

SONY[®]

Digital Audio Mixer

Automation Operation

DMX-R100

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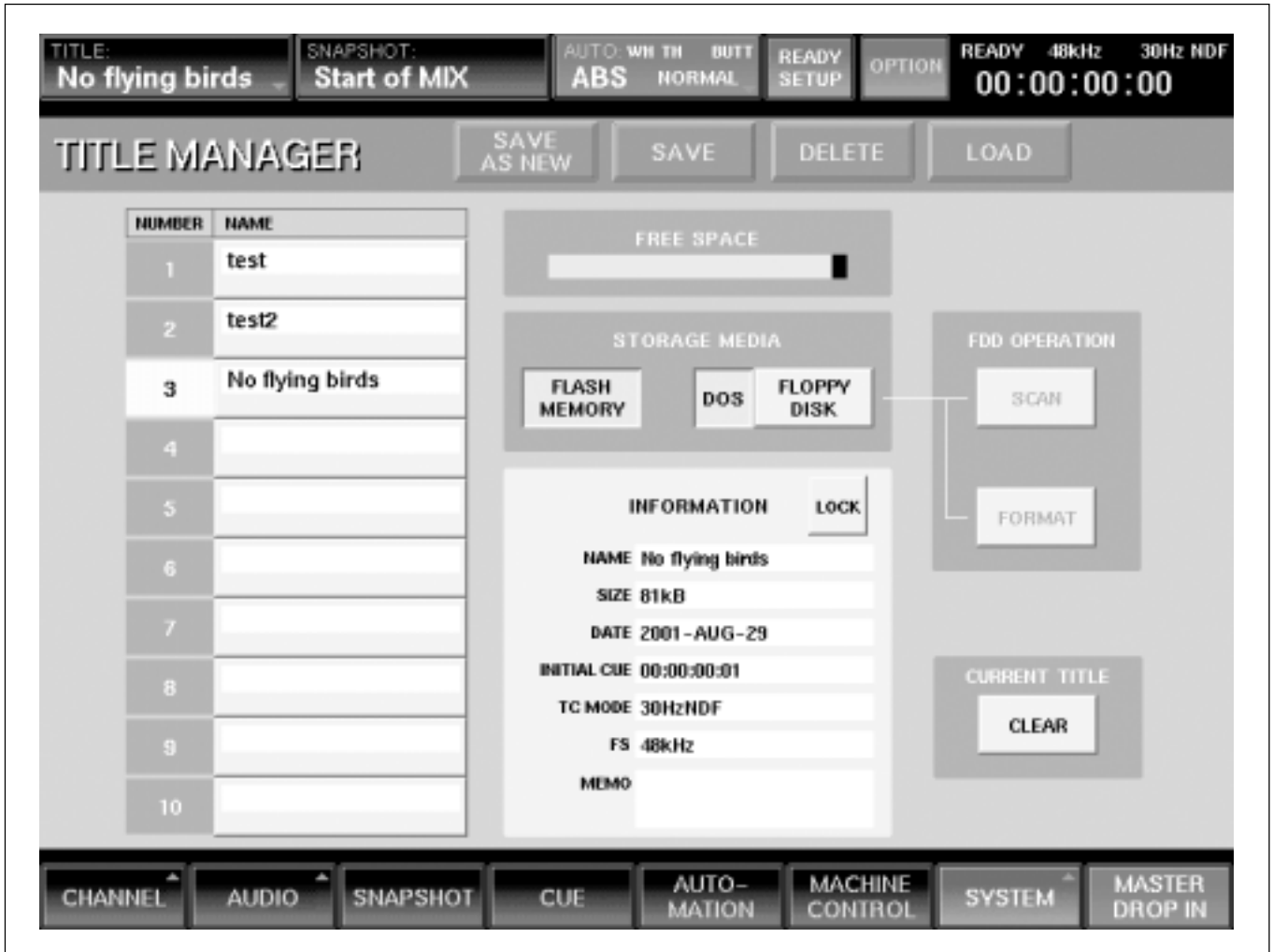
System Set-up

The descriptions and operational procedures that follow assume that:

- A multitrack machine, either tape or hard drive, is connected to the DMX-R100.
- The multitrack has suitable material recorded on it, and its audio outputs are assigned to input channels on the mixer.
- The multitrack transport is under the control of the mixer transport keys.
- A timecode link, either SMPTE or MIDI, exists between the multitrack and the mixer for location and synchronisation purposes.

