TASCAM
TEAC Professional Division

MD-801RMKII/
MD-801PMKII

MD Recorder/Player
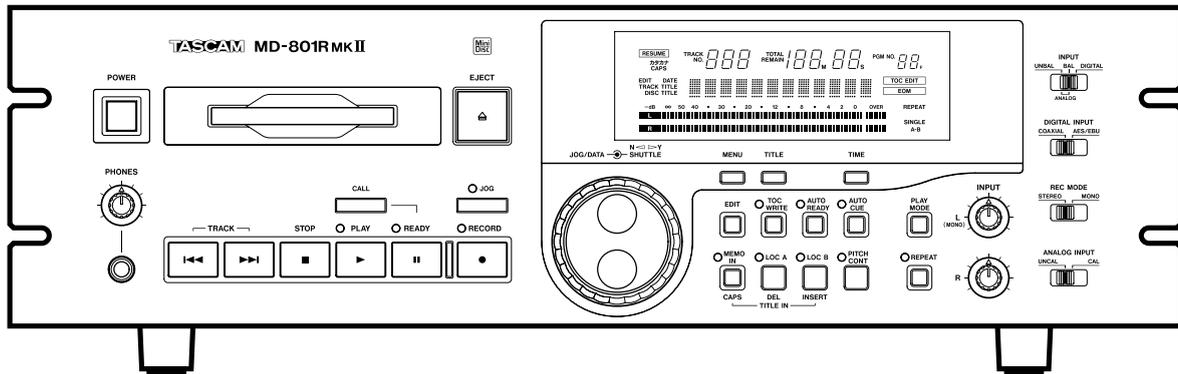
OWNER'S MANUAL

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

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

The lightning flash with arrowhead symbol, within 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.

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

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

Table of Contents

Table of Contents

This manual covers the two models of the MD-801 Mk II product line: the MD-801R Mk II, which is capable of recording and playing back on MiniDisc media, and the MD-801P Mk II, which is for playback only of such media. Apart from the recording and associated facilities provided on the MD-801R, the functionality and specifications of the two units are identical. For brevity, the unit will be referred to as the "MD-801" in instances where there is no difference between the recording and playback models.

When a section of this manual describes a function which is included as part of the MD-801R only, the section will be marked as below:

R **3.12.2 Laser pickup time**

This indicates how long…

There are no features which are unique to the MD-801P model.

1.1 About the MiniDisc format

This section provides some basic information regarding the MiniDisc format. If more detailed information is required, the reader is referred to one of the many books on the subject. John Wilkinson, *The Art of Digital Audio* 2nd ed. Oxford: Focal Press, 1994 is an excellent reference source, particularly Chapter 12, which deals with the use of optical discs in audio applications.

The MiniDisc format (MD) is a convenient form of digital audio media, using optical playback, similar to CDs.

The format of the MD is substantially smaller than that of the CD, and the disc itself is housed in a cartridge with a shutter, similar to that of a 3.5" floppy disc drive. The disc platter should never be removed from this cartridge.

Pre-recorded MDs, which are manufactured in the same way as commercial CDs, using a stamper process, are read using a laser beam to read the pits stamped onto the disc.

Recordable MDs are also available, and the technology used for recording on a recordable MD is magento-optical, allowing the disc to be re-used many times. Shutters on both sides of the disc allow access to the disc surface by the recorder's laser and magnetic head.

There is a third kind of MD, the hybrid, which contains pre-recorded pits at the center of the MD, together with an area reserved for user recording.

Full explanations of the principles of magneto-optical recording may be found in a number of excellent reference works, but briefly, during the recording process, the disc is exposed to a strong laser beam which heats the disc's magnetic medium so that a magnetic field can be applied to change the orientation of the magnetic particles. On cooling, this orientation is permanently fixed, unless the disc is reheated and re-recorded.

The MD format therefore provides the convenience and durability of an optical disc format with the reusabilty characteristics of tape.

1.1.1 ATRAC compression

If a MiniDisc were to be recorded using exactly the same techniques as a CD, the playback time would be only 15 minutes of stereo playback.

However, using a technique known as ATRAC (Adaptive TRansform Acoustic Coding), 74 minutes of stereo audio at 44.1 kHz sampling frequency with a 16-bit word length can be recorded on an MD.

ATRAC uses two important pyscho-acoustic principles to reduce the size of the recorded data: the greater sensitivity of the human ear to mid-range signals, relative to bass and treble signals, and the "masking" effect, whereby quieter signals are hidden by louder ones.

The ATRAC used in the MD-801R/P Mk II is a very recent version of this encoding scheme (4.5), resulting in an almost inaudible loss of signal quality.

1.1.2 Buffer memory

The ATRAC compression scheme has an additional advantage, as a RAM buffer must be provided for the compressed data, before it is decoded and sent to the D/A converters.

On the MD-801R/P Mk II, this buffer memory holds about 10 seconds' worth of data. The advantage is that, unlike a CD player, the MD-801R/P Mk II is not vulnerable to mechanical shocks and vibration, etc., which can cause a CD player playback pickup to jump and cause audible skipping.

1.1.3 Random access and U-TOC

The format of a recordable MD is much closer to that of a computer disc than of conventional audio media. The random access nature of the disc media allows a logical "track" to be composed of sections of audio data recorded at different points on the disc.

In the same way that a computer's operating system hides the details of the way that data is stored on the

disk from the user, and a file appears as one contiguous block of data (even though it may be spread over many tracks and sectors of the disk), the MD player allows separated audio data to appear as a continuous audio track.

The MD-801 allows the creation and reading of a User Table of Contents (U-TOC) on recordable discs, which contain instructions to the player on the logical arrangement of the tracks, where to find the next audio segment to be played, etc. This is similar to the directory tracks provided as part of a computer disk operating system.

The random access facilities provided by the MD-801 are significantly better than those to be found on consumer MD decks. The effective start time can be effectively zero, compared with hundreds of milliseconds on consumer units.

1.1.4 Track titling, etc.

In common with other forms of digital audio media, the MD medium allows other data to be recorded alongside the audio data. In the MD medium, this is used to provide alphanumeric disc and track titles, which are shown on the display of the player.

In the case of the MD-801R/P Mk II, this information may be conveniently entered through a standard computer keyboard (PS/2 compatible), or through the controls of the main unit.

In addition, a realtime clock allows date- and time-stamping of tracks recorded on the unit or created or edited through TOC editing functions.

These times will be displayed when the disc is replayed on any one of the MD-801 series.

1.2 Care of MD media

The MD medium has been designed to be robust, and the integration of the disc into a cartridge protects the recorded surface from the worst effects of dust, fingerprints, and scratches.

Even so, there are some commonsense precautions that you should take when storing and handling MiniDiscs.

- Do not open the shutter and touch the surface of the disc.
- Do not keep MiniDiscs in excessively dusty locations, in direct sunlight, in areas subject to high temperatures, or high levels of humidity.
- If the cartridge becomes dirty, clean it with a dry, soft cloth. Do not use any solvents or other liquids.

1.3 About the MD-801R/P Mk II

The MD-801R/P Mk II, based on the TASCAM MD-801 series of MD recorder/players, and designed to meet the requirements of audio professionals, includes the following features:

- Full editing functions to divide, erase and combine tracks, etc.
- Auto cue function, allowing the playback point to be automatically cued to the first frame of a track, using a selectable sensitivity level
- Auto ready function, allowing the playback point to be "parked" in the play ready mode at the start of each track
- A resume function, which holds in backup memory the point where playback stopped, or the power was disconnected
- Incremental play mode, allowing cueing of the playback point to the start of the next track, as determined by a selectable audio threshold level, when playback is stopped
- "Soft mute" eliminates clicks, etc. when pausing and restarting playback
- Dual time display
- Three playback modes: normal (whole disc), track play, and A-B play (between two defined points)
- 3-point autolocation facility
- Repeat (disc, track, A-B)
- Either stereo or monaural playback may be selected
- Pitch change ±9.9% in 0.1% steps
- Shuttle operations up to 100 x normal speed, and jog to single-frame accuracy
- Digital outputs in COAXIAL (SPDIF) and AES/EBU
- Word clock synchronization for inclusion of the MD-801 in an all-digital audio setup
- Two sets of analog outputs: –10 dBV unbalanced **MONITOR** (RCA) and +4 dBu balanced **LINE** (XLR-type). The **LINE** outputs may be trimmed for precise signal matching with other equipment
- Output selectable (using remote controllers) from either **MONITOR** or **LINE**
- High-quality DA convertor for optimum analog audio quality
- Level 4.5 ATRAC system
- PS/2-compatible computer keyboard connector allows titling and other remote control operations

to be conveniently carried out using a standard keyboard

- Remote control possible from dedicated TASCAM remote control units (RC-801, RC-FS10/20, and RC-8), or through industry-standard parallel or serial interfaces

- Tally signals sent to controlling device at the end of each track played back

- Optional RAM buffer expansion module (BU-801) allows flash start of track playback

R In addition, the MD801R Mk II provides the following features:

- 20-bit A/D converter for increased audio quality when recording

- Selectable Copy ID modes, including the SCMS standard

- Integral sampling frequency converter, allowing digital recording from material recorded at frequencies other than 44.1 kHz (48 kHz and 32 kHz)

- Digital inputs in both SPDIF and AES/EBU formats

- The ability to record in monaural mode, doubling the recording time available on a disc.

