOP button.

The FD-8 exits SETUP mode and [COMPLETED !] disappears. The FD-8 displays the Time Base (ABS 00m 00s 00f) of the saved Program.

<Tips>

You can monitor the signal being saved through the MON mix section, or through the headphones connected to the DAT (or adat). Follow the steps below to monitor the signal via the MON mix section.

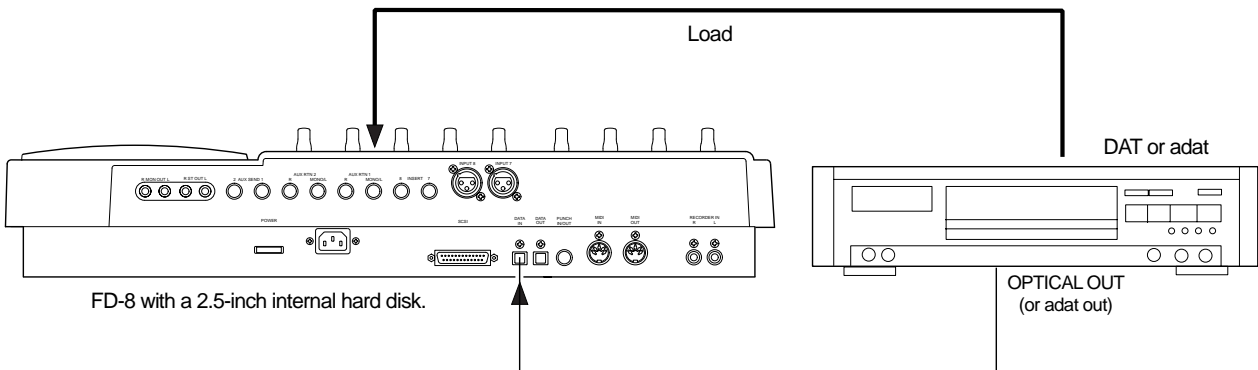
- * Set the SELECTOR in the monitor section to "MON."
- * Turn the MON knobs for channels 1 and 2 for DAT backup (or channels 1–8 for adat backup) toward "TRK."
- * Turn up the MASTER knob in the monitor section.

Loading song data via a DAT or adat

This section explains how to load backup data from a DAT or adat to a 2.5-inch IDE internal hard disk (current drive). You can load two-tracks of individual Program data from the DAT simultaneously, or eight tracks of data from the adat.

This procedure assumes that no recordings exist on the current drive (load destination). Be sure to turn off the power to all devices before you make connections.

Note: The current drive disk should be formatted in Mastering mode to load data to from a DAT or adat.



DAT (or adat) connection and preparation

* Connect the DATA IN on the FD-8 to the OPTICAL OUT on a DAT or to "adat out" on an adat using an optical cable. If you are using S/P DIF digital signal (DAT), use an optional Fostex COP-1 (optical-coaxial converter) to connect a DAT that is equipped only with a COAXIAL (RCA) digital output.

* After all connections are made, turn on the power to all devices, and insert a backup tape into a DAT (or adat). Rewind the tape to a point slightly before the beginning of the saved data.

Note: Depending on whether you use a DAT or an adat, you need to switch between S/P DIF digital signal (OPTICAL) and adat digital signal for the DATA IN/OUT jacks. These signals are completely different, although they use the same jack configuration.

Loading data

* You can load data using the “Load PGM ?” menu in SETUP mode. The following procedure assumes that the current drive disk (2.5-inch internal hard disk) does not contain any recordings, and that Program 1 (P01) has been set up on the disk.

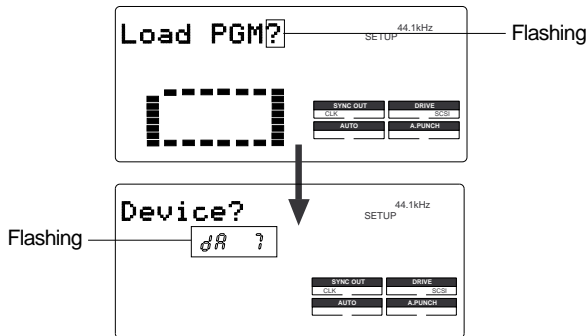
<[Load PGM ?] menu>

- * Input signal options: [AdAt], [dAT], [SCSi id-6]
- * Program options: P01 - P99 (an individual Program)
- * Track options: When using an adat or DAT: tracks 1–8, tracks 1–16, Tracks 1–24;
When using a SCSI disk (SCSi id-6): All tracks will be automatically selected.

1. Press the SETUP key to enter SETUP mode.

2. Use the JOG dial to select [Load PGM ?] menu, then press the EXECUTE/YES key.

[Load Device ?] appears and the selected input signal option flashes. ([dAT], [AdAt], or [SCSi id-6] flashes.)

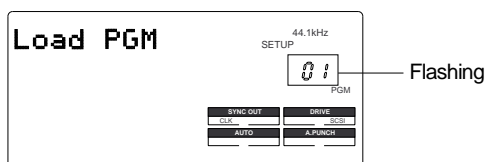


3. Use the JOG dial to select the desired type of digital signal used for the load operation ([dAT] or [AdAt]).

[AdAt]	Select this to load data in the adat digital signal format from a connected adat.
[dAT]	Select this to save data in the S/P DIF digital signal format from a connected DAT.

4. Press the EXECUTE/YES key.

The number of the Program set up on the current drive flashes on the display.

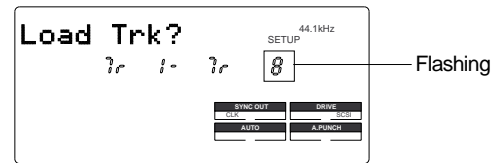


5. Use the JOG dial to select a Program into which to load data.

If only one Program has been set up, turning the JOG dial enables you to select [01] or [02]. If you select [02], “PGM” of [Load PGM] and [New] flash alternately. This means that a new Program (P02) should be set up before you execute the load operation. (If multiple Programs exist in the current drive disk, turn the JOG dial to select a Program from these Programs plus one new Program.)

6. Press the EXECUTE/YES key.

The FD-8 displays the track selection screen. You can change the value of a flashing number.



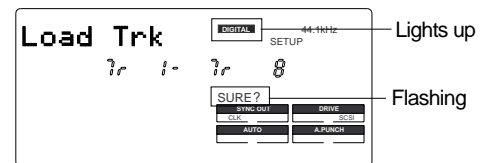
7. Use the JOG dial to select the desired tracks.

Options are Tr 1–8, Tr 1–16 (Real track 1–8 and Additional track 9–16), or Tr 1–24 (Real track 1–8 and Additional track 9–24). In this example, select Tr 1–8.

8. Press the EXECUTE/YES key.

The FD-8 enters “load standby” mode and displays the following.

[DIGITAL] lights up and [SURE ?] flashes.



Flashing [DIGITAL] indicates that signal is not input from the digital device (DAT or adat) correctly. Check the connections.

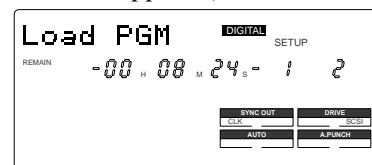
9. Make sure that [DIGITAL] lights up steadily, and press the EXECUTE/YES key.

The FD-8 displays the following, indicating “Start playing the DAT!” If you are using an adat, [Play AdAt] flashes.



10. Start playing the DAT (or adat).

Start playing the tape from a point slightly prior to the top of the Program data. The FD-8 reads the recorded pilot signal, then automatically starts loading data. (Wait a while until the following indication appears.)



The FD-8 displays the track numbers being loaded and the total time of the Program. The time value starts counting down as the load operation progresses. The RECORD RACK LEDs for tracks 1 and 2 flash, and level meters 1 and 2 indicate the level of signal input from the DAT. (All RECORD RACK LEDs flash and level meters 1–8 indicate the level of signal input from an adat.)

When the load operation is completed, [COMPLETED !] lights up. The FD-8 displays the top of the Program in the current drive and stops.

11. Stop playing the DAT (or adat).

12. Press the EXIT/NO key or the STOP button.

[COMPLETED !] disappears.

<Tips>

- You can monitor the signal being loaded. Follow the steps below.
- * Set the SELECTOR in the monitor section to "MON."
 - * Turn the MON knobs for channels 1 and 2 for DAT backup (or channels 1-8 for adat backup) toward "TRK."
 - * Turn up the MASTER knob in the monitor section.

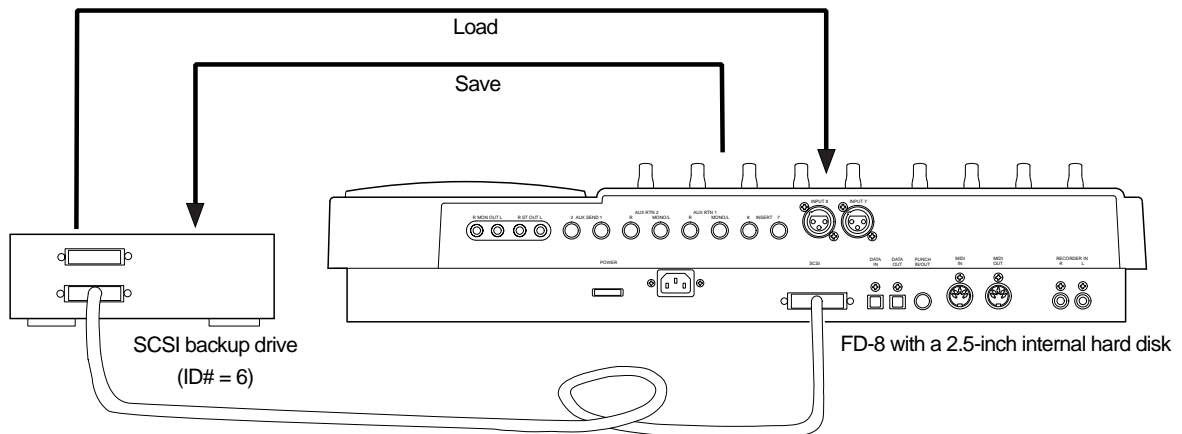
Saving and loading song data via a SCSI drive

This section explains how to save and load data to and from a SCSI backup drive and a 2.5-inch internal hard disk. Recording mode on the current drive does not affect this operation. Refer to the "Saving and loading song data between two SCSI drives" for more information on the procedure.

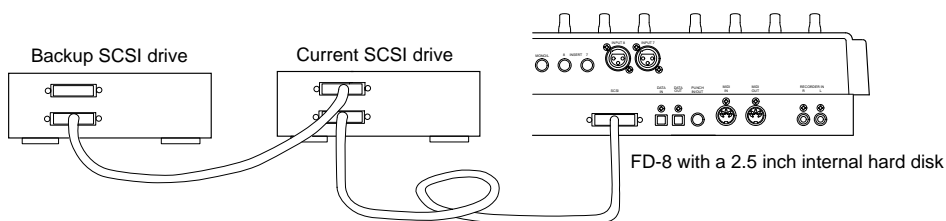
Connect a SCSI backup drive (ID #=6) to the SCSI connector on the 2.5-inch hard disk in the FD-8, as shown below.