Titles

The Title for any project is the heading under which all related data, such as mixes, snapshots and cue points, is held. So, although not vital, it is a good idea to have a Title name for any project right from the start.



To Name a Title

- 1 Touch **SYSTEM** for its pop-up and then touch **TITLE MANAGER** to access the TITLE MANAGER GUI.
- 2 Touch the NAME line in the INFORMATION block in the centre of the GUI, and the QWERTY Keyboard pop-up appears.
- 3 'UNTITLED' will be displayed by default in the upper entry dialogue line for a new system. Either

touch **BACK SPACE** several times to delete it, or touch and move a finger across it to highlight it. Then type in a Title name using the touch QWERTY keyboard. Touch **ENTER** when finished.

From now on, any changes in settings will relate to the Current Title which has just been named. The data for this Title resides in the system Dynamic RAM.

Note

Data left in RAM will be lost if the system is powered down. Use KEEP or SAVE to retain it.

Automation Operation



To Keep a Title

- 1 Touch **TITLE** at the very top left of the GUI for its pop-down.
- 2 Touch **KEEP** in order to save the current settings and data into the Flash Memory, where they will be safely stored.

If the system is turned off and turned on again, the settings stored using KEEP will be restored.

Note

*That having used KEEP for the current Title, recalling a further Title will overwrite the previously 'kept' Title in the Flash Memory. **SAVE or SAVE AS NEW must be used to permanently store a Title.***

To Save a New Title

- 1 Touch **SAVE AS NEW** and the Current Title will be saved in the first available slot in the column to the left of the GUI. The slot number will be highlighted white and the Title name will appear in the NAME column.