- Analog inputs in both +4 dBu balanced (XLR-type) and –10 dBV unbalanced (RCA) formats. The balanced inputs may be trimmed to match input signal levels

- Replace recording function, allowing recording to be carried out in the middle of a track, while retaining the track title

- Sound sync function to allow the unit to start recording automatically when a selectable audio threshold level is exceeded

- Title dubbing from another MD-801 unit (requires optional connecting cable PW-1XMD)

- Realtime clock for date- and timestamping recorded material

1.3.1 Unpacking the unit

When you unpack the unit, as well as the unit itself and this manual, you should find:

- Power cord

- Rack-mount kit

- Warranty card

If any items are missing, contact your TASCAM dealer.

1.3.2 Rack-mounting the unit

The MD-801 is equipped with integral rack-mount ears, and may be installed in any standard vertical 19" rack.

Remove the feet from the MD-801 using a Phillips screwdriver before installing the unit.
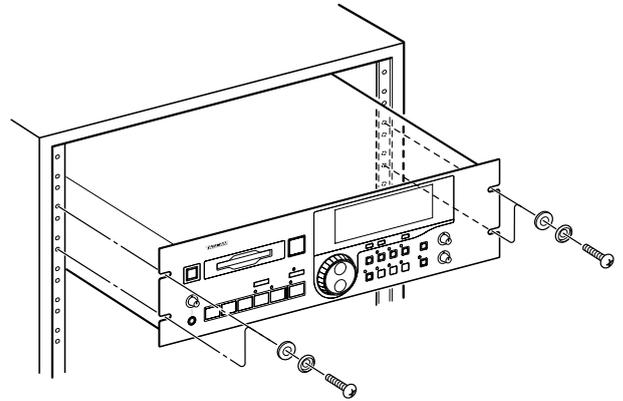
In addition to the 3U of space required for the MD-801 itself, we strongly suggest leaving at least 1U of empty rack space above the MD-801 for ventilation purposes.

1.3.3 Care of the unit

The commonsense precautions that you should take with any piece of precision electronic equipment also apply to the MD-801. In particular:

- Do not subject the unit to severe shocks or vibration. Despite the buffer mechanism mentioned above, there is a risk of data loss, particularly while recording.

- Do not use the unit in very dusty or smoky environments. If the optical lens or the head becomes dirty as the result of such use, use a commercially-available MD lens and head cleaner to clean the lens.

- The exterior of the unit may be cleaned with a soft dry cloth, or a cloth barely dampened with a mild detergent solution. Do not use any solvent, thinner or alcohol-based cleaning agents to clean the unit.

The date and time clock (for timestamping of recordings and edits) is powered by a lithium battery. We suggest that this battery is changed about every two years.

NOTE

Do not attempt to change this battery by yourself. Get an authorized TASCAM service center to perform this operation for you.

1.3.4 Backup memory

When the unit is powered down, the following settings are memorized.

- AUTO READY status (see **[20]**)
- AUTO CUE settings and status (see **[21]**)
- The last used PLAY mode (see **[22]**)
- The two LOC points (A and B) (see **[24]**)
- Pitch control settings and status (see **[25]**)
- REPEAT status (see 4.2.9, "Repeat playback")
- Menu settings (see 3, "Menu items")
- If the resume function is turned on, the resume point is memorized

1.4 About this manual

This manual has been organized so that you should be able to find the section you need relatively quickly. We suggest that you familiarize yourself with at least the Table of Contents, so that you know where to look if you need information on a particular aspect of the unit's operation.

An index is also provided, which should assist you in locating the desired section.

As mentioned earlier, when a section of this manual describes a function which is included as part of the MD-801R only, the section will be marked as below:

R **3.12.2 Laser pickup time**

This indicates how long…

There are no features which are unique to the MD-801P model only.

When characters are shown on the unit's dot-matrix display, the following typeface is used: Input Mon. Alternatively, the alphanumeric display itself may be shown:

> TITLE ?

If a "preset" word or phrase is shown on the display, this is shown as follows: **TRACK TITLE**.

Track times, program numbers, as shown in 7-digit numbers, are shown as *034*, etc.

If a front panel control or rear panel connection is mentioned, the following typeface is used (a little larger than that used for preset display words): **TOC WRITE**. The number of the control or connection, as given in 2, "Front and rear panel features", may also be given, e.g. **[5]**.

If a front panel control or rear panel connection of another unit is specifically named, the folloiwng typeface is used: **WORD IN**.

When an optional PS/2-compatible keyboard is connected to the MD-801, the keyboard keys are represented in the following typeface:

Press **F1** to go back by one track.

If two keys are to be pressed together (i.e. the first-named key is to be pressed and held down while the second is pressed), this is represented as:

Press **SHIFT** + **F1** to enter the erase track editing function.

- d

The selections that can be made using the MD-801's menu system affect the operation of many other functions. We suggest that you take the time to look through this section and familiarize yourself with the basic contents, so that you have an idea of some of the options available to you.

3.1 Basic principles of menu operations

1 The menu system is entered using the **MENU** key **[15]**. Pressing this key brings up a menu in the display.

2 The **JOG/DATA** dial **[12]** is used to select a menu.

3 The **SHUTTLE** wheel **[13]** is used to open the menu selected in step 2.

4 The **JOG/DATA** dial is used to select parameters and enter values for the menu. Turn the dial clockwise to increase values, and counterclockwise to decrease them.

5 "On" and "off" values are selected by turning the **SHUTTLE** wheel clock wise and counterclockwise respectively (**Y** and **N**).

6 A few menus have "sub-menus" which are selected using the **JOG/DATA** dial, and opened with the **SHUTTLE** wheel.

7 When a menu item has been set in step 4, turn the **SHUTTLE** wheel to the right (**Y**) to enter the value and return to normal operation.

To "escape" from menu mode without making a setting, turn the **SHUTTLE** wheel to the left (**N**) or press the **MENU** key.

3.2 Pitch control

```
PITCH  CONT  ?
```

Pitch control can be set ±9.9%, in 0.1% steps. The default setting is 0.0%.

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
PITCH>   0.0%
```

See 4.2.13, "Varispeed mode" for details of pitch control operations.

3.3 Auto cue

```
A  CUE  LVL  ?
```

The auto cue facility allows you to cue the playback position automatically to the first frame where the audio level goes above a trigger threshold (see 4.2.12, "Cueing to the first audio position in a track"). This menu allows you to set the threshold. The default setting is –54 dB.

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
A  CUE>  -54dB
```

There are nine sensitivity levels available for use with this function: –24 dB, –30 dB, –36 dB, –42 dB, –48 dB, –54 dB, –60 dB, –66 dB and –72 dB.

R This setting is also used with the Sound Synchro function as the threshold above which recording starts (or below which the unit drops into record ready mode).

3.4 Frame display

```
FR  DSPL  SEL?
```

The frames part of the time display can be turned on or off. There are either 86 or 87 MD frames per second. The default setting is on.

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
FR  DSPL>ON
```

The only two options here are on and off.

3.5 Jog loop length

```
JOG  LENGTH  ?
```

As explained in 4.2.14, "Jog mode", when locating a point using the **JOG** dial, playback is looped, starting at the provisional jog point.

This menu allows you to set the length of the jog loop. The default value is 16 frames (about 0.2 second).

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
JOG  LG>   16f
```

The minimum length for the jog loop is 12 frames, and the maximum value is 32 frames. The value is set in 1-frame steps.

3.6 Resume setting

```
RESUME  SEL  ?
```

When the resume setting is turned on, playback restarts from the point at which it was stopped (or the point at which playback was taking place when the power was cut off). The default is off, which means that when playback is stopped, it will start at the beginning of the disc, unless a track number is explicitly specified.

This function, when on, changes the function of the **STOP** key **[5]**. When the resume function is on, and the **STOP** key is pressed in play mode, the MD-801 enters play ready mode. If the **STOP** key is pressed once again, the MD-801 enters stop mode.

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
RESUME>  OFF
```

The options available are on and off.

3.7 EOM disc

```
EOM  DISC  ?
```

This menu item affects the output of the MD-801 to a device attached to the parallel port (see 7.1, "REMOTE (PARALLEL) connector". When set on, an "EOM DISC" tally signal is transmitted from the parallel port when the end of the disc is reached in playback (or recording, in the case of the MD-801R).

When this message is transmitted, the **EOM** indicator flashes in the display.

In this menu, it is possible to select how many seconds before the end of the disc this message is to be sent, or to turn the message off completely. The default setting is off.

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
EOM  DISC>OFF
```

The time may be set from 1 to 99 seconds, in 1 second steps, or set to off.

R

NOTE

The EOM tally signal is always transmitted when the U-TOC is updated as the result of a recording operation having been completed, unless this setting is set to off. It is also transmitted when recording is halted temporarily.

3.8 EOM track

```
EOM  TRACK  ?
```

The EOM track is similar to the EOM disc function, as described above. The EOM tally signal is transmitted before the end of a track playback, and this menu allows the time before the end to be set, or the disabling of this function (default off).