<Note on connections>

Be sure to connect a SCSI backup drive to the SCSI connector. Make sure that the ID number for the SCSI backup drive is set to "6."



Note: As shown in the drawing, when the SCSI drive assigned for the current drive is daisy chained to the SCSI drive for backup and also connected to the optional 2.5 inch IDE internal hard disk which is in the current drive mode, please note the following items.



When the 2.5 inch hard disk is assigned as the current drive:

Switch on power to FD-8 only and not to the two SCSI drives connected.

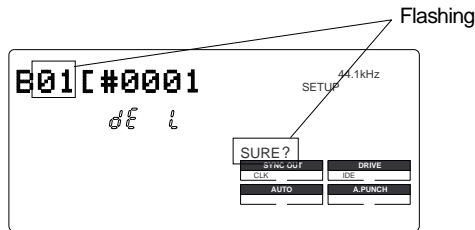
If save/load of song data is to be executed using the SCSI drive assigned for backup, switch on power to the FD-8 and the SCSI drive assigned for backup. Do not switch on power to the SCSI drive assigned for the current drive. By utilizing either method, FD-8 will always recognize the 2.5 inch IDE hard disk as the current drive.

In order to use the SCSI drive as the current drive, power to any equipment that is interconnected must, of course, be switched on. The SCSI drive will automatically switch to the current drive mode.

<Quick Troubleshooting>

If you are stuck in one of the following situations, refer to the explanations below for corrective actions.

The FD-8 displays the following during the save operation using a SCSI backup drive:



The backup disk contains some data and does not have enough free space to record new data. The FD-8 is asking you whether or not the existing data should be deleted. Take one of the following actions:

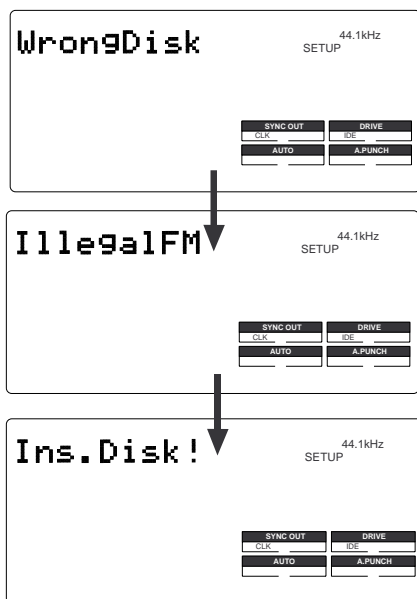
* If you wish to delete the existing data:

Press the EXECUTE/YES key twice. Pressing the key once causes [Del. ALL ?] and [SURE ?] to flash, and pressing it again deletes the existing data so that you will be able to continue the save operation.

* If you do not wish to delete the existing data:

Turn the JOG dial to display [Eject], then press the EXECUTE/YES key. The disk will be ejected. Insert another backup disk in the drive.

When you inserted a SCSI backup disk into the backup drive to save data, the following messages appeared in turn and the disk was ejected.

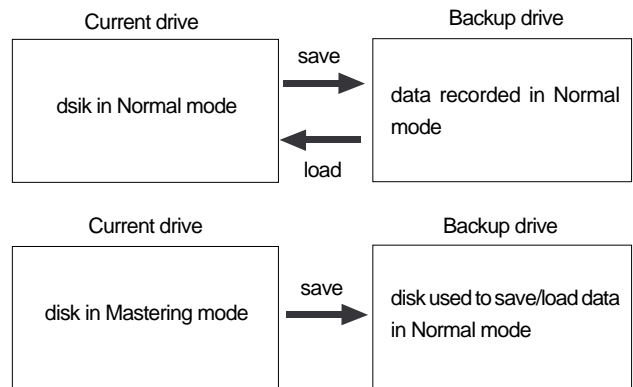


The FD-8 recognizes that the backup disk cannot be used in its current condition. There are two reasons for this.

* You inserted a disk that was used for the current drive.

* The disk's recording mode differs from that of the data to save or load.

For example, the disk used to save or load data in Mastering mode is inserted to save data in Normal mode. That is, you tried to use a disk (that was once used to save or load data in a particular recording mode) to save data in a different recording mode.



To be able to use the ejected disk, you need to re-format it as described below.

* Quit SETUP mode and return to the Time Base display of the current disk, then insert the disk in the backup drive.

* Select the [Bk Format ?] menu in SETUP mode and re-format the backup disk.

Changing the Initial Settings (SETUP Mode)

SETUP mode of the FD-8 offers the “Changing the initial settings” menus that configure the operating environment of the FD-8, a “Check” menu that enables you to check the number of events of each track, and the “Execution” menus that execute certain operations, such as save and load.

The “Changing the initial settings” menus include 15 parameters as shown in Table-1 below. These parameters were set before the unit was shipped from the factory (These values are called the “initial settings.”). Modifying these settings allows you to change the operating environment of the FD-8.

The “Check” menu provides one parameter “Checking the number of events” as shown in Table-2.

Also, as shown in Table-3, the “Execution” menus include six items: Title Edit?, Del. PGM?, Load PGM?, Save PGM?, Format?, and [Bk Format?], which you can execute by selecting the corresponding SETUP menu. This chapter explains how to use the “Changing the initial settings” menu shown in Table-1 and the “Check” menu shown in Table-2. For more information on the “Execution” menus, refer to the corresponding pages in the “Reference page” column in Table-3.

<Table-1> “Changing the initial settings” menu

Parameters	Default setting	Refer page
Setting a time signature	001BAR 4/4	98
Setting a Tempo	001BAR 1♩120	100
Setting the metronome function	oFF	101
Setting a preroll time	00	102
Setting MIDI sync output signal	CLK (Clock)	103
Setting an MTC frame rate	25 frame	104
Setting an MTC offset value	00H 59M 57S 00F 00SF	104
Setting Offset mode	ABS	105
Setting the slave mode	oFF	106
Setting the slave type	VArI	107
Setting the record protect function	oFF	108
Setting digital input tracks	L- r- (No assign)	109
Setting digital output tracks	L- □ r- □ (ST. OUT L, R)	110
Setting BAR/BEAT resolution mode	oFF	111
Setting the MIDI device ID number	00	112

<Table-2> “Check” menu

Check item	Refer page
Check of the Event number on the track.	112

<Table-3> “Execution” menu

Execution item	Refer page
Deleting a Program	35
Editing a Program title	36
Saving song data to an external digital device (DAT, adat, SCSI)	85
Loading song data from an external digital device	85
Formatting an current drive disk	28
Formatting an backup drive disk	31

Selecting SETUP mode

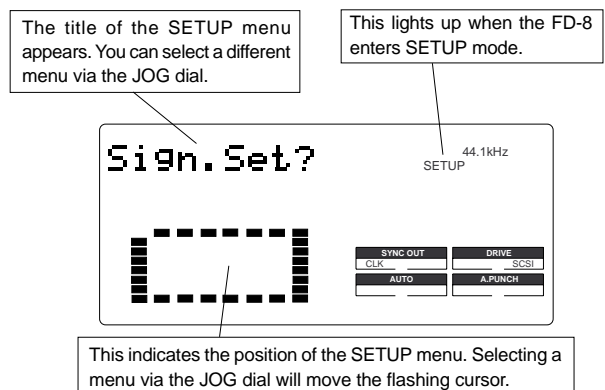
Follow the steps below to select the desired SETUP menu in SETUP mode.

1. While the FD-8 is stopped, press the SETUP key on the control panel.

Pressing the SETUP key causes the FD-8 to enter SETUP mode. The FD-8 displays the first hierarchy level of the SETUP menu you selected before you turned off the power. At this time, the menu graphics appear as shown below. The flashing menu indicator is the currently-selected menu. Turning the JOG dial will select a different menu and the corresponding menu indicator will flash.

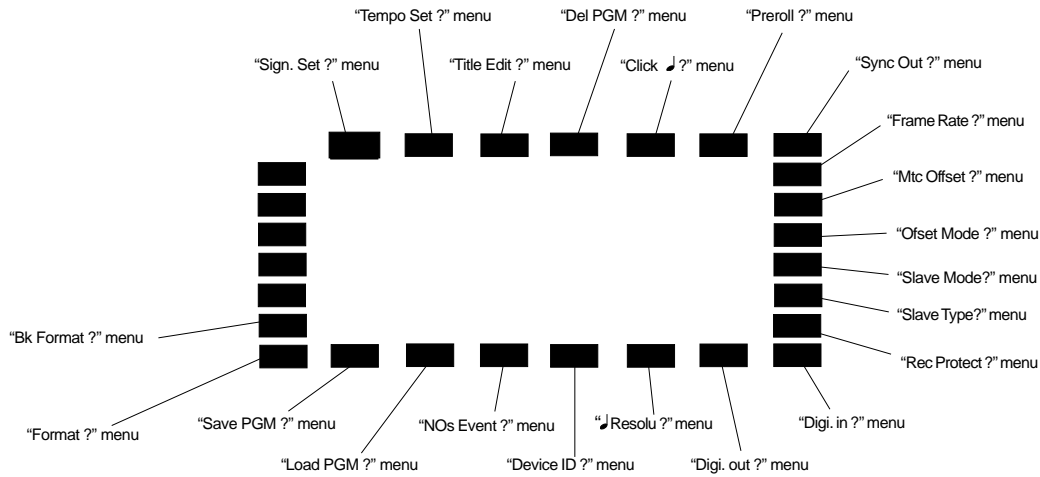
2. Select the desired menu using the JOG dial, then press the EXECUTE/YES key.

The FD-8 displays the second hierarchy level of the selected SETUP menu, where you can set parameters. (Refer to the next page for more information.) To exit SETUP mode, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode.



Note: With the factory initial settings, or when you turn on the power again after you format an external SCSI disk, “Sign. Set? (Setting a time signature)” appears. Otherwise, the first hierarchy level of the previously-selected SETUP menu appears.

The following diagram shows the position of each menu.



Setting a time signature ("Sign. Set ?" menu)

Using the "Setting a time signature" menu, you can set a time signature of a given measure on the internal programmable Tempo Map. For example, you can specify "4/4 for the first and second measures, and 2/4 from the third measure." Setting a time signature and tempo will create a Tempo Map, which allows the FD-8 to manage a song using the BAR/BEAT/CLK Time Base. You can also use the Metronome function.

The time signature and tempo setting are required when MIDI clock & Song Position Pointer are output to an external sequencer.