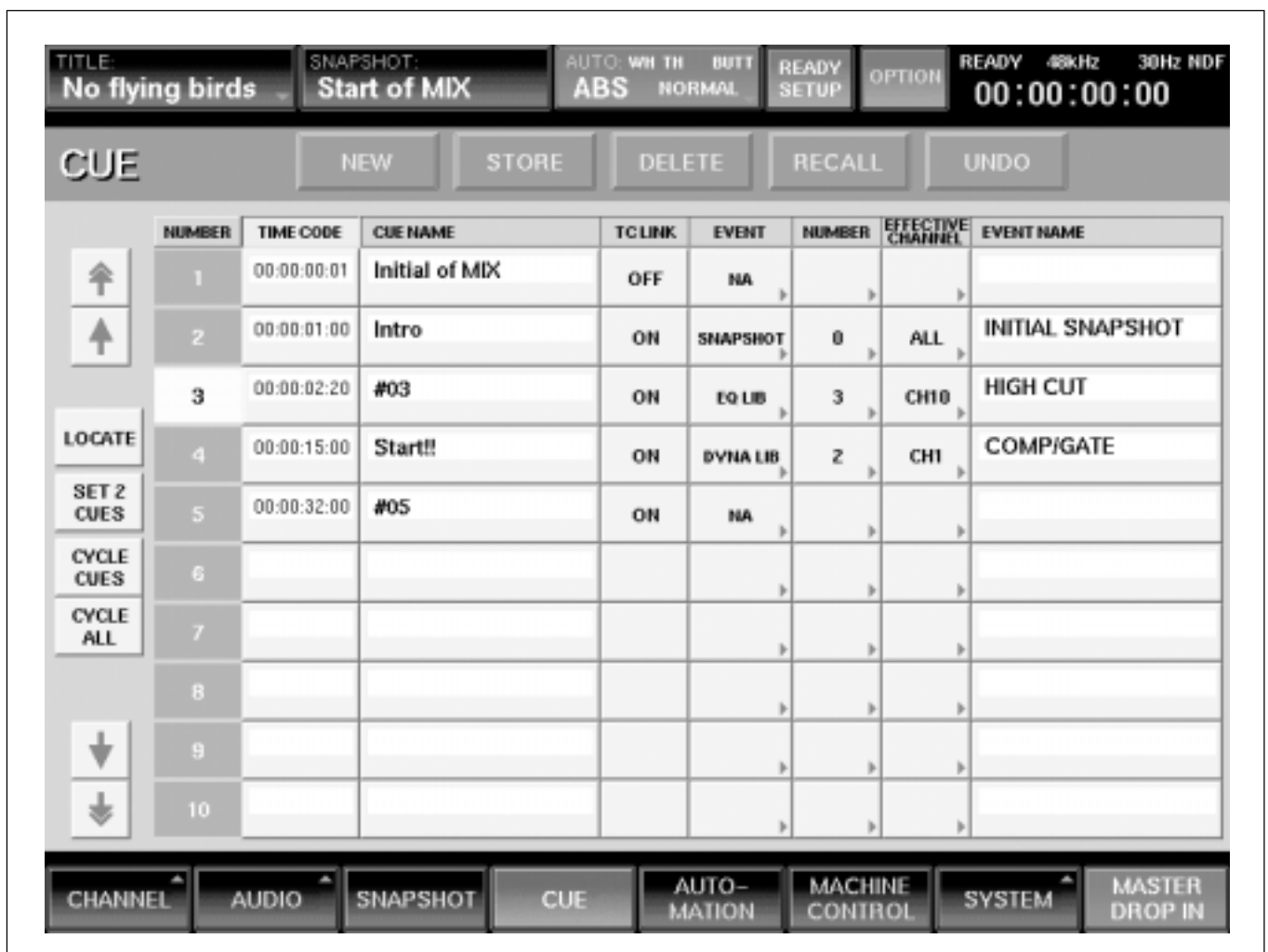
To Save a Title

- 1 Touch **SAVE** to overwrite the data in the Title that has its number highlighted white. A pop-up will appear, requiring confirmation. Touch **YES** to complete the save.
- 2 To save in a different slot, touch its number to highlight it, and then touch **SAVE**. A pop-up will appear, requiring confirmation. Touch **YES** to complete the save.

Cues

The Cues GUI allows Cue Points, in the form of timecode markers, to be set along with a name entry. It is often extremely useful to set Cues for the crucial points in any piece of material to be worked on. These include the start and end, verses and choruses for music, and scene changes in post production projects.

Once set, Cues can be used for a number of purposes, including locate and cycling between specified Cues.



General

Cue timecode points can be set in a number of ways:

- From the current time point whilst the material is rolling ('on the fly').
- From the current time point whilst the material is stationary.

- Manual entry using the jog wheel.
- Manual entry using the ten-number key pad.

Cues can be linked to fire events at their timecode points. Events include Snapshots, EQ and Dynamics library settings.

To Enter a New Cue at the Current Timecode Point

To enter a Cue for the start of the material, for example:

- 1 Whilst the material is either stationary or moving, touch **NEW** in the CUE GUI, and a new entry will appear in the TIMECODE column. A default number will be entered automatically in the CUE NAME column.
- 2 To change the default number to an appropriate name, touch the default in the CUE NAME column, and the QWERTY Keyboard pop-up appears.
- 3 The default will be displayed in the upper entry dialogue line. Either touch **BACK SPACE** several times to delete it, or touch and move a finger across it to highlight it. Then type in a suitable name, such as 'START OF TITLE' in this case, using the touch QWERTY keyboard. Touch **ENTER** when finished.

To Revise the Time of a Cue 'On the Fly'

- 1 Under the NUMBER column, touch the Cue number to be revised. It highlights white.
- 2 Whilst the material is either stationary or moving, touch **STORE** in the CUE GUI, and the current timecode point will appear in the TIMECODE column.

To Revise the Time of a Cue Manually

- 1 Under the TIMECODE column, touch the timecode number to be revised. It highlights white.
- 2 Then adjust the timecode number using the jog wheel or the ten-number key pad. Press **ENTER** at the bottom right of the number key pad when finished.

To Locate to a Cue

- 1 Under the NUMBER column, touch the Cue number that is to be the locate point, to highlight it white.
- 2 Touch **LOCATE** in the CUE GUI and the system will locate to the timecode point for the highlighted Cue.
- 3 To locate to the same Cue, either touch **LOCATE** or press the LOCATE button above the transport keys on the panel.

Note

*The front panel LOCATE button will always cause a locate operation to the point set by touching **LOCATE** in the GUI, even if another Cue number is touched and highlighted white in the GUI. However, touching **LOCATE** in the GUI will always locate to the Cue which is highlighted. In other words, touching **LOCATE** in the GUI sets the Cue to which the front panel LOCATE button will operate.*

Cycle All

To play the source material from beginning to end and have it repeat until the stop transport key **■** is pressed:

- 1 Touch **CYCLE ALL** in the CUE GUI and it turns green. The LOCATE button above the transport keys on the panel also lights green.
- 2 Press the LOCATE button and the system will play from the first Cue to the last Cue and repeat until the **■** transport key is pressed.
- 3 After pressing **■**, press **LOCATE** again to continue Cycle All.
- 4 De-select **CYCLE ALL** when finished.