When this message is transmitted, the **EOM** indicator flashes in the display.

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
EOM  TRK>  OFF
```

The time may be set from 1 to 99 seconds, in 1 second steps, or set to off.

3.9 Timer-controlled playback

```
TIMER  PLAY  ?
```

When this function is enabled, if a disc is in the unit, and the unit is powered up (e.g. from a timer-based switching unit), the TOC is read, and playback starts. The default setting is off.

If the resume function is switched on (3.6, "Resume setting") playback will start from the point at which playback was last stopped, or at the playback point at which the power was last cut off.

If the resume function is off, playback will start from the beginning of the disc.

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
TMR  PLY>OFF
```

The options available are on and off.

3.10 Incremental play

```
INCR PL SEL?
```

This function allows auto-cueing of the playback point to the start of the next track when the **STOP** key **[5]** is pressed, or a fader stop command is received (on pin 8 of the parallel remote control port **[47]**).

When this mode is enabled, pressing the **PLAY** key **[6]** of the MD-801, or on an optional RC-801 or RC-8 remote control unit (or the **MONITOR** key of either of these units), or a PS/2-type keyboard connected to the MD-801 will cue playback to the start of the track following the current track, and start playback from there.

- - - - - - - - - - - - - - - -
NOTES

While this function is enabled, the TRACK NO. indicator flashes, as a reminder that the function is enabled.

The Auto Ready function (see 4.2.11, "Cueing the next track automatically"), together with the associated commands received at the serial remote control port) is disabled when this function is enabled.
- - - - - - - - - - - - - - - -

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
INCR PL> OFF
```

Choose between on and off, with the default setting being off.

3.11 Serial communications

```
SERIAL SET ?
```

This menu allows the setting of parameters affecting the serial (RS-232C) control port **[45]**. This menu contains sub-menus, allowing the different parameters to be accessed (**DATA** dial to show the sub-menus, **SHUTTLE** wheel to open them).

3.11.1 Baud rate

From the main menu, the first sub-menu allows the setting of the communications speed (baud rate):

```
BAUD SEL ?
```

When this sub-menu is opened, the baud rate can be selected and set. The default value is 9600.

```
BAUD>    9600
```

When a sub-menu value has been set with the **SHUTTLE** wheel, the unit returns to the normal setting.

3.11.2 Word length

The next sub-menu allows the setting of the word length in serial communications:

```
LENGTH SEL ?
```

When this sub-menu has been opened, the word length can be set to 7 or 8 bits. The default is 8 bits.

```
LENGTH>8bits
```

3.11.3 Parity

The next sub-menu allows the setting of the parity to be used in serial communications:

```
PARITY SEL ?
```

When this sub-menu has been opened, the parity can be selected from off, odd or even parity. The default is for off (no parity).

```
PARITY>   OFF
```

3.11.4 Stop bits

The final sub-menu allows the setting of the number of stop bits:

```
STOP BIT ?
```

When this sub-menu is opened, thje number of stop bits can be set to 1 or 2. The default is 1.

```
STOP BIT>   1
```

3.12 Check items

These are not settable menu items, but allow the checking of various aspects of the MD-801 system.

When the following menu item appears, use the **SHUTTLE** wheel to enter the menu, and the **DATA** dial to choose the different options.

```
CHECK ?
```

Exit the menu system by turning the **SHUTTLE** wheel.

3.12.1 Spindle motor time

```
S_TIME>   121
```

Use this to check how many hours the spindle motor has been in operation.

R 3.12.2 Laser pickup time

```
R_TIME>    43
```

This indicates how many hours the laser pickup has been used for recording.

3.12.3 System software version

```
SYS>    01.00
```

This allows you to check the current system software version.

R 3.13 Auto track numbering level

```
A_TRK LVL ?
```

This allows the setting of the threshold above which a signal received at the **AES/EBU** jack or either of the analog connectors triggers the start of a new track (see 4.3.4, "Track number incrementing"). This value can be off, or one of nine values, as detailed below.

There should be a period of relative silence (i.e. below the trigger level) of at least three seconds between "tracks" in the source material for this function to operate.

- - - - - - - - - - - - - - - - - - -
NOTE

Bear in mind that some classical material, spoken word, etc. may include such periods of silence, and this may cause spurious track divisions. Also, some analog material may be noisy, and the noise may go above the track division threshold. Adjust the threshold level taking these factors into consideration.
- - - - - - - - - - - - - - - - - - -

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
A_TRK>  -54dB
```

The available settings are: –24 dB, –30 dB, –36 dB, –42 dB, –48 dB, –54 dB, –60 dB, –66 dB, –72 dB and off. The default value is –54 dB.

R 3.14 Copy ID

```
COPY ID SEL?
```

When recording an MD on the MD-801, the copy ID of the recorded MD can be set for different purposes.

The three settings available are:

- Copy Free—(Free) allows unlimited digital copies to be made from the digital recording made on the MD-801
- First-generation copy only—(1 gen) allows only one digital copy to be made from the digital recording produced on the MD-801
- Copy prohibit—(Proh) means that no further digital copies can be made from the digital recording produced on the MD-801.

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
COPY ID>Free
```

The default setting is for free copying. The restrictions apply only to digital copies produced through the **COAXIAL** port. The copy bit is ignored if the recording is made when the disc is played back through the **AES/EBU** connector.

R 3.15 Post-script recording

```
PS REC ?
```

As explained in 4.3.5, ""Post-Script" recording", recording can start either from the beginning of the disc (when this function is turned off), or from the beginning of the free space available, i.e. after the last recorded track (when this function is turned on).

This function also controls the operation of the replace recording function (see 4.3.6, "Replace recording").

After the menu has been opened with the **SHUTTLE** wheel, the display changes:

```
PS REC>ON
```

The available options are on and off, with the default being on.

This section gives you informstion about the basic operations using the MD-801.

It assumes that you have connected the MD-801 to all the other equipment that you will be using. If you have not already made these connections, read 2.3, "Rear panel" for details of the rear panel connections, and connect the other equipment appropriately.

4.1 Inserting and ejecting discs

Discs are inserted label side uppermost, in the direction of the arrow marked on the disc. The display shows:

```
NO DISC
```

if the MD-801 is turned on without a disc in the drive.

As the disc is loaded, the display shows:

```
Disc Loading
```

When the disc has been loaded, the disc title, number of tracks, total running time, etc. are displayed.

Use the **EJECT** key **[3]** to eject discs.

Discs do not have to be ejected when the power to the MD-801 is turned off. No damage will be caused to discs if they are left in the unit at power-off or power on.

- - - - - - - - - - - - - - - - - - -
NOTE

Never turn the power off when the U-TOC is being written to disc (`UTOC Writing`*). If you do, the disc may become unreadable.*
- - - - - - - - - - - - - - - - - - -

When the MD-801 is turned on with a disc already loaded in the drive, the display will show:

```
TOC Reading
```

before showing the disc title, running time, number of tracks, etc.

4.2 Playback of discs

The following instructions apply to both pre-recorded and recordable MD media.

4.2.1 Playing back a whole disc

When the disc has been loaded, and the TOC has been read, use the **PLAY MODE** key so that the playback mode is not set to **SINGLE** or **A-B** (see **[22]**).

Press the **PLAY** key **[6]**. Playback will start from the beginning of the disc.

Stop playback with the **STOP** key **[5]**.

Pause playback with the **READY** key **[7]** and restart it with the **PLAY** key.

- - - - - - - - - - - - - - - - - - -
NOTE

If the tracks being played back are less than three seconds in length, playback will be discontinuous ("jumpy").
- - - - - - - - - - - - - - - - - - -

4.2.2 Playback outputs

There are two sets of outputs provided on the MD-801: the **LINE** balanced XLR-type at +4 dBu **[40]**, and the **MONITOR** unbalanced RCA at –10 dBV **[38]**.

OUTPUT MODE DIP switch 2 **[39]** on the rear panel is used to synchronize these outputs so that material is always played back through both sets of outputs (off), or individually (on).

If the individual output option is chosen, the **PLAY** key on the MD-801 itself or the **MONITOR** key on the RC-801 will start playback through the **MONITOR** outputs only. In this case, the **LINE** outputs are activated following a play or online command from a remote controller (keyboard, RC-801, RC-8 or the serial or parallel controller).

If the the **LINE** outputs are used for playback, the **MONITOR** outputs may also be used for simultaneous playback. **OUTPUT MODE** DIP switch 3 controls this. When set to off, the **MONITOR** outputs are muted when the **LINE** outputs are in use. When set on, the **MONITOR** outputs are always used.

The **PHONES** jack **[9]** is always used.

The above applies to the analog outputs only, and does not refer at all to the digital outputs, which are always in use, regardless of the origin of the playback command.

4.2.3 Monaural playback

OUTPUT MODE DIP switch 1 **[39]** is used to combine the left and right tracks and output them from both the left and right outputs equally.

The outputs affected are the **LINE [40]**, **MONITOR [38]** and **PHONES** outputs. The digital outputs are not affected by the position of this switch.

4.2.4 Playing back a single track

When the disc has been loaded and the TOC has been read, use the **PLAY MODE** key to select the SINGLE play mode (see **[22]**).

Use the **TRACK** keys **[4]** to move the playback position to the start of the desired track.

Press the **PLAY** key **[6]**. Playback will start from the beginning of the track.

Stop playback with the **STOP** key **[5]**. Playback will restart at the start of the disc, unless you move the playback position to the start of the next track to be played back.

NOTE

*The above function can be overridden with the resume function, which turns the **STOP** key into a "PAUSE" key and allows playback to continue from where it was paused using the STOP key. See 3.6, "Resume setting" for details.*

Pause playback with the **READY** key **[7]** and restart it with the **PLAY** key.

4.2.5 Entering the A and B location points

1 Press the **MEMO IN/CAPS** key **[23]** so that the indicator lights.

2 Locate the playback point to the first location, and press **LOC A/DEL [24]**. The indicator will light, showing that a value has been entered into the location, and the **MEMO IN/CAPS** indicator will go out.

3 Locate the playback point to the second location, and press the **MEMO IN/CAPS** key **[23]** again so that the indicator lights.

4 Press **LOC B/INSERT [24]**. The indicator will light, showing that a value has been entered into the location, and the **MEMO IN/CAPS** indicator will go out.

Clear the location points by stopping playback, pressing the **MEMO IN/CAPS** key, and pressing the appropriate location key (**LOC A/DEL** or **LOC B/INSERT**) so that the indicator goes out.

4.2.6 Playback between two location points

1 Enter the location points as described above.

2 Press the **PLAY MODE** key **[22]** so that the display shows A-B.

3 Press **LOC A/DEL [24]**. The unit will locate to the first point, and start playing until it reaches the second point, and then stop.

If the location points are in the wrong order (i.e. B precedes A), the display will show A-B Error when playback is attempted.

4.2.7 The CALL function

The CALL key **[10]** is used for easy location to a marked point

1 Put the MD-801 into play ready mode at the point you want to mark (the **READY** indicator **[7]** should be lit).

2 Press the **READY** key. The current point is now marked.

3 You can now play back, or perform the next operation.

4 To return to the marked point, press the **CALL** key **[10]**.

R The MD-801R also automatically sets the call point at the point where recording last started. This enables easy return to the point where the recording started, using the **CALL** key, in order to check a take, etc.

4.2.8 Relative time display

The call point set in the way described above (4.2.7, "The CALL function") can also be used as a zero point for relative time display (all times are displayed relative to this point, with times before the point being displayed as negative values), To enter the relative time mode:

1 Make sure that the **MEMO IN/CAPS** indicator **[23]** is lit.

2 Press the **TIME** key **[17]** to show the different display modes. The relative display mode appears as follows:

```
rel  xxxm  yys
```

where xxx represents the "minutes" portion of the elapsed time since the call point, and yy represents the "seconds" portion of the elapsed time. Times before the call point are prefixed with a minus sign.

NOTE

If no call point has been set, the "relative time" will be from the start of the disc.

4.2.9 Repeat playback

Use the **REPEAT** key **[26]** to enable the repeat mode as shown in the display (`REPEAT`).

The three different repeat modes available correspond to the three playback modes set with the **PLAY MODE** key **[22]** (whole disc, `SINGLE` track or `A-B` points, as set above).

- -
NOTE
For A-B repeat to be effective, location point A must be before location point B, otherwise A-B repeat cannot take place.
- -

4.2.10 Track search operations

While playing back, it is possible to press the **TRACK** keys **[4]** in order to move forward or backward a number of tracks, corresponding to the number of times the key is pressed.

After locating to the start of the track (the start of the track start cue point if **AUTO CUE** is off (4.2.12, "Cueing to the first audio position in a track") or the first audio frame if it is on), the deck will park in play ready mode.

Pressing the "previous" **TRACK** key at the first track will move to the last track on the disc, and pressing the "next" **TRACK** key at the last track will move to the first track on the disc.

4.2.11 Cueing the next track automatically

When playing back a single track, it is often useful to cue the next track ready for playback.

Use the **AUTO READY** key **[20]** to enable the unit to enter play ready mode automatically when the start of a track is reached. This is the start of the track as determined by the digital subcode, not the start of the audio signal, unless **AUTO CUE** is on (see 4.2.12, "Cueing to the first audio position in a track").

Depending on the play mode (when no repeat is active), the unit will enter stop mode in `SINGLE` or `A-B` play mode, and play ready in the "continue" mode, after the location has taken place.

If repeat is active, the unit will enter play ready mode at the start of the next track (`REPEAT` "continue"), the start of the track which is being repeated (`REPEAT SINGLE`) or the A repeat point (`REPEAT A-B`).

4.2.12 Cueing to the first audio position in a track

To cue the playback position to the first point where the audio level exceeds a preset threshold, make sure that playback is stopped, press the **AUTO CUE** key so that the indicator is lit, and then press the **READY** key.

The playback point will then locate to the start of the audio portion of the track (the **PLAY** indicator will flash while it is locating).

If the **AUTO CUE** indicator is lit, the playback point will automatically locate to the first audio point of the destination track when searching and locating.

There are nine "trigger" levels which may be selected through the menu system (see 3.3, "Auto cue") for the **AUTO CUE** operation. Select the appropriate level depending on the source material.

4.2.13 Varispeed mode

The MD-801 is capable of playing back material in varispeed mode.

The speed can be altered to ±9.9% relative to normal speed, and can be changed using the menu system (see 3.2, "Pitch control").

- -
NOTE
*While the MD-801 is in varispeed mode, care must be taken that it is not set to use an external word clock (***[43]***).*
- -

4.2.14 Jog mode

To use the **JOG** dial to locate a playback point precisely (to frame accuracy):

1 Press the **JOG** key **[11]** to light the indicator.

2 Turn the **JOG** dial **[12]** (clockwise to move the jog point forwards, counterclockwise to move it backwards). Monitoring is at normal speed. When you stop turning the **JOG** dial, the section that has been "highlighted" by the jog action will be repeatedly looped.

You can set the length of the jog loop from a menu item (see 3.5, "Jog loop length").

3 Press the **READY [7]** key to set the call point, at the end of the jog loop.

4 Locate to the call point by pressing **CALL [10]**.

4.2.15 Shuttle mode

The **SHUTTLE** wheel **[13]** allows you to perform fast cue or review operations, moving forwards or backwards through the program material at high speed.

The further the wheel is moved from the central position, the faster the cue or review speed.

Since the MD-801 is a digital recorder, playback in cue and review is not continuous.

4.2.16 Displaying track titles during playback

When the MD-801 is in play or play ready (or in record or record ready) mode, pressing the **TITLE** key **[16]** shows the current track title.

If the track does not have a title entered, the display briefly shows:
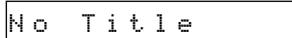
```
No Title
```

If the display is too long to fit on the display, it can be scrolled by pressing the **TITLE** key once more.

The entry and editing of titles is described in 5.11, "Track and disc title entry"

4.2.17 Displaying the recording date

If the current track has been "date- and time-stamped", the date and time can be displayed:

1 While the MD-801 is in play or play ready (or record or record ready) mode, press the **MEMO IN/CAPS** key **[23]** so that the indicator is lit.

2 Press the **TITLE** key **[16]**. The word **DATE** will light in the display, and the date will be shown (for example 98y 12m 25d), followed

by the time (e.g. 10h 34m 12s) in 24-hour format.

If the track has not been time-stamped, the display briefly shows:
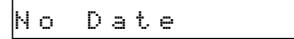
```
No Date
```

4.2.18 Setting the time and date

Since the MD-801 leaves TASCAM with the date and time pre-set, there should be little need for you to set the time and date of the internal clock.

However, if you move the MD-801 across time-zones, etc., you may need to reset the date and time following the procedure below:

1 Eject any disc and power off the MD-801 (this step is not strictly necessary, but simplifies the procedure).

2 Press and hold down the **TIME** key **[17]** while turning on the power. The display shows:
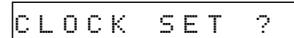
```
CLOCK SET ?
```

3 Turn the **SHUTTLE** wheel clockwise to start setting the time and date.
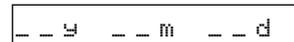
```
__y __m __d
```

4 Use the **DATA** dial as a data entry wheel, and the **SHUTTLE** wheel as a cursor to move between the year (y), month (m) and day (d) fields, as described in 3.1, "Basic principles of menu operations".

5 After entering the value for the day, turn the **SHUTTLE** wheel:

```
__h __m --s
```

6 You can set the hours (h) and minutes (m) here.

7 When these have been entered, press the **TIME** key to set the time (the seconds value is set to zero as you press the key) and return to normal operation.

R 4.3 Recording operations

Naturally, these recording operations refer to the

MD-801R model only.

4.3.1 General notes on recording using the MD format

Because the MD method of recording is somewhat different to a linear recording method, such as tape, you should note the following points.

• The message `Disc Full` may appear on the display before the available recording time on the disc has all be used.

This may be because more than 255 tracks have been recorded on the disc.

• The sum of the total recorded time, and the displayed remaining available time may not equal the theoretical total capacity of the disc.

This is because of the nature of the MiniDisc track structure. At least two seconds are used for every MiniDisc track, regardless of the audio structure. In addition, "bad sectors", caused by dirt, scratches, etc. are automatically skipped and ignored, which means that they are unavailable for recording. We always suggest that you leave some "safety net", and do not attempt to record a program of exactly 74 minutes on an MD marked as 74 minutes.

• Erasing a track will not make the time the exact length of the erased track available for recording.

This is on account of the nature of the MD recording format, and has to do with block size, etc. If you are familiar with computer systems, you may be aware of a similar limitation with regard to file size on some operating systems.

4.3.2 Rebuilding the TOC

It is possible to rebuild the TOC, which will free up recording space if a heavily-edited disc is being used.

1 With the MD-801 stopped, press the **EDIT** key **[18]**.

2 Turn the **DATA** dial **[12]** until the display shows:

> `TOC REBUILD?`

3 Turn the **SHUTTLE** wheel **[13]** clockwise to rebuild the TOC (counterclockwise to cancel the operation).

4 When the display shows `Complete`, and the **TOC WRITE** indicator **[19]** lights, press the **TOC WRITE** key to write the new TOC to disc.

NOTE

Depending on the condition of the disc (how many edits have been performed, etc.), it may take a considerable amount of time for the TOC to be rebuilt. In rare cases, the recording capacity of the disc may not be increased, even after the TOC has been rebuilt in this way.

• The number of tracks that have been intentionally recorded, and the number of tracks displayed may not match.

When the transport encounters dirt or scratches, etc., the current track is ended, and a new track is started. This automatically-created track is marked by the letters "`Cont !!`" being added to the end of the track title. This "track" cannot be combined using the editing methods available. To avoid the occurence of such "tracks", it is important to keep the MD media clean and dust-free.

NOTE

*Every time recording is halted, the TOC is updated. As always, avoid turning off the power while the TOC is being written. In addition, you should be aware that if you have performed editing operations that you do not want to commit to disc, and then do some recording, the edit operations will be saved to disc when recording stops. You may want to eject the disc without writing the edits (see **[3]**) before recording, to avoid this situation.*

Like most other forms of recordable media, MDs incorporate a write-protect tab, which can prevent you from accidentally overwriting precious recordings. If you try recording with a disc that has had the tab set to the "protect" position (open), the display will show:

> `W_Protected!`

If you want to record on this disc, you must eject the disc, close the write-protect tab and record again.

4.3.3 Basic recording

This gives the basic instructions on how to record. There are a number of different recording-related options which may be selected, as described elsewhere in this section.

1 Select the recording method (digital or analog) and the appropriate input source.

2 Make sure the unit is stopped.

3 Press and hold down the **RECORD** key **[8]** and press the **READY** key **[7]**.

4 Adjust the recording level (analog, **UNCAL** only) so that the meters do not read **OVER**, even in the loudest passages.

5 Start recording by pressing the **PLAY** key **[6]**.

6 When recording is finished, press the **STOP** key **[5]**.

After recording is finished, the TOC is updated.

The date is automatically recorded (as taken from the internal clock).

The **STOP** key may also be used to cancel the record ready mode entered in step 3.

4.3.4 Track number incrementing

When recording, the track numbers are incremented automatically in the following cases:

- When making digital recordings from another unit through the **COAXIAL** input **[34]**, the PQ code is used when making a recording from a CD player or an MD player, and START IDs are used when recording from a DAT.

- When making digital recordings through the **AES/EBU** input **[32]** or analog recordings, the Auto track numbering level may be used. The first time that a signal exceeding the selected threshold is encountered after recording is started, the start of a track is marked, and the track number is incremented. While recording is taking place, if the level drops below the selected threshold for three consecutive seconds or more, and then rises above the threshold, the start of a new track is marked, and the track number is incremented. See 3.13, "Auto track numbering level" for details.

When recording from AES/EBU or analog sources, the auto track numbering function may be turned off completely. There are then two options:

- Record the whole of the material in one take, and use the editing functions at a later time to divide the material into tracks.

- While recording is taking place, press the "next" **TRACK** key **[4]**. Recording will continue, but the track number is incremented by one, and the track division is written at the point where the "next" **TRACK** key was pressed.

4.3.5 "Post-Script" recording

There are two ways of cueing the disc when recording. One is "post-script" recording, where recording starts immediately following the last recorded material. Unlike a linear recorder (tape, etc.) there is no need to cue the medium to the last track.

The other is non post-script, which starts recording from the start of the disc, overwriting the whole disc, except for the title.

Post-script recording is set using the menu system, described in 3.15, "Post-script recording".

4.3.6 Replace recording

This function allows recordings to be made on an existing track, if the MD-801 is in ready mode in the middle or at the start of an existing track.

Recording in replace mode allows recording on that track. Since the MD format is non-linear, the length of the track does not matter.

Recording from the start of the track will replace the existing track, keeping the same track number and title (if any). The whole of the existing track will be erased, even if the replacement material is shorter than the existing track.

Recording from part of the way through the track will add a new track with the number of the current track plus one. If you start recording part of the way through the track, the part of the original track from the point at which recording started, to the end of the original track, will be erased, even if the new track is shorter than this portion.

NOTE

If you want to keep the start of a track on which you are making a replace recording from the middle, use the Track Divide editing function, and start replace recording from the newly-created second track. You can, of course, keep the second part by replace recording the newly-created first track.

---

1 Make sure that the post-script recording mode is on (3.15, "Post-script recording").

NOTE

If post-script recording is turned off, you will erase the whole disc (except for the disc title).

---

2 Cue the playback point to the place that you want to start recording.

3 Press the **READY** key **[7]** to put the MD-801 into play ready mode. This step is the primary difference between replace recording and ordinary post-script recording.

4 Press and hold down the **RECORD** key **[8]** and press the **READY** key. The display will show:

```
Replace REC
```

5 To start recording, press **PLAY [6]**. When you have finished recording, press **STOP [5]**.

If you want to cancel the recording operation after step 4, press the **STOP** key **[5]**.

NOTES

You cannot use the input monitor function before entering the replace record mode. You must stop the transport first if you want to use the record monitor function.

Many replace recording functions carried out on the same track may result in sections which it is later impossible to combine using the edit functions.

4.3.7 Sound synchro recording

With this facility, the MD-801 goes from record ready to record mode when a signal threshold is exceeded. The threshold is the same as for the Auto Cue function (4.2.12, "Cueing to the first audio position in a track") and is set in the Auto Cue menu (3.3, "Auto cue").

The facility also allows the unit to go automatically from recording to record ready mode, if the input signal drops below the threshold and stays at this lower level for five successive seconds.

1 Make sure the MD-801 is recording or in record ready mode.

2 Use the "previous" **TRACK** key **[4]** to toggle between turning the Sound Synchro function on and off (the screen below shows it turned on).

```
S_SYNC ON
```

If the MD-801 is in record ready mode, start playing the source. As soon as the signal level goes above the threshold, the MD-801 will go from record ready to record mode.

If the MD-801 is in record mode, it will drop back to

record ready mode as soon as a period of relative silence of more than five seconds in length is detected. Recording will start again as soon as a signal which is over the threshold is detected again, and the Sound Synchro mode is still on.

NOTE

If the Sound Synchro mode is on, and a manual change is made from record ready to record (or the other way round), the Sound Synchro mode is automatically turned off.

4.3.8 Digital recording

Since the MD-801 incorporates a frequency convertor, digital recordings can be made from a wide variety of sources, including sources played back at non-standard frequencies (varispeed and pitch shifting are therefore possible).

1 Set the **INPUT** selection switch **[28]** to **DIGITAL**.

2 Set the **DIGITAL INPUT** selection switch **[29]** to either **AES/EBU** or **COAXIAL**, depending on the source.

NOTE

*When recording from a digital source, remember that the input level controls **[27]** have no effect.*

------

3 If you require mono recording (uses the left channel only, and doubles the available recording time), set the **REC MODE** switch **[30]** to **MONO**, otherwise, make sure it is set to **STEREO**.

4 Press and hold down the **RECORD** key **[8]** and press the **READY** key.

5 Start recording by pressing the **PLAY** key **[6]**, and finish by pressing the **STOP** key **[5]**.

NOTES

If the selected digital input is not correctly connected, or is not present, the D-IN UNLOCK! *message will appear on the display to inform you of this.*

If the digital input signal is interrupted and resumes within 30 seconds of the interruption, a new track will be started on the MD-801, with a number that is one higher than the pre-

vious one. If the digital signal is not resumed within 30 seconds of interruption, recording will stop.

As mentioned earlier, 4.3.4, "Track number incrementing", when digital recordings are made through the **COAXIAL** *inputs, track numbers are incremented automatically as PQ code is read from CD or MD, or START IDs are read from DAT. However, if a source track is less than three seconds in length, a new track will probably not be started on the MD-801.*

4.3.9 Analog recording

1 Set the **INPUT** selection switch **[28]** to **ANALOG**.

2 Set the **ANALOG INPUT** switch **[31]** to **UNCAL** or **CAL**.

UNCAL enables the input level controls, while **CAL** disables them, and inputs the analog signal "as given". In this case, a signal input received at nominal level (+ 4dB in the case of the balanced inputs[1], and –10 dB in the case of the unbalanced inputs) will register –16 dB. You should take care that analog signals never go more than 16 dB above the nominal level, or clipping will occur.

If your program material includes such passages, re suggest that you use the **UNCAL** setting, and attenuate the signal a little using the input level controls.

3 If you require mono recording (combines the left and right channels, and doubles the available recording time), set the **REC MODE** switch **[30]** to **MONO**, otherwise, make sure it is set to **STEREO**.

4 Press and hold down the **RECORD** key **[8]** and press the **READY** key.

5 Start recording by pressing the **PLAY** key **[6]**, and finish by pressing the **STOP** key **[5]**.

Track numbering is incremented as described in 4.3.4, "Track number incrementing".

---

1. Provided that the trimmer potentiometers at the balanced inputs have been left in the position as shipped from the factory. If these settings have been changed, the reference level will be altered accordingly.

4.3.10 Track title copying together with audio

This is a special case when making copies between two MD-801 units. Titles may be copied in either the analog or the digital copying modes.

A special optional cable (PW-1XMD) is required, to link the two serial ports of the two units **[45]**. Set up the serial communication parameters to the default values, as described in 3.11, "Serial communications", with the baud rate set to 9600.

Apart from ensuring that this connection is made, there are no special settings to be made on the master (source) unit.

To copy titles along with the audio data:

1 Put the slave unit into record ready mode.

2 Press the **RECORD** key (again on the slave unit). The display shows:

```
A-TitleW ON
```

3 Use the **RECORD** key to toggle this mode between on and off.

4 The title will now be copied automatically when the mode is set to on, and the track number on the slave is incremented (see 4.3.4, "Track number incrementing" for details of when tracks are incremented).

In addition, you can copy the title of the current track of the master unit by pressing **RECORD** on the slave unit when it is in record mode, and the track title copy mode is on.

The Sound Synchro function (see 4.3.7, "Sound synchro recording") can be used for automatically putting the slave unit from record ready to record when the master unit's audio level exceeds a threshold.

NOTE

Tracks of less than seven seconds in length cannot have their titles copied automatically in this way. You will have to copy the titles manually in these cases.

For information regarding the copying of disc titles between MD-801 units using the serial link, see 5.11.6, "Copying disc and track titles".

Unlike tape or other linear media, the MD-801 provides you with a wide range of editing tools, allowing you to make arbitary cuts, "splices" and rearrangements of running order without having to re-record any parts of the material.

Although the editing operations you perform will take effect instantly, unless they are written to disc as part of the User Table of Contents (U-TOC), they will not take any effect when the disc is next used (or inserted in another machine), as "splices", etc. are virtual, and do not actually represent cuts in the material.

The U-TOC contains all the information that is read by the MD-801 in order to know what parts of the disc should be played, and in what order.

For that reason, it is important that you never turn off the MD-801 while it is writing the U-TOC to disc. If you do this, you will probably be unable to use the disc in the future.

5.1 Basic editing operations

1   To start an editing operation, press the **EDIT** key **[18]** and the EDIT indicator will light in the display.

2   Select the editing operation using the **DATA** dial **[12]**.

3   When the editing operation is complete (the exact steps are described in the individual sections below), turn the **SHUTTLE** wheel **[13]** to complete the operation and return to normal mode.

After an editing operation, the **TOC WRITE** indicator **[19]** will light, and the display TOC EDIT will light, showing that there are editing changes made which have not been saved to disc.

4   Commit the editing operation to disc by pressing the **TOC WRITE** key **[19]**.

- - - - - - - - - - - - - - - -
NOTE

A disc must not be write-protected when saving edits to disc. The display shows W_Protected! *if you attempt to write a U-TOC to a protected disc. By ejecting the disc you lose the edits you have made, so you should make sure that a disc on which you want to save edits is write enabled **before** you start the editing process.*
- - - - - - - - - - - - - - - -

After most editing operations, the MD-801 enters the play ready mode.

5.1.1 Cancelling an edit operation

If you wish to cancel an edit operation at any time before step 3 above, do any of the following:

- turn the **SHUTTLE** wheel counterclockwise
- press the **STOP** key **[5]**
- press the **EDIT** key

5.1.2 Editing without saving the edits to disc

If you want to make edits, but do not want to commit them to disc, you can do either of the following:

- turn off the power to the MD-801
- press the **EJECT** key once, and press it again, after the TOC Edited! message appears on the display
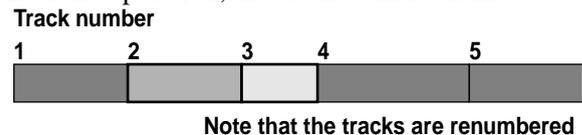
5.2 Dividing tracks

Use this editing function to split one track into two. This operation can be carried out while the MD-801 is in play ready mode.

Before the operation to split track 2, the tracks and numbers look like:

Track number

This track is to be divided here
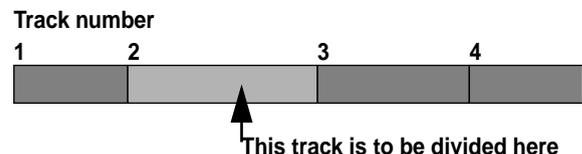
After the operation, the tracks will look like:

Track number

Note that the tracks are renumbered

1   Locate the playback position so that it is at the point where you want to divide the track. Press the **READY** key **[7]** to put the MD-801 into play ready mode.

2   After pressing the **EDIT** key, turn the **DATA** dial until the display shows:

```
DIVIDE  ?
```

3   Turn the **SHUTTLE** wheel clockwise.