- Initial setting: [4↓4] for bar [001] (not specified for 002 and later.)
- Setting range of measures: [001] - [999]
- Setting range of time signatures: [1↓4], [2↓4], [3↓4], [4↓4], [5↓4], [1↓8], [3↓8], [5↓8], [6↓8], [7↓8], [8↓8], [-↓-] (delete)
- Max. setting points: 64 points

- * You can set time signatures for each Program individually.
- * The settings can be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.

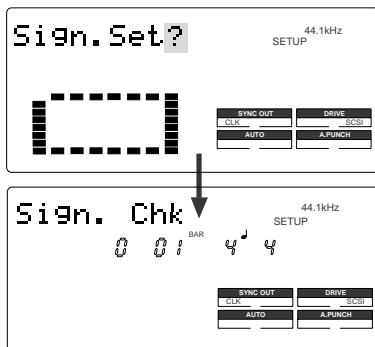
Storing a time signature

1. Select a Program for which to set a time signature.

Refer to "Using the Program Change function" on page 34 for information on selecting a Program.

2. Press the SETUP key, use the JOG dial to select the [Sign.Set ?] menu, then press the EXECUTE/YES key.

The indication changes to [Sign. Chk] and the current time signature appears. The initial setting is [001BAR 4↓4] (4/4 for the first measure).



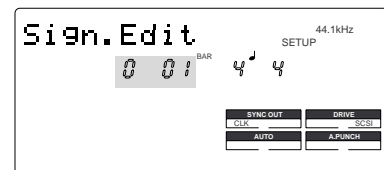
At this time, rotating the JOG dial clockwise enables you to check the current time signatures in sequence.

With the initial setting, time signatures after the first measure are all [---BAR- ↓-]. This means that a time signature of 4/4 applies to all measures.

3. Press the EXECUTE/YES key.

The indication changes to [Sign. Edit] and [001 (measure)] of [001BAR 4↓4] flashes.

You can enter any time signature here.



- **Rotate the JOG dial to enter the desired measure number.**
If you wish to keep the initial setting for the first measure, enter 002. If you try to enter any number other than 001, the time signature indicator shows [-J-]. This means that no time signature is set for any measures other than the first measure. To change the time signature for the first measure, follow the steps below, without entering any other measure number.
- **Press the HOLD/> key, the REWIND button, or the F FWD button to display flashing [—] of [-J-] and enter the time signature using the JOG dial.**

The following measure numbers and time signatures can be entered via the JOG dial.

Measures	001-999, selection of [All Clear?] indication. [All Clear?] means that data in its entirety will be cleared. This is used to initialize the parameter. (Refer to "Clearing stored time signature/tempo data.")
-----------------	---

Time signatures	1J4, 2J4, 3J4, 4J4, 5J4, 1J8, 3J8, 5J8, 6J8, 7J8, 8J8, -J- [-J-] means no time signature assigned, and is used to delete time signature data. (Refer to "Modifying (or deleting) stored time signatures" for more information.)
------------------------	--

Note: You cannot assign "- -" to measure 001.

4. **Press the EXECUTE/YES key whenever you enter a pair of measure/time signature values.**

Repeat this step to specify the necessary time signature for the measures.

To cancel the setting operation, or to exit SETUP mode after storing data, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode.

Modifying (or deleting) stored time signatures

1. Repeat steps 1-3 described in the "Storing a time signature" section to display [Sign. Edit].
2. Press the HOLD/> key, the REWIND button, or the F FWD button so that the flashing cursor is on the time signature value.
3. **Use the JOG dial to enter a new value.**
Entering [—] deletes the existing data.
Note that you cannot enter [—] for measure 001.
4. Press the EXECUTE/YES key.

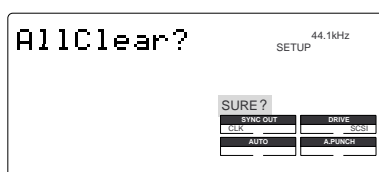
Caution: If modifying or deleting the stored time signature causes the bar/beat setting for the tempo specified in the "Setting a tempo" menu to disappear, the tempo setting will also be automatically erased.

To cancel the setting operation, or to exit SETUP mode after storing data, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode.

Clearing all time signature and tempo settings

Caution: Using this function will erase not only the time signature setting but also the tempo data specified in the "Setting a tempo" menu described in the next section.

1. Repeat steps 1-3 described in the "Storing a time signature" section to display [Sign. Edit].
2. **While the measure number is flashing, turn the JOG dial counter-clockwise to select [All Clear ?].**
When [All Clear ?] appears, [SURE ?] flashes, and you can clear the time signature and tempo data in the next step.



To cancel the All Clear operation, press the STOP button or the EXIT/NO key now. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode.

3. **Press the EXECUTE/YES key.**

The stored time signature and tempo data in its entirety are cleared, and the initial settings are restored.

Setting a tempo (“Tempo Set ?” menu)

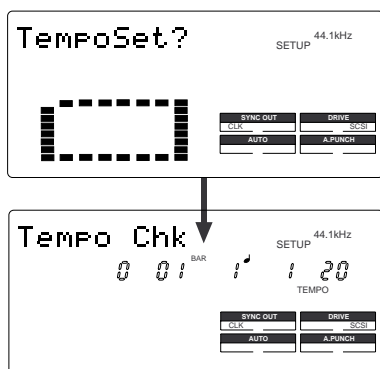
The “Setting a tempo” menu enables you to specify a tempo at a given point in a song that already has a time signature setting. For example, you can specify a tempo of 150 to the third beat of the 12th measure. Time signature and tempo settings make a Tempo Map, which is used by the FD-8 to manage the song using the BAR/BEAT/CLK Time Base, and enable the Metronome function. Tempo settings as well as time signature settings are required when you wish to output MIDI clock and Song Position Pointer to an external sequencer.

- Initial setting: bar 001, beat 1: 120 (001BAR ↵ 120TEMPO)
 - Setting range of measures: Determined by the time signature setting.
 - Setting range of beats: Determined by the time signature setting.
 - Setting range of tempo: 30-250/quarter note, --- (delete)
 - Max. setting points: 64 points
- * You can set the tempo for each Program individually.
 * The settings can be saved and loaded as part of song data.
 * The settings are maintained after you turn off the power to the unit.

Checking the stored tempo setting

1. Select a Program to check the tempo setting for.

Press the SETUP key, use the JOG dial to select the [Tempo Set ?] menu, then press the EXECUTE/YES key. Indication on the display changes as shown below, and the current tempo appears. The initial setting is [001 BAR ↵ TEMPO 120]. This means that a tempo for the first beat of the first measure is set to 120.



2. Rotate the JOG dial clockwise.

You can view the current tempo values in sequence. Tempo value [--- BAR ↵ TEMPO ---] means that no tempo values are specified after the current setting. With the initial setting, [001 BAR ↵ TEMPO 120] is followed by [--- BAR ↵ TEMPO ---].

Storing a tempo value

3. Press the EXECUTE/YES key.

The display indicates [Tempo Edit] and [TEMPO] flashes. (See the figure below.)

This means that you can enter a value now.



4. Press the HOLD/> key, the REWIND button, or the F FWD button to move the flashing cursor to the desired edit location, and use the JOG dial to enter the bar/beat/tempo information to be stored.

Pressing the HOLD/> key or the F FWD button repeatedly will move the flashing cursor from TEMPO to BAR and to ↵, then returns to TEMPO.

Pressing the REWIND button repeatedly will move the cursor in the opposite direction.

The bar and beat settings for the time signatures determine the setting range of bar and beat settings for the tempo. You can specify a tempo between 30 and 250 per quarter note.

The indication [---] means “no tempo,” which is used to delete a tempo setting.

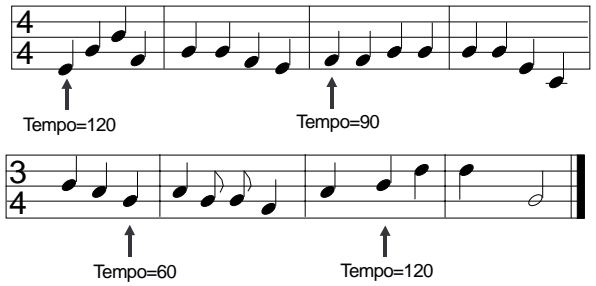
When you turn the JOG dial, [---] appears for the bars and beats for which no tempo has been set.

5. Press the EXECUTE/YES key.

The display shows the stored bar/beat/tempo, then returns to the Tempo Edit indication (as shown in step 4).

6. Repeat steps 3-5 to store necessary tempo data.

For example, if you specify tempo values in the song with [001 BAR 4 ♩ 4] and [005 BAR 3 ♩ 4] settings, the Tempo Map includes the settings shown in the table below.



Tempo Map	
Time signature setting	Tempo setting
001 BAR 4 ♩ 4	001 BAR 1 ♩ TEMPO 120 003 BAR 1 ♩ TEMPO 90
005 BAR 3 ♩ 4	005 BAR 3 ♩ TEMPO 60 007 BAR 2 ♩ TEMPO 120

Modifying (or deleting) stored tempo settings

1. Repeat steps 1-3 described in the “Storing a tempo value” section to display [Tempo Edit ?].
2. Press the HOLD/> key, the REWIND button, or the F FWD button so that the flashing cursor is on the measure number. Turn the JOG dial to select bar/beat to edit or delete.
3. Press the HOLD/> key, the REWIND button, or the F FWD button so that the flashing cursor is on the TEMPO number.

4. Use the JOG dial to enter a new value.
Entering [---] deletes the data at the selected bar/beat.
5. Press the EXECUTE/YES key.
6. Press the STOP button or the EXIT/NO key repeatedly to exit SETUP mode.

Setting the Metronome function (“Click ?” menu)

“Setting the Metronome function” menu allows you to determine whether or not the FD-8 outputs a metronome sound from Real track 8 during playback or recording. Turning the Metronome function on enables you to record your performance while playing the instrument accompanying the metronome sound.

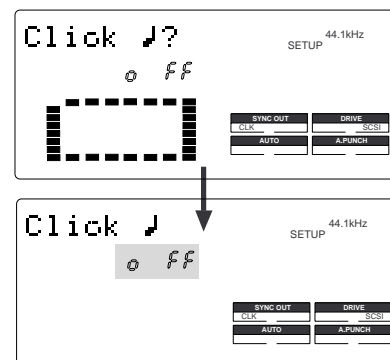
Note: Since Real track 8 outputs the metronome sound when this function is turned on, you cannot play the audio recorded on this track. Also, do not record any data on track 8. The FD-8 can output the metronome sound even from an unrecorded area (outside of the range from ABS 0 to REC END) on track 8.