Note

*When **LOCATE** in GUI is pressed for the first time or Cycle All is continued, the system will always play from CUE 1. Press the **▶** transport key to continue from the current point.*

Cycle Between Two Cues

To play the source material from one Cue to another and have it repeat until the stop transport key **■** is pressed:

- 1 Touch **SET 2 CUES** in the CUE GUI and it turns green.
- 2 Under the NUMBER column, touch the first Cue number and it highlights white.
- 3 Touch the Cue number for a second Cue, later than the first. **SET 2 CUES** will return to grey, indicating that the two Cues have been accepted.
- 4 Touch **CYCLE CUES** in the CUE GUI and it turns green. The LOCATE button above the transport keys on the panel also lights green.

- 5 Press the front panel LOCATE button and the system will play between Cues set up in step 3, and repeat until the ■ transport key is pressed.
- 6 After pressing ■, press LOCATE again to continue Cycle Cues.
- 7 De-select **CYCLE CUES** when finished.

Note

When LOCATE is pressed for the first time or to continue Cycle Cues, the system will always play from the beginning. Press the ► transport key to continue from the current point.

Overview of Automation of Controls

General

The DMX-R100 allows virtually all controls and switches to be automated. That is to say, movements of faders, knobs and switch operations can be recorded and replayed with reference to timecode. Snapshots of the controls can also be restored with reference to timecode.

Controls first have to be set or armed into an automation ‘ready’ mode, much like arming the tracks of a recorder in readiness for recording audio material. Once armed, they can be ‘dropped in’ to record automation data, control by control individually, on a channel basis, or all ‘ready’ controls simultaneously. This process will be described in more detail later in this supplement.

Automatable Controls

Dynamic automation is possible on the following controls and groups of controls that can be automated:

- Channel Faders, Cuts & Pans
- M/T Faders, Cuts & Pans
- Aux Send Levels & Cuts
- Routing Assignment Buttons
- Equaliser Knobs & Switches
- Dynamics Knobs & Switches
- Master Faders

Static settings and I/O assignments will be stored when a Title is saved, independent of automation operations. Saved static settings do not include the CR MONITOR

level knob and SELECT MACHINE buttons.

Automation set-up

The following section describes how to turn the automation functions on, and the options included. The actual operation varies according to control type and therefore the detail will be described in separate sections later.

Automation data is recorded in two basic modes: ABS (absolute) where the exact settings are recorded for the first time or overwrite previous data, and TRIM, which allows previous data to be trimmed and modified.

The way controls are dropped into automation record varies according to control type. The following brief summary assumes controls are already set to automation ready:

• FADERS

Individual faders drop into automation record when they are touched and drop out when released. (This applies so long as ‘Touch Hold’ and ‘Write Hold’ are not enabled.)