```
Point OK?
```

4   A jog loop will start playing. Adjust the jog loop using the **JOG/DATA** dial, so that the start

of the loop is the point at which you want to divide the track.

NOTE

You can set the length of the jog loop in the menu system (see 3.5, "Jog loop length").

----

5 When the start of the jog loop is correctly positioned, turn the **SHUTTLE** wheel clockwise. The display shows `Now Editing`, and `Complete` when the editing operation has finished.

The track title of the first track created by the division process will have the same title as the original track (before the division took place). The second track will be untitled.
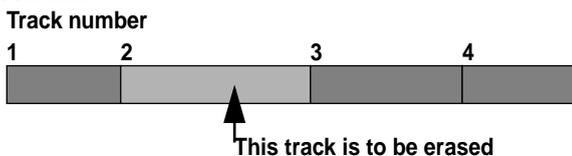

NOTE

*If the divide point is set to a track boundary (the start of a track), the display will show an error message (`Not Execute!`) when the **SHUTTLE** wheel is turned in step 4 above.*

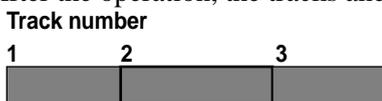------------------------------

5.3 Erasing a track

This operation erases a track and frees the space for further recording.

Before this edit operation, the tracks and numbers look like:

Track number

This track is to be erased

After the operation, the tracks and numbers look like:

Track number

Note that the tracks following the erased tracks are automatically renumbered, so that the numbering sequence is contiguous.

Tracks can be erased while the MD-801 is stopped, or in play, or in play ready mode.

1 Set the playback position at the track to be erased (use the **TRACK** keys or any other convenient way of locating to the track).

2 After pressing the **EDIT** key, turn the **DATA** dial until the display shows:

    ERASE TRK ?

**3** Turn the **SHUTTLE** wheel clockwise to change the display:

    Track OK ?

4 If you want to change the track to be erased at this stage, you can use the **TRACK** keys to change the current track.

5 Turn the **SHUTTLE** wheel clockwise to erase the track. The display shows `Now Editing`, and `Complete` when the erase operation is finished.

5.4 Combining tracks

This editing function allows you to combine a track with the previous track. It is not possible to combine two non-adjacent tracks (but you can move such tracks and then combine them—see 5.5, "Moving tracks").

Before the combine operation, the tracks and numbers look like:

Track number   **The playback position is here**

These tracks are to be combined
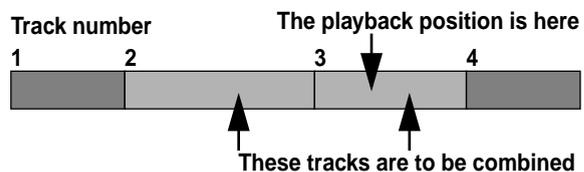
After the combine operation, they look like:

Track number

Note that the following tracks are renumbered to provide a contiguous sequence.

1 Use the **TRACK** keys, or any other convenient method, to select the second track of the pair to be combined (the selected track will be combined with the one before it).

2 After pressing the **EDIT** key, turn the **DATA** dial until the display shows:

    COMBINE ?

3 Turn the SHUTTLE wheel clockwise to enter the rehearsal mode:

    Rehearsal

The **PLAY** indicator above the **PLAY** key will flash, as will the **EDIT** indication in the display, to show that rehearsal mode has been entered.

In this rehearsal mode, the last 4 seconds (approximately) of the previous track and the first four seconds (approximately) of the current track are continuously repeated, so that you can audition the "join" between the tracks.

4 At this point, it is still possible to use the **TRACK** keys to select another track to be combined. This newly-selected track will be combined with the track immediately before the new selection.

5 Turn the **SHUTTLE** wheel clockwise to combine the tracks. The display will show Now Editing, followed by Complete.

The track number of the first combined track (i.e. the track immediately before the track selected prior to the combine operation) is used for the combined track.

The title of the second track is appended to that of the first track.

NOTES

Selecting the first track and attempting a combine operation will result in the message TRK Illegal! *being shown on the display—it is not possible to combine the first and last tracks.*

Mono and stereo tracks cannot be combined.

In some cases where an MD has had many edit operations performed, the Cannot EDIT! *message may appear on the display. This does not indicate a fault with the disc or the machine, but is a property of the MD recording system.*

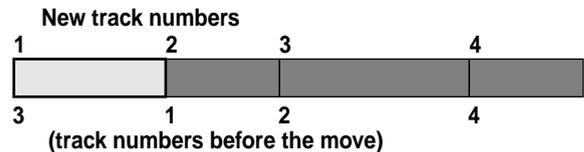------------------------

5.5 Moving tracks

This function allows you to edit the running order of the tracks, and re-place a track in a different position. This can also be used with the combine function (5.4, "Combining tracks") in order to combine non-contiguous tracks.

Before a move operation, the tracks and numbers

look like:

Track number

This track is to be moved
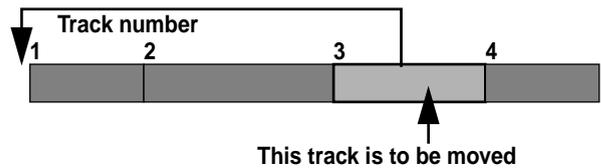
Following the move operation, the tracks look like:

New track numbers

(track numbers before the move)

The "gap" is closed up, and all tracks are re-numbered in the new sequence. A move operation can be carried out in the stop, play ready or play modes.

1 Use the **TRACK** keys, or any convenient method, to select the track to be moved.

2 After pressing the **EDIT** key, turn the **DATA** dial until the display shows:

MOVE ?

3 Turn the **SHUTTLE** wheel clockwise to open the move menu. The display will show:

Move to 001?

The three numeric digits indicate the track number that the current track will occupy after the move operation.

4 Use the **DATA** dial to change the destination track number.

5 Turn the **SHUTTLE** wheel clockwise. The display will show Now Editing, followed by Complete.

All tracks will be automatically renumbered.

NOTE

You cannot move a track to itself, e.g. if you have selected track 1, the destination number cannot be 001. *The display will show a* Not Execute *message if you attempt this.*

5.6 A and B point erase operations

The two location points (see 4.2.6, "Playback between two location points") can be used for a variety of erasure purposes. Although the basic principle

of operation is the same, the function is so flexible that it can be used for many different purposes.

In order to be used for editing in this way, the following conditions must be met:

• Point A must not be at the same location as point B
• At least one of the two points must be marked
• Point B must come after point A

If any of these conditions are not met, the display will show A-B Error!.

The A and B points do not have to be in the same track.

All A-B operations are carried out in the same way:

1 Set the A and B points (4.2.5, "Entering the A and B location points").

2 In stop, play or play ready mode, after pressing the **EDIT** key, turn the **DATA** dial until the display reads:

ERASE A-B ?

3 Turn the **SHUTTLE** wheel to enter rehearsal mode.

Rehearsal

The above message alternates with Erase OK ?, and the **EDIT** indicator in the display flashes.

The rehearsal mode continuously plays from a position about four seconds before the A point, and about 4 seconds after the B point. This allows you to preview the "splice".
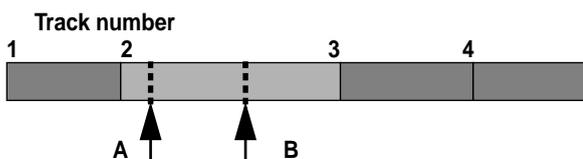
4 Turn the **SHUTTLE** wheel to confirm the erase process.

After the operation is complete, if the A point has been set, it is erased (the indicator goes out).
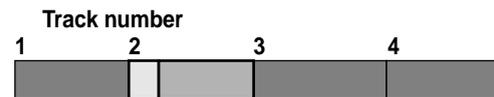
The B point will be at the position where the erase took place.

5.6.1 Normal A-B erase

In this editing operation, both the A and B points are set within the same track.
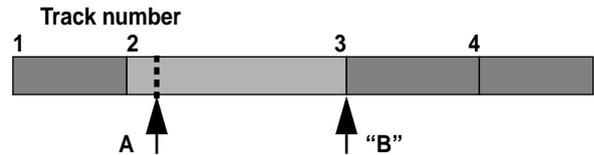

All data between these points is erased.
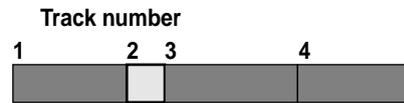

5.6.2 Erasing to the end of a track

If only point A is marked, the end of the track containing point A is regarded as point B.
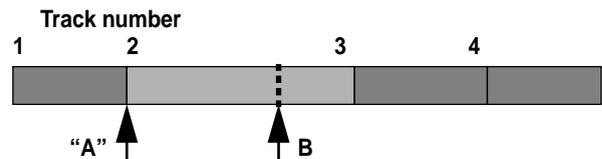

This provides a convenient way to delete from a marked point to the end of the track.
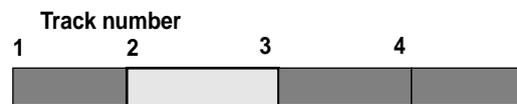

5.6.3 Erasing from the start of a track

If only point B is marked, the start of the track containing point B is regarded as point A.

This provides a convenient way in which data can be erased from the start of a track only.

In addition, the AUTO CUE function (4.2.12, "Cueing to the first audio position in a track") can be used to cue precisely to the start of the audio in a track. If this location is then marked as point B, all "dead time" at the start of the track up to the audio start can be eliminated.


5.6.4 Erasing more than one track at a time

If the A and B marks are set in different tracks, all material between the A and B points will be erased.

If the A point is set at the start of a track, and the B point at the end of another track, the whole of the tracks containing and between these points will be erased (in the example above, tracks 2 and 3 will be erased.

Track number

Formerly tracks 4 and 5
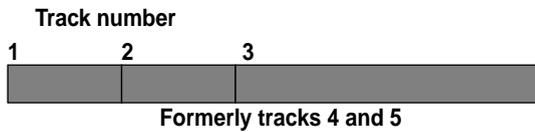
The remaining tracks will be automatically renumbered to form a continuous sequence.


NOTE

It is not possible to erase the last track on the disc using this method. You must use the track erase function (see 5.3, "Erasing a track") for this purpose.

5.6.5 Retaining a track title for use by the second track after a division

As explained earlier (5.2, "Dividing tracks"), when a track is divided, the earlier of the newly-created pair of tracks contains the song title. If you are using the track division to eliminate lead-in times, this would mean that the unwanted lead-in kept the title and the program material was untitled. To avoid this, use the A-B erase function (without setting the A point) to retain the title for the remaining part of the track.

5.7 Moving an A-B point

This is the electronic equivalent of a razor-blade and splicing tape. A section of material can be marked, and moved to almost any part of the disc.

Track number

A **B** **A-B portion to be inserted here**
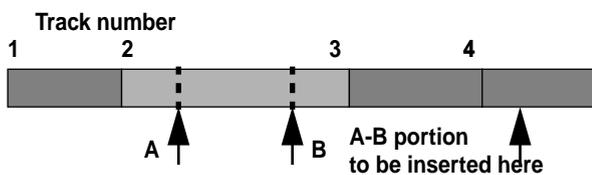
After the operation, the layout will be:

Track number

Track 2 split into two at cut point **New track from A-B portion**

This operation can be performed in stop. play ready, or play modes.

The same conditions apply with regard to the A and B points as apply when erasing material between

them:

• Point A must not be at the same location as point B

• At least one of the two points must be marked

• Point B must come after point A

If any of these conditions are not met, the display will show A-B Error!.

1 Mark the A and B points.

2 Press the **EDIT** key, and turn the **DATA** dial until the display shows

INSERT A-B ?

3 Turn the **SHUTTLE** wheel clockwise. The display will change:

INSR PT OK ?

The MD-801 will keep looping the point at which the insertion is to take place (the insertion point is at the end of the loop). Use the **JOG** dial (it is not a data dial at this point) to alter the position of the insertion point.

4 Turn the **SHUTTLE** wheel clockwise once more, and the display will change (alternating with the word Rehearsal, while the **EDIT** indicator lights in the display:

IN PT OK ?

The playback will now loop from a point about four seconds before the insertion point to a point about four seconds after the A point. This allows you to preview the effect of the "punch-in" join between the original material and the A-B portion being moved.

5 Press the **LOC B** key **[24]** while this rehearsal process is taking place. The display will change:

OUT PT OK ?

The playback loop now changes so that the loop starts about four seconds before the B point, and ends about four seconds after the insert point. This allows you to preview the effect of the "punch-out" between the A-B portion being moved and the original material.

6 Turn the **SHUTTLE** wheel clockwise to make the edit. The display will show Now Editing, followed by Complete. The A-B section becomes a new track. The point from which the A-B section was moved also becomes a track break, and all track num-

bers are renumbered accordingly. See the diagram above for an example.

If you need to make the new track (formerly the A-B portion) into part of the preceding and/or following track, use the track combine facility (see 5.4, "Combining tracks") to turn these tracks into one track.

The A and B points are lost after this edit operation, and will have to be re-entered if they are to be used again.

You can cancel the operation at any time in the usual way (**SHUTTLE** wheel counterclockwise, **EDIT** key or **STOP** key).

- - - - - - - - - - - - - - - - - - - -
NOTE
You cannot move the A-B portion inside itself (i.e. the insert point cannot be between the A point and the B point).
- - - - - - - - - - - - - - - - - - - -

5.8 Restoring erased material

A track or section erased can be unerased. This is an "all or nothing"-type process—all tracks and sections deleted are restored, and it is not possible to restore only one of these tracks or sections.

In addition, if tracks or sections are restored, the audio data only is restored—the titles and recording dates are not restored, but a title such as RST.001 will be automatically given, showing that this is a restored track. The tracks restored in a single operation start numbering at 001, regardless of any other track titles with the same number that were on the disc before the operation.

This function can also be used in an emergency, if recording was taking place, and power to the unit was cut off part of the way through the recording process. In this event, data on the disc will be present, but will not be organized with the TOC and will hence be inaccessible. This function may allow the data to be accessed after the restore operation has been performed.

However, there are occasions on which this function does not restore such data, and the Not. Execute! message will appear..

- - - - - - - - - - - - - - - - - - - -
NOTES
Tracks and sections of less than 12 seconds in length may not be restored.

When restoring a track or tracks, the last restored track will have the unused portion of the disc automatically appended to it. This will result in a Disc Full error message if you try to record on the disc.

To overcome this problem, split the new long track at the end of the recorded section, and delete the new track which consists of the unused part of the disc.

When restoring recordings that have been interrupted, the time shown on the display may disappear from the display at the point at which the power was cut. This is a normal function, and you should not be concerned if this happens. You may want to use this as the position to divide the new "long" track into two before deleting the unwanted part, as described above.

If a track or section occupies a part of the disc which has been overwritten by a new recording, the older section cannot be restored—the data is no longer available.
- - - - - - - - - - - - - - - - - - - -

This operation can take place in stop, play ready or play mode.

1 Press the **EDIT** key, and turn the **DATA** dial until the display shows:

> RESTORE ?

2 Turn the **SHUTTLE** wheel clockwise to restore deleted data.

The display may show Not Execute!. Here, this means that the disc has no material recorded on it which has been erased (there may even be no material at all recorded on it).

5.9 Changing track attributes

After a track has been restored in the way described above, it may have the wrong attribute assigned to it (it may be restored as mono when it was originally stereo, or *vice versa*). This function allows you to restore the correct attribute.

1 Use the **TRACK** keys or any other convenient method to select the track whose attributes you wish to change.

2 After pressing the **EDIT** key, turn the **DATA** dial until the display shows:

> TRK ATTR ?

3 Turn the **SHUTTLE** wheel clockwise. The display changes:

```
Track OK ?
```

4 Turn the **SHUTTLE** wheel clockwise once again to change the current track from mono to stereo or *vice versa*.

The display will show `Now Editing`, followed by `Complete.`

This function may also be used to "un-protect" a track if the following message appears at any time in the edit mode:

```
T_Protected!
```

This signifies that the track cannot be edited. This is software protection, which has been set by an MD unit other than an MD-801, and it can be disabled using this function in the way described above.

- - - - - - - - - - - - - - -
NOTE
If a track is "unprotected" in this way, it cannot be protected again.
- - - - - - - - - - - - - - -

5.10 Erasing a complete disc

As well as erasing individual tracks (see 5.3, "Erasing a track"), it is also possible to erase the entire contents of a disc.

1 After pressing the **EDIT** key, turn the **DATA** dial until the display shows:

```
ERASE DISC ?
```

2 Turn the **SHUTTLE** wheel clockwise to enter this edit menu:

```
Sure ?
```

3 If you are sure that you want to erase the contents of the disc, turn the **SHUTTLE** wheel clockwise once more.

The display will show `Now Editing`, followed by `Complete`, followed by `Blank Disc.`

If you want to abort the erase process, use the usual methods (**SHUTTLE** wheel counterclockwise, **EDIT** key or **STOP** key).

5.11 Track and disc title entry

The disc and tracks can be titled. The titles can consist of upper- and lowercase letters, numbers, and punctuation symbols (as well as Japanese *katakana*).

Each title can be up to 99 characters long, and titles too long to fit on the display are scrolled.

The total number of characters which can be included as titles on a disc (disc and track titles) is 1,792 characters.

A computer keyboard (PS/2 compatible) can be attached to the MD-801, and used to input titles, or titles can be entered, using the procedure described below (for keyboard operations, see 6, "Use of a keyboard with the MD-801").

Titles can be entered in stop (disc titles), play or play ready (track titles) mode as well as in the record and record ready modes.

1 Press the **EDIT** key and turn the **DATA** dial until the display shows:

```
TITLE ?
```

2 Turn the **SHUTTLE** wheel clockwise.

If the MD-801 is in stop mode, the words **DISC TITLE** will light in the display, and you can enter the title for the whole disc.

If the MD-801 is in play or play ready mode, or record or record ready mode, the words **TRACK TITLE** will light in the display, and you can enter the title for the current track.

3 The display will change:

```
_
```

The underline cursor shows where the character will be entered.

4 Use the **DATA** dial to scroll through the symbol set. The character set selected initially is the lowercase alphabet set, together with numbers and punctuation symbols.

5 Use the **MEMO IN/CAPS** key **[23]** to change between lowercase and uppercase characters. If uppercase characters are selected, the **CAPS** indicator will light in the display.

6 Turn the **SHUTTLE** wheel clockwise to move the cursor to the right, and counterclockwise to move it to the left. Continuing to hold the **SHUTTLE** wheel away from the center posi-

tion will move the cursor more than one position.

```
K _
```

7 Continue using the **DATA** dial and **SHUTTLE** wheel to enter characters, until the title is complete.

```
Koto  Sonata_
```

8 To store the title, press the **EDIT** key. The title will scroll across the display if it is too long to fit on one line, allowing you to check it.

- - - - - - - - - - - - - - - - - - -

NOTES

If the display shows Name Full, *it means that the character limit for a title (99 characters) or for a disc (1,792 characters) has been exceeded.*

If a disc has been titled on another MD recorder, which permits longer titles than those permitted by the MD-801, the titles, when edited on the MD-801, are subject to the same limitations as those imposed on "native" titles.

- - - - - - - - - - - - - - - - - - -

5.11.1Deleting characters

If a character is entered in error, delete it as follows:

1 Move the cursor under the character to be deleted:

```
Koto  Sonatta
```
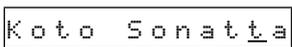
2 Press the **LOC A/DEL** key **[24]**. The character at the cursor position will be deleted.

```
Koto  Sonata
```

5.11.2Inserting characters

If you have missed out a character, insert a space for a new character in the following way:

1 Move the cursor to the character following the position where a character is to be inserted:
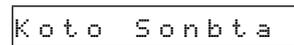
```
Koto  Sonta
```

2 Press the **LOC B/INS** key **[24]**. A space will appear into which you can enter a character:

```
Koto  Son_ta
```
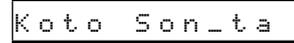
5.11.3Changing characters

If a character has been wrongly entered, you can change it by moving the cursor to the character, and turning the **DATA** dial.
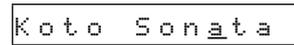
Thus:

```
Koto  Sonbta
```

can be corrected by moving the cursor to the b:

```
Koto  Sonbta
```

and then turning the **DATA** dial counterclockwise:

```
Koto  Sonata
```

5.11.4Editing existing titles

If a title has already been entered, for a disc or for a track, pressing the **EDIT** key and turning the **DATA** dial until TITLE ? is displayed allows you to edit it, to change characters, and insert or delete characters as described above.

In stop mode, the disc title can be edited.

In play mode or play ready mode, the title of the current track can be edited.

5.11.5Viewing titles

As explained earlier (4.2.16, "Displaying track titles during playback"), pressing the **TITLE** key during playback will display the disc title (in stop mode) and the current track title (in play or play ready mode).

If the title is too long to fit in the display, pressing the **TITLE** key once more will scroll it across the display.

5.11.6 Copying disc and track titles

When two MD-801 units are connected together using the optional PW-1XMD serial cable, disc and track titles can be copied from one unit (master) to the other (slave), as described in 4.3.10, "Track title copying together with audio", with the following procedure.

1 After pressing the **EDIT** key on the slave unit, turn the **DATA** dial until the display shows:

```
TITLE  ?
```

2 Turn the **SHUTTLE** wheel clockwise.

If the master MD-801 is in stop mode, the **DISC TITLE** indicator will light in the display, and you can copy the title for the whole disc.

If the master MD-801 is in play or play mode, the **TRACK TITLE** indicator will light in the display, and you can copy the title for the current track.

3 The display will change:

```
_
```

4 With both units in stop mode, press the **CALL** key **[10]** on the slave unit.

The title currently displayed on the master unit (in this case, the disc title) is copied to the slave unit.

NOTE

Track titles can also be copied in this way, as well as using the method described in 4.3.10, "Track title copying together with audio", as long as the master unit is in play or play ready mode.

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MD-801RMKII/
MD-801PMKII