- Initial setting: [oFF]
- Option: [oFF], or [on]
- * You can turn the function on and off for each Program individually.
- * The settings can be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.

Setting the Metronome function

1. While the FD-8 is stopped, press the SETUP key to enter SETUP mode.
2. Turn the JOG dial to select [Click ♩ ?] ([?] flashes.), then press the EXECUTE/YES key.

The current setting ([oFF] or [on]) appears on the display. Pressing the EXECUTE/YES key lights up the flashing [?] character steadily; the current setting flashes. The initial setting is [oFF] as shown below.



3. Turn the JOG dial to select [on] or [oFF].

Selecting [on] will enable the output of the metronome sound. Selecting [oFF] (initial setting) will disable the metronome output.

4. Press the EXECUTE/YES key.

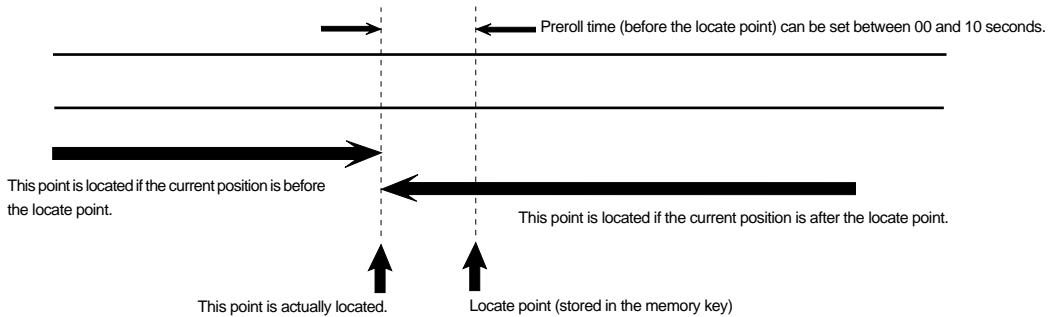
The display shows the selection (on or oFF), then returns to the indication in step 2.

To cancel the setting operation, or to restore a setting obtained prior to the EXECUTE/YES key press, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode and displays the previous Time Base.

Setting a preroll value ("Preroll ?" menu)

The FD-8 features the Preroll function that enables you to locate a position a few seconds prior to a specified locate point. The "Setting a preroll value" menu allows you to set the preroll time (in seconds). The Preroll function is convenient when you wish to monitor the audio data from a point slightly before the locate point.

- Initial setting: [00] second
- Setting range of preroll time: [00]-[10] seconds in one second steps
- * You can set the value for each Program individually.
- * The settings can be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.



Setting a preroll time

1. While the FD-8 is stopped, press the SETUP key to enter SETUP mode.

2. Turn the JOG dial to select [Preroll ?] ([?] flashes.), then press the EXECUTE/YES key.

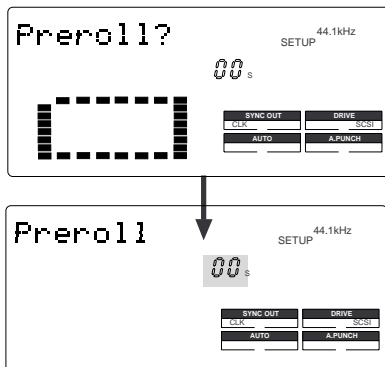
The current preroll time setting appears on the display. Pressing the EXECUTE/YES key lights up the flashing [?] character steadily; the current setting flashes. The initial setting is [00] as shown below.

3. Turn the JOG dial to enter a desired preroll time value.

You can set a value in one-second increments. Rotating the JOG dial clockwise increases the value, and rotating it counter-clockwise decreases the value.

4. Press the EXECUTE/YES key.

The display shows the value, then returns to the indication that appeared in step 2.



To cancel the setting operation, or to restore the setting obtained prior to the EXECUTE/YES key press, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode and displays the previous Time Base.

Setting MIDI sync output signal (“Sync Out ?” menu)

The “Setting MIDI sync output signal” menu enables you to select the type of MIDI sync signals output from the MIDI OUT connector on the rear panel of the FD-8 to an external MIDI device.

The options are MIDI clock & Song Position Pointer, or MTC (MIDI time code). Select an appropriate option depending on the type of signal supported by the connected MIDI device.

If you select MIDI clock & Song Position Pointer, first you need to set the time signatures and tempo as described previously. If you select MTC, you first need to set the MTC frame rate, the MTC offset time, and the MTC offset mode as described later.

- Initial setting: [cLK] (clock & Song Position Pointer)
- Option: [cLK] (clock & Song Position Pointer), [Mtc] (MIDI time code), [oFF] (no output)
- * You can set the parameters for each Program individually.
- * The settings can be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.

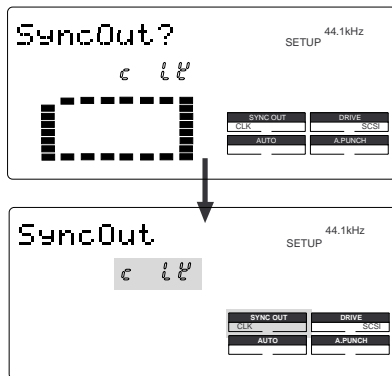
Setting MIDI sync signal

1. While the FD-8 is stopped, press the SETUP key to enter SETUP mode.

2. Rotate the JOG dial to select [Sync Out ?] ([?] flashes.), then press the EXECUTE/YES key.

The currently-selected MIDI sync signal type appears on the display.

Press the EXECUTE/YES key to turn off the flashing [?] indication. The MIDI sync signal type indication flashes, and the indicator flashes indicating the SYNC OUT setting. The initial setting is [cLK] as shown below.



3. Turn the JOG dial to select the desired MIDI sync signal.

Setting this parameter to [cLK] (initial setting) will select MIDI clock & Song Position Pointer.

Setting the parameter to [Mtc] will select MIDI time code. With the [oFF] setting, no MIDI sync signal will be output.

4. Press the EXECUTE/YES key.

The selected MIDI sync signal type is stored, and the FD-8 returns to the display with the flashing [?] indicator as shown in step 2.

Each option appears on the display as follows.

When [cLK] is selected:

SYNC OUT	
CLK	

When [Mtc] is selected:

SYNC OUT	
	MTC

When [oFF] is selected:

SYNC OUT	

To cancel the setting operation, or to restore a setting obtained prior to the EXECUTE/YES key press, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode and displays the previous Time Base.

Setting an MTC frame rate (“Frame Rate ?” menu)

The “Setting an MTC frame rate” menu enables you to set the frame rate for MTC output from the MIDI OUT connector of the FD-8 to an external MIDI device. If you have already set the type of MIDI sync output signal to [MTC], you need to set the frame rate. Use the frame rate of MTC received by the external MIDI device (or sequence software).

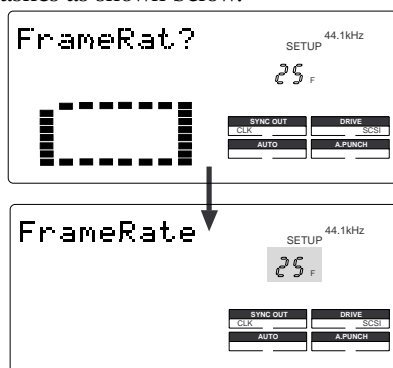
- Initial setting: [25 F] (25 frames)
- Setting range of frame rate: [24 F], [25 F], [30 DF], [30 F]
- * You can set the value for each Program individually.
- * The settings can be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.

Setting an MTC frame rate

1. While the FD-8 is stopped, press the **SETUP** key to enter **SETUP** mode.

2. Turn the **JOG** dial to select [**Frame Rate (?)**] (**[e]** and **[?]** flash alternately.), then press the **EXECUTE/YES** key.

The current frame rate setting appears on the display. Press the **EXECUTE/YES** key to turn off the flashing **[?]** character; the current setting flashes. The initial setting of [25 F] flashes as shown below.



3. Turn the **JOG** dial to enter the desired frame rate.

Rotating the **JOG** dial clockwise or counter-clockwise displays available frame rates as an alternative.

4. Press the **EXECUTE/YES** key.

The selected frame rate is stored and the display returns to the indication with a flashing **[?]** that appeared in step 2.

To cancel the operation, or to restore the setting obtained prior to the **EXECUTE/YES** key press, press the **STOP** button or the **EXIT/NO** key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits **SETUP** mode and displays the previous **Time Base**.

Setting an MTC offset value (“Mtc Offset ?” menu)

The “Setting an MTC offset value” menu enables you to specify an offset time value - the difference between the time of MTC output from the FD-8 and the ABS 00m 00s 00f time. You need to specify this value if you have selected [Mtc] for the “Setting MIDI sync output signal” menu.

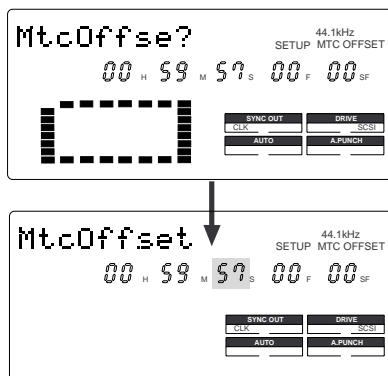
With the initial setting of 00H 59M 57S 00F 00SF, for example, MTC of 59M 57S 00F 00SF is output at the ABS time 00M 00S 00F 00SF. You can also set an offset value from the 001 BAR 1↓00 CLK value (bar/beat) on the Tempo Map. Refer to the next section for information on MTC Offset mode.

- Initial setting: [00H: 59M: 57S: 00F: 00SF]
- Setting range of offset time: 00H: 00M: 00S: 00F: 00SF - 23H: 59M: 59S: 29F: 99SF
- * You can set the value for each Program individually.
- * The settings can be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.

Setting an MTC offset

1. While the FD-8 is stopped, press the **SETUP** key to enter **SETUP** mode.
2. Turn the **JOG** dial to select **[Mtc Offset (?)]** ([t] and [?] flash alternately.), then press the **EXECUTE/YES** key.

The current offset value appears on the display. Pressing the **EXECUTE/YES** key turns off the flashing [?] character, and the value in seconds flashes. You can enter a value at the flashing digit. The number [57] of the initial setting [57S] flashes as shown below.



3. Use the **HOLD/>** key, the **REWIND** button, or the **F FWD** button to move the flashing cursor, and turn the **JOG** dial to enter the desired offset value.

Press the **HOLD/>** key or the **F FWD** button to move the flashing cursor to the right, and press the **REWIND** button to move it to the left. Turning the **JOG** dial continuously will round up the number to the next digit. For example, if you rotate the **JOG** dial on the seconds digit up 59, turning the dial further will increase the number on the digit of minute by one.

4. Press the **EXECUTE/YES** key.

The selected offset value is stored and the display returns to the indication with the flashing [?] that appeared in step 2.