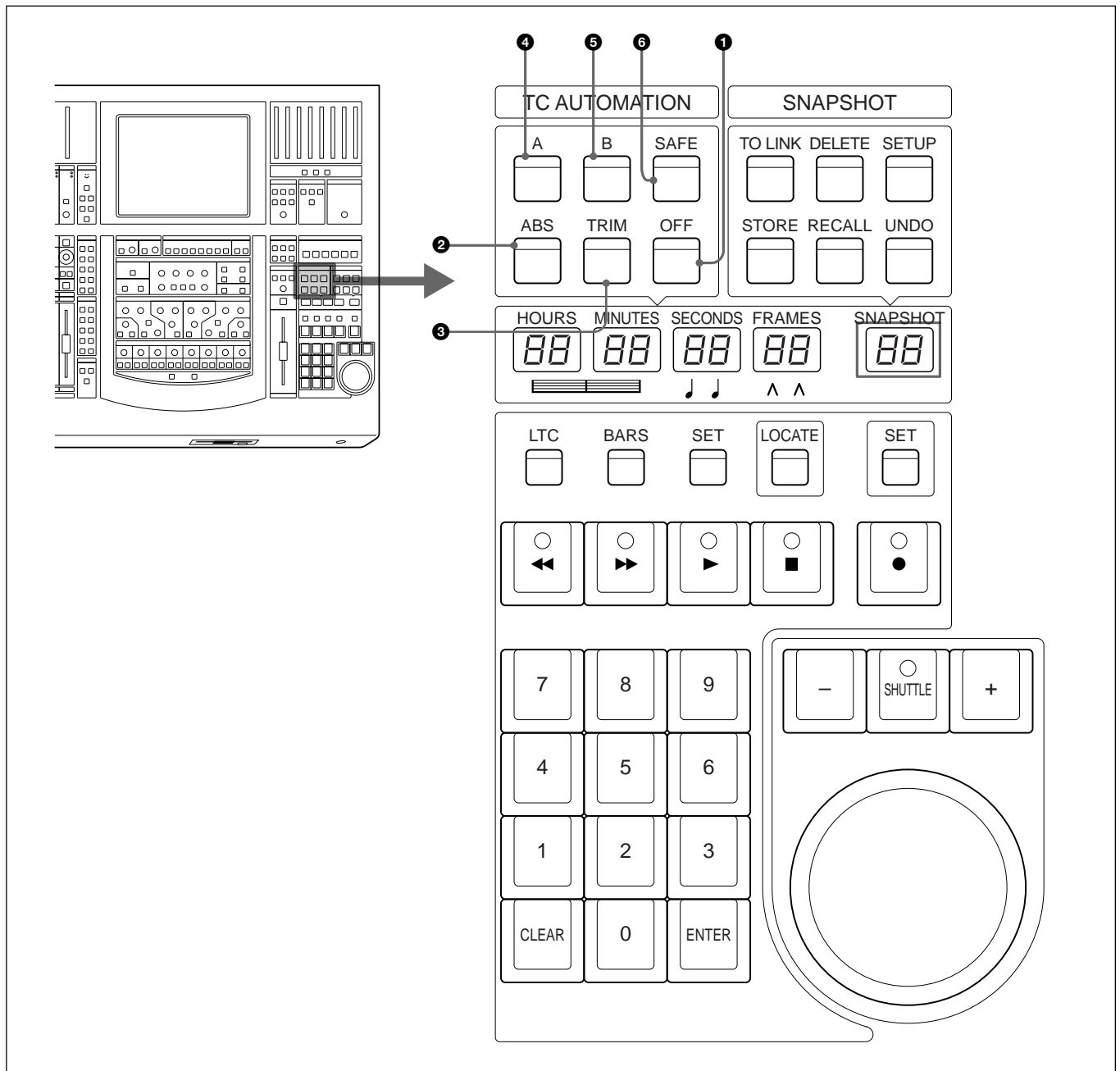
• SWITCHES

An individual switch drops into automation record when it is pressed and remains so until automation timecode ceases.

• KNOBS

An individual rotary knob drops into automation record when its numeric indicator in the CHANNEL

Automation Operation



TC AUTOMATION buttons

GUI is touched (changing its colour from yellow to red). Touching it once more will drop it out.

• INDIVIDUAL CHANNELS

Any controls set to ready on an individual channel will drop into automation record when the **WRITE** button for that channel is pressed, and drop out when it is pressed once more.

• ALL CHANNELS

Any controls set to ready on all channels will drop into automation record when **MASTER DROP IN**, at

the bottom right of the LCD, is touched. Touching it once more will drop all channels out.

Refer to the illustration 'TC AUTOMATION buttons' above for the following sections describing the functionality of buttons related to automation.

① OFF button

OFF is set as the system fire-up default. When this button is lit, the recording and replaying of automation data is prevented. All functions remain as manual operations.

The upper central indicator block in the GUI will be black, displaying OFF, when this button is lit. **OFF**, **ABS** and **TRIM** inter-cancel.

Note

Although automation cannot be recorded or replayed when OFF is lit, controls can still be set into automation 'ready'.

2 ABS button

Pressing **ABS** allows 'absolute' settings and movements to be recorded as automation data for any controls set to automation 'ready', i.e. the exact settings or movements of faders and knobs will be recorded once dropped in.

A 'ready' status is indicated with a yellow marker or display for each individual control. Red markers or displays indicate automation record status.

The upper central indicator block in the GUI will be red, displaying ABS, when this button is lit. **ABS**, **TRIM** and **OFF** inter-cancel.

3 TRIM button

Pressing **TRIM** allows previously recorded automation data to be trimmed for any controls set to automation 'ready'. So, as an example, a fader may have certain movements recorded using the 'ABS' function and TRIM allows those movements to be globally adjusted. In other words, the original moves are retained but are at a higher or lower level overall. TRIM can also be dynamic in operation.