To cancel the operation, or to restore the setting obtained prior to the **EXECUTE/YES** key press, press the **STOP** button or the **EXIT/NO** key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits **SETUP** mode and displays the previous Time Base.

Note: For example, if you set **MTC Offset** mode to **[ABS]** (see the next section) and you wish to start the song from **MTC's 01H 00M 00S 00F**, you may wish to set a preroll of three seconds with an **MTC offset of 00H 59M 57S 00F**.

Setting Offset mode (“Offset Mode ?” menu)

If you have selected **[MTC]** in the “Setting Offset mode” menu, you need to select **MTC Offset** mode. This menu enables you to determine whether the specified **MTC** is output at **ABS 00H 00M 00S 00F** or at **001 BAR 1 ♪00 CLK** (bar/beat) of the **Tempo Map**.

Note: As an example, if you set **MTC Offset** mode to **[ABS]** and you wish to start the song from **MTC's 1H 00M 00S 00F**, you may want to set a preroll of three seconds with **MTC offset of 00H 59M 57S 00F**.

If you select **[BAR ♪]** as the **MTC Offset** mode, a preroll of two measures is automatically set. Use **01H 00M 00S 00F**; do not set a preroll value.

Note: If you set **Offset** mode to **[BAR ♪]** and use **MTC** to synchronize sequence software on the computer, the tempo of the sequencer may sometimes slip gradually. This is because the tempo of the **FD-8** and the tempo of the software are slightly different even if both use the same tempo. Some sequence software can read the tempo output from the **FD-8** correctly. We recommend that you use the tempo of the **FD-8** on the sequence software. No such problems will occur if the sequence software synchronizes the **FD-8** via **MIDI clock**, instead of **MTC**.

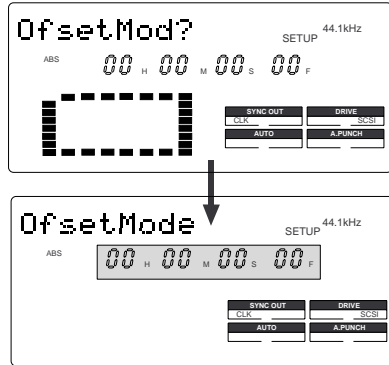
- Initial setting: **[ABS 00H 00M 00S 00F]**
- Offset mode option: **[ABS 00H 00M 00S 00F]**, or **[BAR ♪ 001 BAR 1 ♪]**
- * You can set the mode for each Program individually.
- * The settings can be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.

Setting MTC Offset mode

1. While the FD-8 is stopped, press the **SETUP** key to enter **SETUP** mode.

2. Turn the **JOG** dial to select [**Offset Mode (?)**] ([**e**] and [**?**] flash alternately.), then press the **EXECUTE/YES** key.

The current offset mode appears on the display. Pressing the **EXECUTE/YES** key to turn off the flashing [**?**] character. The Offset mode indicator flashes. With the initial setting, [ABS 00H 00M 00S 00F] flashes as shown below.

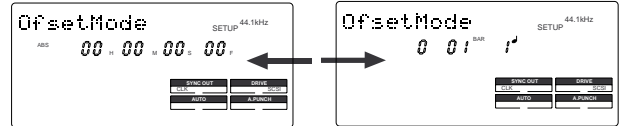


3. Use the **JOG** dial to select the desired **Offset mode**.

Rotating the **JOG** dial clockwise or counter-clockwise will alternately show a flashing [ABS 00H 00M 00S 00F] and [001BAR 1 ♪].

If you select [ABS 00H 00M 00S 00F], the specified MTC offset time is output at ABS 00H 00M 00S 00F.

If you select [001BAR 1 ♪], the specified MTC offset time is output at 001 BAR 1 ♪ 00 CLK of the Tempo Map.



4. Press the **EXECUTE/YES** key.

The selected offset mode is stored and the display returns to the indication with flashing [**e**] and [**?**].

To cancel the operation, or to restore the setting obtained prior to the **EXECUTE/YES** key press, press the **STOP** button or the **EXIT/NO** key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits **SETUP** mode and displays the previous Time Base.

Setting the Slave mode (“Slave Mode ?” menu)

The “Setting the Slave mode” menu allows you to set Slave mode of the FD-8 to on and off.

When Slave mode is turned on, the FD-8 will lock to MTC input from the master device. The FD-8 can also sync to the selected external sync signal if you select an appropriate Slave type.

With this menu setting, you can set up a system in which multiple FD-8s operate in sync or an FD-8 synchronizes to a Fostex digital multitrack recorder, as well as the FD-8 locking to MTC output from the sequence software.

- Initial setting: [o FF]
- Option: [on] or [o FF]

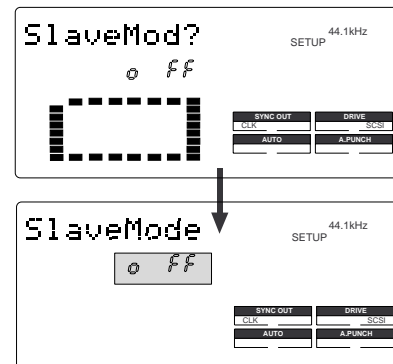
- * You can set the mode for each Program individually.
- * The settings can be saved and loaded as part of song data.
- * The settings are maintained after you turn off the power to the unit.
- * The Program is automatically checked before the operation.
- * The sampling rate is automatically checked before the operation.

Turning Slave mode on and off

1. While the FD-8 is stopped, press the **SETUP** key to enter **SETUP** mode.

2. Turn the **JOG** dial to select [**Slave Mode (?)**] ([**e**] and [**?**] flash alternately), then press the **EXECUTE/YES** key.

The current slave mode appears on the display. Pressing the **EXECUTE/YES** key turns off the flashing [**?**] character, and the Slave mode indicator flashes. With the initial setting, [o FF] flashes as shown below.



3. Use the JOG dial to turn Slave mode on and off.

Rotating the JOG dial clockwise and counter-clockwise alternates flashing [on] and [oFF].
 Selecting [on] turns Slave mode on, and selecting [oFF] turns Slave mode off.

4. Press the EXECUTE/YES key.

If you select [oFF], [e] and [?] flash alternately.
 If you select [on], [e] and [?] flash alternately and [SLAVE] flashes as shown below.
 This means that the FD-8 has not locked to the sync signal.
 When the FD-8 locks to the sync signal from the master device, [SLAVE] lights up steadily.

After you set Slave mode to [on], you need to select the Slave type (type of sync signal) described in the next section.



To cancel the operation, or to restore the setting obtained prior to the EXECUTE/YES key press, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode and displays the previous Time Base.

Setting the Slave type (“Slave Type ?” menu)

The “Setting the Slave type” menu enables you to select the type of external sync signal used when the FD-8 is set as a slave to sync to an external device.

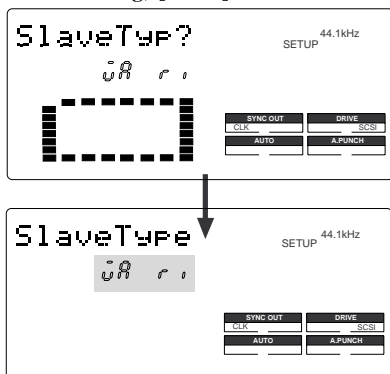
- Initial setting: [VAri]
- Option: [VA ri], [SP di F], [Ad At], [Fr EE]
 - [VA ri]: The FD-8 synchronizes only to external MTC.
 - [SP di F]: The FD-8 locks to MTC, then synchronizes to incoming S/ PDIF digital signals.
 - [Ad At]: The FD-8 locks to MTC, then synchronizes to incoming adat digital signals.
 - [Fr EE]: The FD-8 locks to MTC, then synchronizes to the internal clock.
- * You can set the parameter for each Program individually.
- * The settings can be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.
- * The Program is automatically checked before the operation.
- * The sampling rate is automatically checked before the operation.

Setting the Slave type (external sync signal)

1. While the FD-8 is stopped, press the SETUP key to enter SETUP mode.

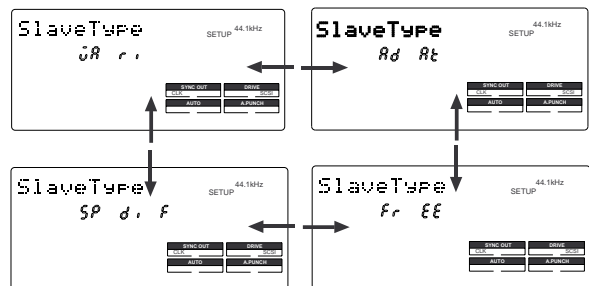
2. Turn the JOG dial to select [Slave Type (?)] ([e] and [?] flash alternately), then press the EXECUTE/YES key.

The current Slave type appears on the display.
 Pressing the EXECUTE/YES key turns off the flashing [?] character, and the Slave type indicator flashes.
 With the initial setting, [VA ri] flashes as shown below.



3. Use the JOG dial to select the desired Slave type.

Rotating the JOG dial clockwise and counter-clockwise will cause the [VA ri], [SP di F], [Ad At], and [Fr EE] indicators to flash in sequence.



- <Notes>**
- You need to input MTC from an external device to the FD-8 with any Slave type (external sync signal).
 - The FD-8 re-chase window is fixed to ten frames. That is, if an offset between the master device and slave device exceeds ten frames, the FD-8 interprets that as out of sync, and tries to chase and lock to MTC sent from the master device. (This operation is called “re-chasing.”) During the re-chase operation, audio output is muted. If the slave machine slips with MTC from the master device by less than ten frames, the slave machine continues running while recognizing the slippage.

Changing the initial setting (SETUP mode)

<Notes>

- This menu is used to select a digital signal used for external synchronization when Slave mode is turned on. If you wish to specify the type of digital signals to record, you need to use the "Setting digital input tracks" menu.
- When you set the Slave type, the Vari Pitch function is automatically disabled. (The [VARI PITCH] indicator turns off.)

4. Press the EXECUTE/YES key.

The selected Slave type is stored, and [e] and [?] flash alternately.

To cancel the operation, or to restore the setting obtained prior to the EXECUTE/YES key press, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode and displays the previous Time Base.

<Notes>

- If you set the Slave type to [SP di F] (S/P DIF digital signal) or [Ad At] (adat digital signal), [DIGITAL] lights up on the display when the FD-8 receives a normal digital signal from the external device. If the signal is abnormal, the [DIGITAL] indicators flash to give you an alarm.
- If you set the Slave type to [SP di F] (S/P DIF digital signal), approximately two seconds of the sound in the entire system will be muted when the FD-8 locks or unlocks to clock. Make sure to input a stable digital signal source.

Setting the Record Protect function ("Rec Protect ?" menu)

The FD-8 features the Record Protect function, which is similar to the function of record-protect tabs on cassette tapes. The "Setting the Record Protect function" menu allows you to turn the Record Protect function on and off. When this function is turned on, you cannot record, paste, or erase data. Use this function to protect your precious data from being erased accidentally.

- Initial setting: [o FF]
- Option: [on] or [o FF]
- * You can turn the function on and off for each Program individually.
- * The settings can be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.
- * The Program is automatically checked before the operation.

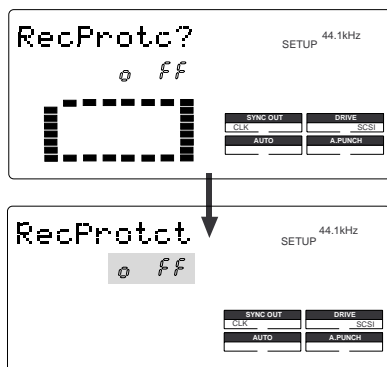
Recording enabled/disabled

1. While the FD-8 is stopped, press the SETUP key to enter SETUP mode.

2. Turn the JOG dial to select [Rec Protct (?)] ([t] and [?] flash alternately), then press the EXECUTE/YES key.

The current setting appears on the display. Pressing the EXECUTE/YES key turns off the flashing [?] character, and the recording enabled/disabled indicator flashes.

With the initial setting, [o FF] flashes as shown below.



3. Use the JOG dial to enable or disable recording.

Rotating the JOG dial clockwise and counter-clockwise will flash [on] and [o FF] alternately. Selecting [o FF] enables recording; you can record, paste, and erase data. Selecting [on] disables recording; and you cannot record, paste, or erase data.

Note: When recording is disabled (on) and you try to record, paste, or erase data, the FD-8 displays [Protected] for a second, indicating that you cannot perform the operation. To perform the operation, you need to enable recording (oFF).

4. Press the EXECUTE/YES key.

[t] and [?] flash alternately.

To cancel the operation, or to restore the setting obtained prior to the EXECUTE/YES key press, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode and displays the previous Time Base.

Setting digital input tracks (“Digi. In ?” menu)

The “Setting digital input tracks [Digi.in ?]” menu allows you to assign digital signals input at the DATA IN connector of the FD-8 to the tracks. You can perform digital recording from an external digital device (CD, MD, DAT, adat, digital mixer, etc.) using this function.

You can assign any two tracks, and route L/R output from an external digital device to these tracks. If you are using an external digital device with an adat output, selecting “AdAt” on the “Setting digital input tracks” menu enables you to record all eight track data digitally.

- Initial setting: [L-], [r-] (No assign for L and R)
 - Assignable tracks: L channel = [1]~ [8], [—] (no assign), or [AdAt] (track 1 ~8)
R channel = [1] ~ [8], or [—] (no assign)
- * This setting is shared by all Programs in the same disk.
* The settings cannot be saved and loaded as part of the song data.
* The settings are maintained after you turn off the power to the unit.

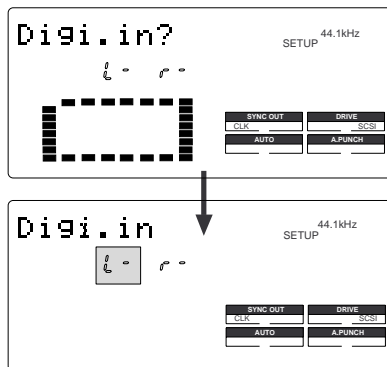
Setting digital input tracks

1. While the FD-8 is stopped, press the SETUP key to enter SETUP mode.

2. Turn the JOG dial to select [Digi. in ?] ([?] flash alternately), then press the EXECUTE/YES key.

The current digital input track assignment appears on the display. Pressing the EXECUTE/YES key turns off the flashing [?] character, and the L channel setting of the digital input track flashes.

With the initial setting, [L-] and [r-] appear and [L-] flashes as shown below. You can select a flashing channel to assign a track.



3. Press the HOLD/> key, the REWIND button, or the F FWD button to select a channel (L or r) and use the JOG dial to specify a track.

To select tracks 1-8, no assign (-), or AdAt, turn the JOG dial while [L] (Channel L) is flashing.

To select tracks 1-8 or no assign (-), move the cursor to flashing [r] (Channel R) turn the JOG dial.

Note: You cannot assign L channel and R channel to the same track. If you assign the same track and press the EXECUTE/YES key, the last channel you set will have priority, and the first channel will be automatically set to [-]. For example, if you assign L channel to [2], then assign R channel to [2], and press the EXECUTE/YES key, L channel will be set to [L-], and R channel will be set to [r-2].

4. Press the EXECUTE/YES key.

The selected track assignment is stored, and [?] flashes. When the FD-8 receives a correct digital signal, [DIGITAL] lights up on the display.

To cancel the operation, or to restore the setting obtained prior to the EXECUTE/YES key press, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode and displays the previous Time Base.

Note: If [DIGITAL] flashes on the display, check the connection with the external device, and the settings on the FD-8 and the external device.

Note: While a track is assigned for digital input, you cannot use the same track for analog recording via the corresponding input jack. When you finish digital recording, set the “Setting digital input tracks” menu to [L-, r-] (no assign).

However, in other tracks not assigned for digital input, it is possible to record analog signals. For example, if tracks 1 and 2 (L-1, r-2) are selected for digital inputs, then digital signals in tracks 1 and 2, and analog signals in other tracks can be recorded, thus making it possible to simultaneously record digital and analog signals on all four tracks (If an MO disc is used for the current drive, only two tracks can be recorded simultaneously.).

When the “Setup of the digital input track” is set to “AdAt,” please note that tracks 1 ~ 8 will all be assigned to digital input and thus, analog signals cannot be recorded in any of the tracks.

Setting digital output tracks (“Digi. Out ?” menu)

The “Setting digital output tracks” menu enables you to assign the track that outputs digital signals from the DATA OUT connector of the FD-8 to an external digital device. You can send the recorded audio data on the FD-8 to an external digital device (MD, DAT, adat, digital mixer, etc.) in digital form. Any two tracks selected from tracks [1]–[8], or [s-t] (STEREO OUT L, R outputs) are assignable. You can also select [AdAt] to output all track data (1–8) simultaneously to a digital device with an adat input.

- Initial setting: [L- □], [r- □] (Stereo Out L, R output) □ = s
- Assignable tracks: L channel = [1] ~ [8], □ (Stereo Out L), or [AdAt]
R channel = [1] ~ [8], or □ (Stereo Out R)

- * This setting is shared by all Programs in the same disk.
- * The settings cannot be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.

<IMPORTANT>

Match the sampling rate of the digital input on the external device with the sampling rate of the FD-8 to send digital signals from the FD-8 to the external device.

Setting digital output tracks

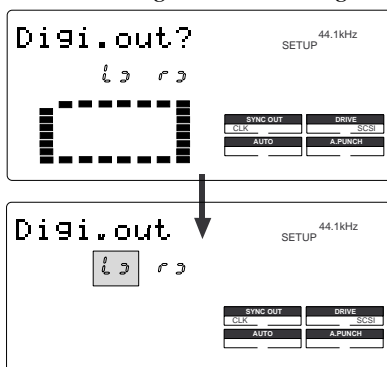
1. While the FD-8 is stopped, press the **SETUP** key to enter **SETUP** mode.

2. Turn the **JOG** dial to select [Digi. out ?] ([?] flashes), then press the **EXECUTE/YES** key.

The current digital output track assignment appears on the display.

Pressing the **EXECUTE/YES** key turns off the flashing [?] character, and the L channel setting of the digital output track flashes. With the initial setting, [L-□] and [r-□] appear, and [L-□] flashes as shown below.

You can select a flashing channel to assign a track.



3. Press the **HOLD/>** key, the **REWIND** button, or the **F FWD** button to select a channel (L or r) and use the **JOG** dial to specify a track.

To select tracks 1–8, Stereo Out L (□ appears), or AdAt, turn the **JOG** dial while [L] (Channel L) is flashing.

To select tracks 1–8 or Stereo Out R (□ appears), turn the **JOG** dial while [r] (Channel R) is flashing.

Note: At setup of the digital output track, tracks to be assigned to L and R cannot be the same, for example, such as L-4 and r-4. Should setup be executed by mistakenly selecting same track numbers for L and R, the number setup for the L channel will be given priority and “□” will be setup automatically for R. In other words, L channel will be setup to the specified track and R channel will be setup to R of STEREO OUT.

4. Press the **EXECUTE/YES** key.

The selected track assignment is stored, and [?] flashes.

To cancel the operation, or to restore the setting obtained prior to the **EXECUTE/YES** key press, press the **STOP** button or the **EXIT/NO** key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits **SETUP** mode and displays the previous Time Base.

Setting BAR/BEAT resolution mode (“Resolu ?” menu)

The “Setting BAR/BEAT resolution mode” menu enables you to turn BAR/BEAT resolution mode on and off. The initial setting is “off.” When you turn this mode on, the CLK (clock) digits will be always round off to 00 and be stored in the memory key while the FD-8 is using the BAR/BEAT/CLK Time Base. That is, beat resolution is used. Using this function allows you to automatically store a beat-resolution value of the CLIPBOARD IN/OUT points and other points in real-time. (Press the STORE key, then the corresponding memory key while playing the FD-8.) Therefore, it is very convenient when you perform the Copy & Past or Move & Paste operation in beat-resolution.

For example, assume that you have stored the value for 001BAR1 ♪46 CLK as the CLIPBOARD IN point, and the value for 002BAR4 ♪51 CLK as the CLIPBOARD OUT point.

These values will be used as they are if BAR/BEAT resolution mode is turned off. However, the mode is turned on, the following values will be stored instead. The following example has a time signature setting of 4/4.

001BAR1 ♪46 CLK → 001BAR1 ♪00 CLK (A CLK value of 46 will be rounded off.)

002BAR4 ♪51 CLK → 003BAR1 ♪00 CLK (A CLK value of 51 will be rounded up.)

- Initial setting: [o FF]
- Options: [on] or [o FF]
- * This setting is shared by all Programs in the same disk.
- * The settings cannot be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.

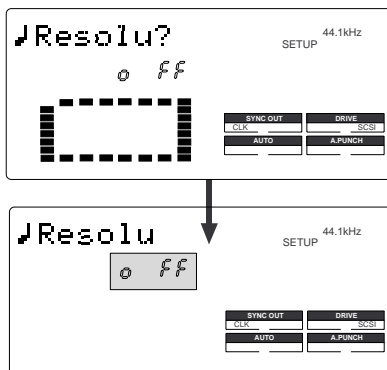
Setting BAR/BEAT resolution mode

1. While the FD-8 is stopped, press the SETUP key to enter SETUP mode.

2. Turn the JOG dial to select [♪ Resolu ?] ([?]) flashes), then press the EXECUTE/YES key.

The current BAR/BEAT resolution mode setting appears on the display.

Pressing the EXECUTE/YES key turns off the flashing [?] character, and the BAR/BEAT resolution mode setting flashes. With the initial setting, [o FF] flashes as shown below.



3. Use the JOG dial to turn the mode [on] or [off].

When you turn the JOG dial clockwise and counter-clockwise, [on] and [o FF] flash alternately.

Selecting [on] turns BAR/BEAT resolution mode on, and selecting [o FF] turns BAR/BEAT resolution mode off.

4. Press the EXECUTE/YES key.

The selected mode setting is stored, and [?] flashes.

To cancel the operation, or to restore the setting obtained prior to the EXECUTE/YES key press, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode and displays the previous Time Base.

Setting the MIDI device number (“Device ID ?” menu)

The “Setting the MIDI device number” menu enables you to set the FD-8 device ID number required to control the unit from a sequence software using MMC (MIDI Machine Control) or FEX (Fostex System Exclusive Message). The transmit device ID links to this setting. You can set the device ID from 00 to 99. However, if the device ID number of the message the FD-8 receives is [7F], the FD-8 will recognize it to perform the corresponding operation, regardless of its device ID setting.

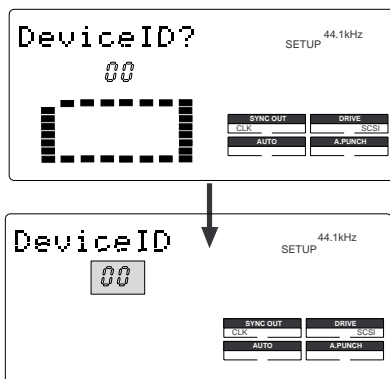
- Initial setting: [00]
- Device ID: [00] ~ [99]
- * This setting is shared by all Programs in the same disk.
- * The settings cannot be saved and loaded as part of the song data.
- * The settings are maintained after you turn off the power to the unit.

Setting the MIDI device ID

1. While the FD-8 is stopped, press the **SETUP** key to enter **SETUP** mode.

2. Turn the **JOG** dial to select **[Device ID?]** ([?] flashes), then press the **EXECUTE/YES** key.

The current MIDI device ID number appears on the display. Pressing the **EXECUTE/YES** key turns off the flashing [?] character, and the MIDI device ID number flashes. With the initial setting, [00] flashes as shown below.



3. Use the **JOG** dial to set the desired MIDI device ID number.

Turning the **JOG** dial clockwise increments the value, and turning it counter-clockwise decrements the value.

4. Press the **EXECUTE/YES** key.

The MIDI device ID number is stored, and [?] flashes.

To cancel the operation, or to restore the setting obtained prior to the **EXECUTE/YES** key press, press the **STOP** button or the **EXIT/NO** key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits **SETUP** mode and displays the previous Time Base.

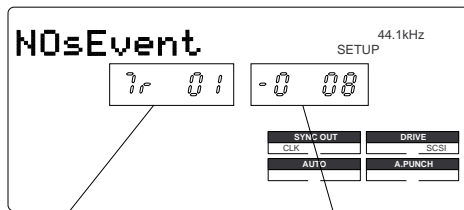
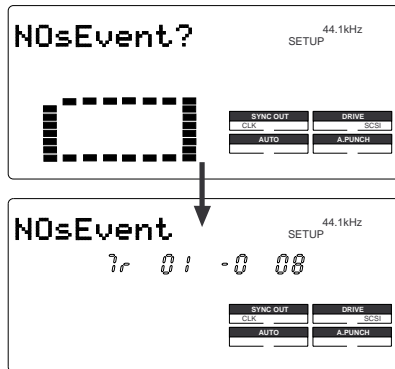
Checking the number of track events (“NOs Event ?” menu)

The “Checking the number of track events” menu enables you to check the number of events on each track. Each track (including Additional tracks) of FD-8 Programs consists of consecutive audio files (and “zero” files). The number of events represents the total number of audio files and 0 files. Each track can contain up to 512 events.

If you are editing a song of typical length (about six minutes), repeated editing operation does not usually cause this maximum number to be exceeded. (Exceeding this limit is called “event number overflow.”) Even a 20-minute song will not cause event number overflow. This is because the FD-8 system always optimizes the data structure by keeping the number of events low. However, if a recording on a track is scattered in different areas of the disk, or if you have made a very long recording on a single track and performed many edits, you should be wary of “event number overflow.” To avoid this problem, use the “Checking the number of track events” menu to check the number of events on each track prior to recording or editing.

Checking the number of track events

1. While the FD-8 is stopped, press the SETUP key to enter SETUP mode.
2. Turn the JOG dial to select [NOs Event?] ([?] flashes), and then press the EXECUTE/YES key.
The screen changes as follows, indicating the number of events on track 1. (In this example, track 1 includes eight events.)



Indicating the track number.

Indicating the number of selected track events

3. Use the JOG dial to select another (01-24) to check the number of events on the corresponding track.
4. Press the EXIT/NO key or the STOP button repeatedly to exit SETUP mode.

To cancel the operation, or to restore the setting obtained prior to the EXECUTE/YES key press, press the STOP button or the EXIT/NO key. Each time you press one of these keys, the FD-8 returns to the previous hierarchy level of the menu, and finally exits SETUP mode and displays the previous Time Base.

* For more information on audio files and events, refer to the "Audio file and event" section of the "Before Starting" chapter.

(Digital Multitracker)
Model FD-8

MIDI Implementation Chart

Date:
Version: V1.00

Function.....	Transmitted	Recognized	Remarks
Basic Channel	Default X Changed X	X X	
Mode	Default X Message X Altered *****	X X X	
Note Number:	True voice *****	X X	
Velocity	Note ON X Note OFF X	X X	
After Touch	Key's X Channel's X	X X	
Pitch Bend	X	X	
Control Change	X	X	
Program Change:	True # X *****	X X	
System Exclusive	○ (rem. 1)	○ (rem. 2)	
Common	: Quarter frame ○ : Song Position ○ : Song Select X : Tune X	X X X	
System Real Time	: Clock ○ : Commands ○ (rem. 3)	X X	
Aux. Message	: Local ON/OFF X : All Notes OFF X : Active Sense X : Reset X	X X X X	
Notes	rem. 1: MMC (Device ID=00~99, 127), MTC, Identity reply, FOSTEX Exclusive rem. 2: MMC (Device ID=00~99, 127), MTC, Inquiry, FOSTEX Exclusive rem. 3: START, STOP, CONTINUE		

Mode 1: OMNI ON, POLY
Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
Mode 4: OMNI OFF, MONO

○: Yes
X: No

MMC Command List

Command List	Movement (Recorder)
01: STOP	STOP
02: PLAY	PLAY
03: DEFERRED PLAY	DEFERRED PLAY
04: FAST FORWARD	F FWD
05: REWIND	REWIND
06: RECORD STROBE	REC
07: RECORD EXIT	PUNCH OUT
09: PAUSE	STOP
40: WRITE	Refer to MMC Response/Information Field List
41: MASKED WRITE	Refer to MMC Response/Information Field List
42: READ	Refer to MMC Response/Information Field List
44: LOCATE	LOCATE to Setting Data
47: SHUTTLE	CUE/REVIEW (+/- 1~60 times)
4C: MOVE	Refer to MMC Response/Information Field List
4D: ADD	Refer to MMC Response/Information Field List
4E: SUBTRACT	Refer to MMC Response/Information Field List

MMC Response/Information Field List	Command
01: SELECTED TIME CODE	READ/WRITE/MOVE/ADD/SUBTRACT
03: REQUESTED OFFSET	READ/WRITE
04: ACTUAL OFFSET	READ
08: GP 0	READ/WRITE/MOVE/ADD/SUBTRACT
09: GP 1	READ/WRITE/MOVE/ADD/SUBTRACT
0A: GP 2	READ/WRITE/MOVE/ADD/SUBTRACT
0B: GP 3	READ/WRITE/MOVE/ADD/SUBTRACT
0C: GP 4	READ/WRITE/MOVE/ADD/SUBTRACT
0D: GP 5	READ/WRITE/MOVE/ADD/SUBTRACT
0E: GP 6	READ/WRITE/MOVE/ADD/SUBTRACT
0F: GP 7	READ/WRITE/MOVE/ADD/SUBTRACT
48: MOTION CONTROL TALLY	READ
4C: RECORD MODE	READ/WRITE
4E: TRACK RECORD STATUS	READ
4F: TRACK RECORD READY	READ/WRITE/MASKED WRITE
51: RECORD MONITOR	READ/WRITE

Inquiry Message List

IDENTITY REQUEST: F0, 7E, <channel>, 06, 01, F7
 IDENTITY REPLY: F0, 7E, <channel>, 06, 02, 51, 01, 00, 0F, 00, 01, 00, 7F, 7F, F7

51: Fostex ID
 01, 00: Device family code
 0F, 00: Device family number FD-8
 01, 00, 7F, 7F: Software version

Maintenance

Cleaning the exterior

* For normal cleaning, use a soft dry cloth

For stubborn dirt, moisten a cloth in diluted detergent, wring it out firmly, and wipe the dirt off. Then polish with a dry cloth.

Never use solvents such as alcohol, thinner or benzene, since these will damage the printing and finish of the exterior.

Specifications

* Mixer section

<INPUT 1 ~ 6>

Connector : ϕ 6mm Phone jack (x 6)
 Input Impedance : 20k Ω or higher
 Reference Input Level : -10dBV

<INPUT 7, 8>

Connector : ϕ 6mm Phone jack (x 2)
 : XLR-3-31 type (x 2)
 Input Impedance : 20k Ω or higher
 Reference Input Level : L: -50dBV, M: -30dBV,
 H: -10dBV

<INSERT 7, 8>

Connector : ϕ 6mm Phone jack (x 2)
 Load Impedance : 10k Ω or higher
 Reference Output Level : -10dBV
 Input Impedance : 10k Ω or higher
 Reference Input Level : -10dBV

<AUX SEND 1, 2>

Connector : ϕ 6mm Phone jack (x 2)
 Load Impedance : 10k Ω or higher
 Reference Output Level : -10dBV

<AUX RTN 1 L/R, 2 L/R>

Connector : ϕ 6mm Phone jack (x 4)
 Input Impedance : 8k Ω or higher
 Reference Input Level : -20dBV

<STEREO OUT L/R>

Connector : RCA pin jack (x 2)
 Load Impedance : 10k Ω or higher
 Reference Output Level : -10dBV

<MONITOR OUT L/R>

Connector : ϕ 6mm Phone jack (x 2)
 Load Impedance : 10k Ω or higher
 Reference Output Level : -10dBV

<PHONES OUT>

Connector : ϕ 6mm Stereo Phone jack
 Load Impedance : 16 Ω or higher
 Maximum output : 50mW (at 50 Ω)

<Equalizer>

HI : 12kHz +/-15dB (Shelving type)
 MID : 200Hz ~ 5kHz +/- 15dB (Parametric type)
 LO : 80Hz +/- 15dB (Shelving type)

<Frequency Response> : 20Hz ~ 20kHz (typical)

<Dynamic Range> : 105dB (typical)

* Recorder section

<Recording/Reproducing>

Recording Medium : External SCSI device
 (SCSI-2, asymmetrical transfer)
 * Connectable SCSI device: Two (for recording
 x1, for backup x 1)
 : Internal E-IDE type 2.5 inch
 hard disk (optional)

<Recording Format> : FDMS-3*
 (* Fostex Disk Management System-3)

<Recording Mode>

Normal Mode : 8 Real track + 16 Additional
 track (Sampling Rate: 44.1kHz/
 A.D.A.C.*)
 Mastering Mode : 8 Real track + 16 Additional
 track (Sampling Rate: 44.1kHz/
 16-bit linear)

<A/D> : 20-bit 64 times over sampling,
 delta sigma modulation type

<D/A> : 20-bit 128 times over
 sampling, delta sigma
 modulation type

<Digital Input/Output> : 44.1kHz/16-bit linear

<Save/Load> : Mastering Mode: FDIO-1*
 (DAT, adat)
 : Normal Mode: SCSI
 (* Fostex Data Input /Output-1)

<Tracks for simultaneous recording>	
	: 8 tracks (via optical adat)
	: 2 tracks (via analog)
<Tracks for simultaneous playback>	
	: 8 tracks
<Program No.>	: Maximum 99 tunes
<Vari pitch.>	: +/-6%
<Crossfade>	: 10msec.
<Recording/reproducing frequency>	
	: 20Hz ~ 20kHz (typical)
<Dynamic Range>	: 90dB (typical)
<Total harmonic distortion>	: 0.008% (at mastering mode)
<Tempo map>	
Signature	: 1/4, 2/4, 3/4, 4/4, 5/4, 1/8, 3/8, 5/8, 6/8, 7/8, 8/8
Tempo	: quarter note (1/4 note) = 30 ~ 250

* Input/Output

<RECORDER IN>

Connector	: RCA pin jack (x2)
Input Impedance	: 20k Ω or higher
Reference Input Level	: -10dBV

<DATA IN/OUT>

Connector	: Optical (x2)
Format	: (1) IEC958 Part 3 (S/P DIF), (2) Alesis Proprietary Multi Channel Optical Interface (Adat Optical)

* Switch to either (1) or (2) depending on setup.

<MIDI IN/OUT>

Connector	: DIN 5 PIN (x2)
Format	: MIDI

<PUNCH IN/OUT>

Connector	: ϕ 6mm phone jack (x1)
-----------	------------------------------

* For using optional Model 8051 foot switch)

<SCSI>

Connector	: D-SUB 25 PIN (x1)
Protocol	: SCSI-2, unbalanced transmission line
Type of transmission	: Asynchronous transmission
Connectable number of units	: 2
SCSI-ID	: Automatic recognition

* General

<Dimensions (mm)>	: 552 (W) x 110 (H) x 355 (D)
	* Including highest protrusion.
<Weight>	: Approx. 5kg

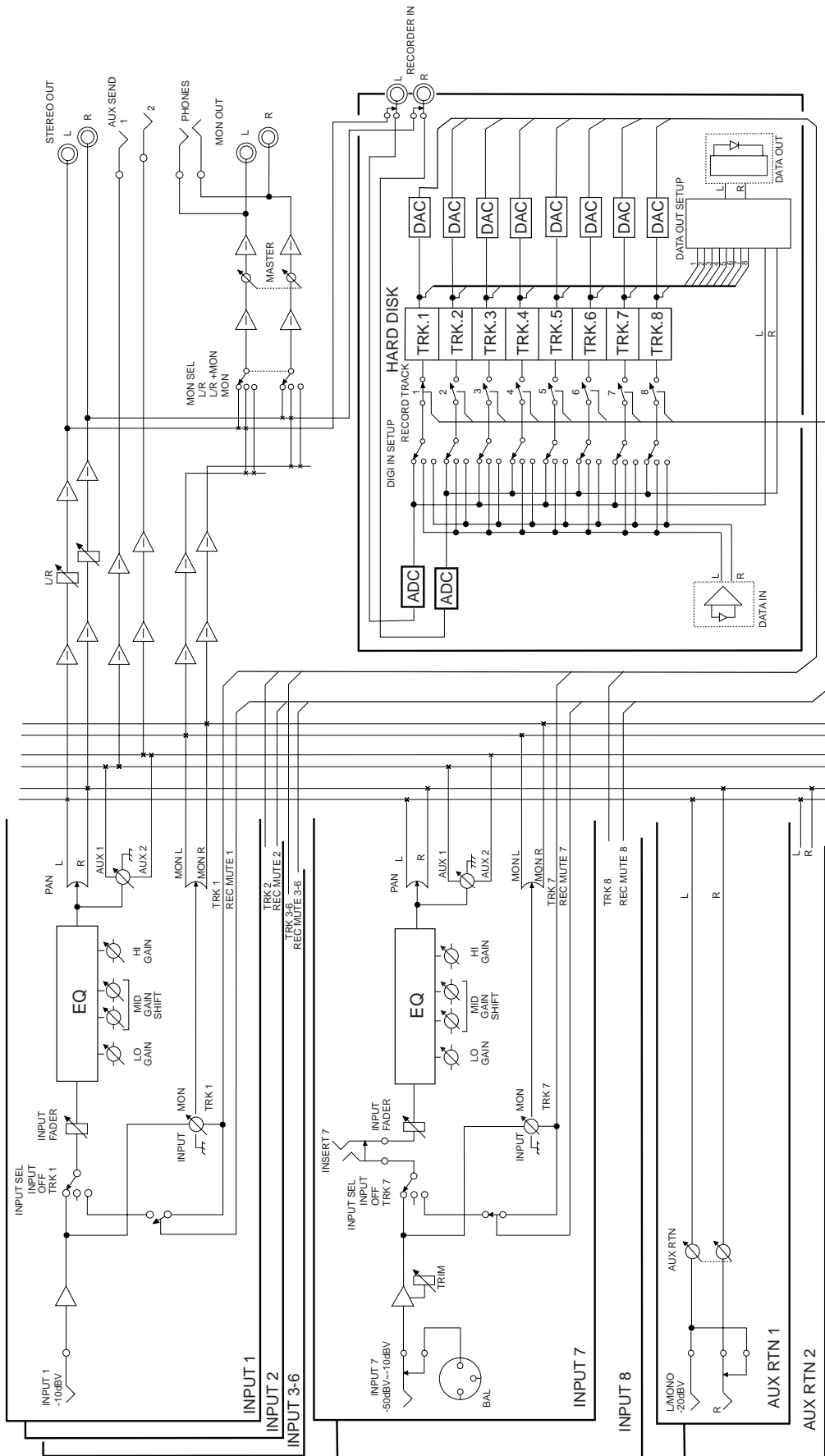
<Power supply>	: AC 120V, 60Hz
	: AC 230V ~ , 50/60Hz
<Power Consumption>	: 15W

* Specifications and appearance are subject to change without notice for product improvement.

*A.D.A.C. (Advanced Digital Audio Acoustic Coding)
A.D.A.C. is the next generation digital audio coding technique maximized for multitrack recording which have been developed by joint research of Matsushita Electric Industry Corporation and Fostex Corporation.

* "Adat" and the "Adat symbol" are trademarks of Alesis Corporation.

Block Diagram



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<List of SCSI drive and media checked for function (as of Aug. 1998)>

<SCSI drive and media checked for function>

"The SCSI drive and media checked for function" are products that have been selected from the Fostex recommended list. They have been connected to an FD-8 and their correct operation confirmed. However, in some cases, there is a subtle difference in performance from unit to unit, even in the same model from the same manufacturer, and therefore, this is not a guarantee of the performance of all recommended products on the list. This is also not an evaluation of the SCSI drive and their performance. The FD-8 has three types of "Recording Mode" and there is a limit to the equipment which can be used (Refer to the owner's manual, the quick operation guide and this additional Edition in regards to the recording mode.).

<Drive and media possible in record/playback when connecting to the FD-8>

Maker/Drive name	Disk Capacity	Recording mode of the FD-8	
		Normal mode	Mastering mode
Iomega zip	100 MB	○ (Approx. 67 minutes)	X
SyQuest ezflyer	230 MB	○ (Approx. 156 minutes)	X
MO drive related	640/540/230 MB	○ *1	X
2.5 inch internal IDE hard disk *3	-	○	○
External fixed SCSI hard disk *4	-	○	○

Time in () is approximate mono track recording time.

(*1): Record/playback time will differ depending on the capacity of the disk used (640/540/230 MB).

The drive and media which can be used are as follows (The time in the following is the approximate mono track recording time).

Maker name	Drive	Media type	Recording time
			Normal mode
FUJITSU	M2513A/M2513E	640/540/230 MB	(Approx. 437/368/156 minutes)
	M2513D/M2512A	230 MB	(Approx. 156 minutes)
OLYMPUS	MOS350/MOS341 series	640/540/230 MB	(Approx. 437/368/156 minutes)
	MOS332 series	230 MB	(Approx. 156 minutes)

(*2): Recording time could be shorter than the time written in above chart, depending on the drive used.

Therefore, the recording time should be checked after formatting, and then checking the REMAIN display.

(*3): The 2.5 inch IDE hard disk will be installed by our service department (The customer cannot do the installation).

If a 2.5 inch IDE hard disk has been installed, we recommended that you read the following items.

(*4): Record/playback time depends on the drive memory capacity.

<To customers with a 2.5 inch internal IDE hard disk installed>

Please note the following if a 2.5 inch hard disk has been installed.

* The 2.5 inch IDE hard disk will be formatted in "**Mastering mode**" before delivery to the customer.

Therefore, the customer need not format it. If the internal hard disk must be reformatted, be sure to do it correctly after referring to "Reformatting the disk" in the owner's manual. When formatting, be careful to note the following.

* When the power is switched on to an FD-8 with a 2.5 inch hard disk installed, the display will indicate as shown below at lower left. This indicates that the media which can be used is the internal hard disk [IDE], and will be lit as shown below.

However, even though a 2.5 inch hard disk is installed, if an external SCSI drive (current drive) is connected, it will be given priority automatically and [SCSI] will be shown in the display (lower right indication).

Therefore, when both an external SCSI drive (current drive) and an internal hard disk are used, the external SCSI drive should not be connected to the SCSI connector if the internal hard disk is to be used to record/playback or when it is to be formatted.