To make this operation easy for faders, they will all jump to their 0dB scale points. This is the reference point from which any trimming moves are made.

The upper central automation status indicator block in the GUI will be green, displaying 'TRIM', when this button is lit. **TRIM**, **ABS** and **OFF** inter-cancel.

4 A button

The **A** button will be lit as the system fire-up default and indicates that automation data will be stored and recalled to and from the 'A' buffer. The **A** and **B** buttons inter-cancel.

5 B button

Pressing the **B** button will cause automation data to be stored and recalled to and from the 'B' buffer. The **B** and **A** buttons inter-cancel.

Automation data can be copied from one buffer to the other. Press and hold the button, **A** or **B**, for the source data until its button flashes. Then press the button for the other buffer. A pop-up will appear, requiring confirmation before the copy operation can be completed.

6 SAFE button

When **SAFE** is set to on, automation data will not be updated. In other words, automation operations can be performed whilst **SAFE** is on but previous data is safe.

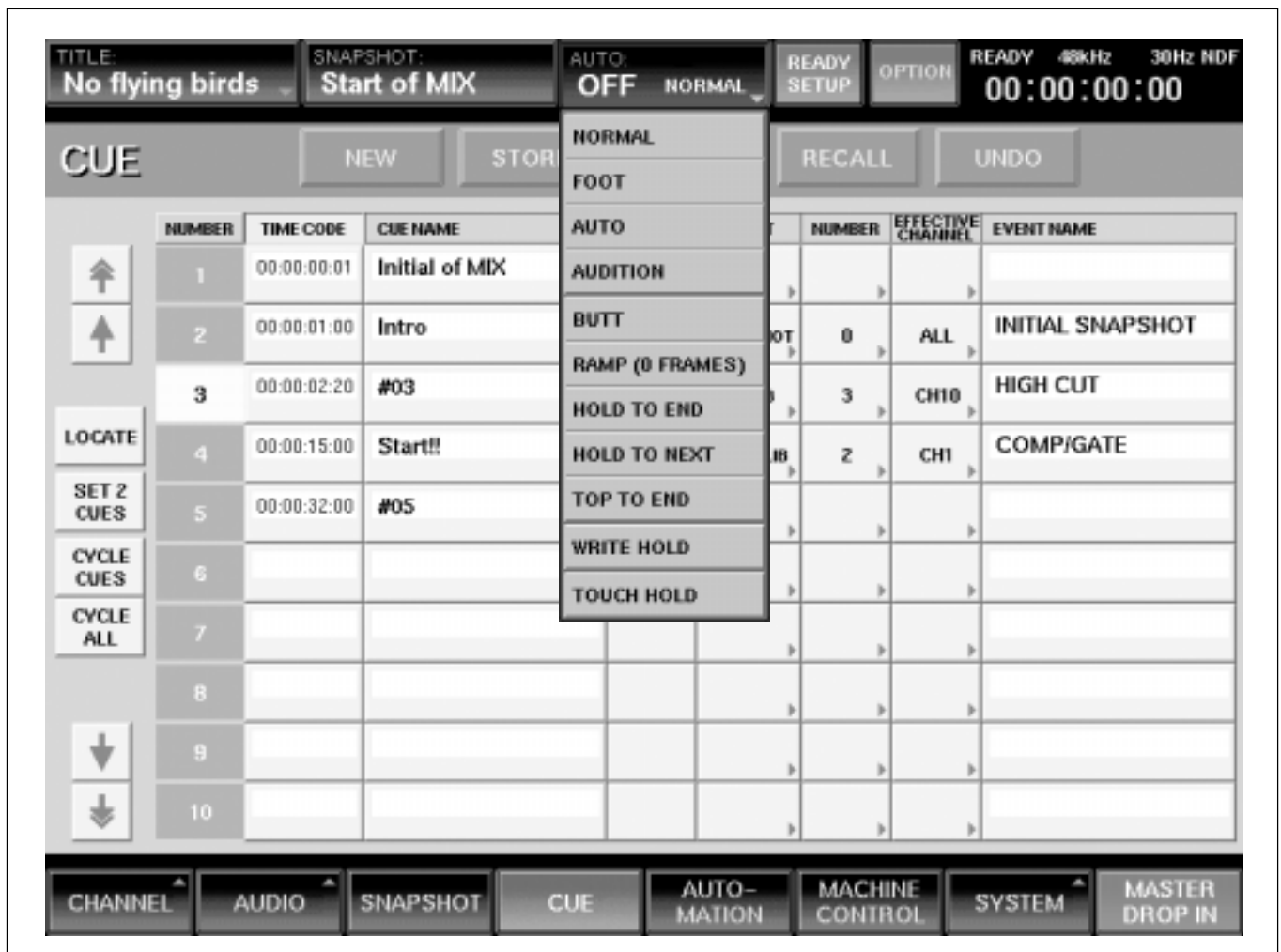
SAFE functions in other ways too:

- Whilst **SAFE** is off, if a mistake is made during an automation operation, press **SAFE** before stopping the tape or material rolling, to prevent updating the automation data.
- Whilst **SAFE** is on, if an automation operation is performed that should be stored, press **SAFE** before stopping the tape or material rolling, to update the automation data.

Note

*The **SAFE** button is also used for the AUDITION function described later in this document.*

GUI Options for Automation



AUTO button

The button in the centre at the top of the GUI (with AUTO legend at top left) displays the current automation status. It is crucial to keep an eye on this area during automation operations.

To the lower left of this button is a larger legend which reflects the settings of the **ABS**, **TRIM** and **OFF** buttons.

Touch AUTO legend for a pop-down of automation options; what follows is a brief explanation of each. They will be described with practical examples later in this supplement.

Operational modes

The upper four operational modes inter-cancel with each other and are displayed in the lower right corner of the AUTO button:

NORMAL

This option is the fire-up default and is the setting for the majority of automation operations.

FOOT

This option allows the automation record drop-in and drop-out to be operated via a foot switch plugged into the rear of the mixer. This mode can also be activated in the AUTOMATION GUI by touching **FOOT SW**.

AUTO

This option allows controls that are set ready to write automation data, to have their settings recorded between specified timecode points. This mode can also be activated in the AUTOMATION GUI by touching **AUTO**.

AUDITION

This option allows a preset level to be found which does not overwrite previous automation data. This new setting can then be dropped in and out of automation record at the appropriate times. New moves can also be made during the drop-in period. This mode can also be activated in the AUTOMATION GUI by touching **AUDITION**.

Note

FOOT, AUTO and AUDITION require that automation data is already present for the time period they are to operate over.

Automation drop-out modes

The four modes in the middle section of the pop-down inter-cancel with each other and are displayed in the upper right corner of the AUTO button, but only whilst **ABS** or **TRIM** is selected.

Automation drop-in and drop-out can be achieved in a number of ways depending on the options set. The options also vary according to control types. They include:

GUI Operations

- Touch **MASTER DROP-IN** to drop all ready controls into automation record.
- Touch individual controls, in the GUI, that are set ready for automation record.

WRITE Buttons

- Press **WRITE** directly above the knob in each fader strip to drop all the ready controls into automation record for that channel.

Fader Knobs

- Touch a fader knob for a fader that is set ready for automation record.

Buttons

- Press an individual button that is set ready for automation record. It will simultaneously change state and drop into automation record.

Knobs

- In the CHANNEL GUI touch the numeric indicator above any knob that is set ready for automation record. Its numeric indicator will change colour from yellow red.

BUTT

This option is the fire-up default. Where a new section of automation moves is recorded over previous moves, having BUTT selected causes a jump between the old and new data, if they are different at the drop-out point. BUTT can also be found under 'AUTO RETURN TIME' in the AUTOMATION GUI.

RAMP (# FRAMES)

This option allows the mix data to return to the previous data over a specified time as a ramp between the new and old values at the drop-out point. The ramp time, in frames, can be set under 'AUTO RETURN TIME' in the AUTOMATION GUI.

HOLD TO END

This option causes the setting at the automation 'drop-out to' point to be recorded to the end of the title. HOLD TO END can also be found under 'AUTO RETURN TIME' in the AUTOMATION GUI.

HOLD TO NEXT

The system stores automation data only when changes to settings occur, in order to save storage space. These changes are known as events. Using HOLD TO NEXT causes the setting at the automation drop-out point to be recorded until the next event. HOLD TO NEXT can also be found under 'AUTO RETURN TIME' in the AUTOMATION GUI.

TOP TO END

This option causes the setting at the automation 'drop-out point' to be recorded from the beginning to the end of the title. TOP TO END can also be found under 'AUTO RETURN TIME' in the AUTOMATION GUI.

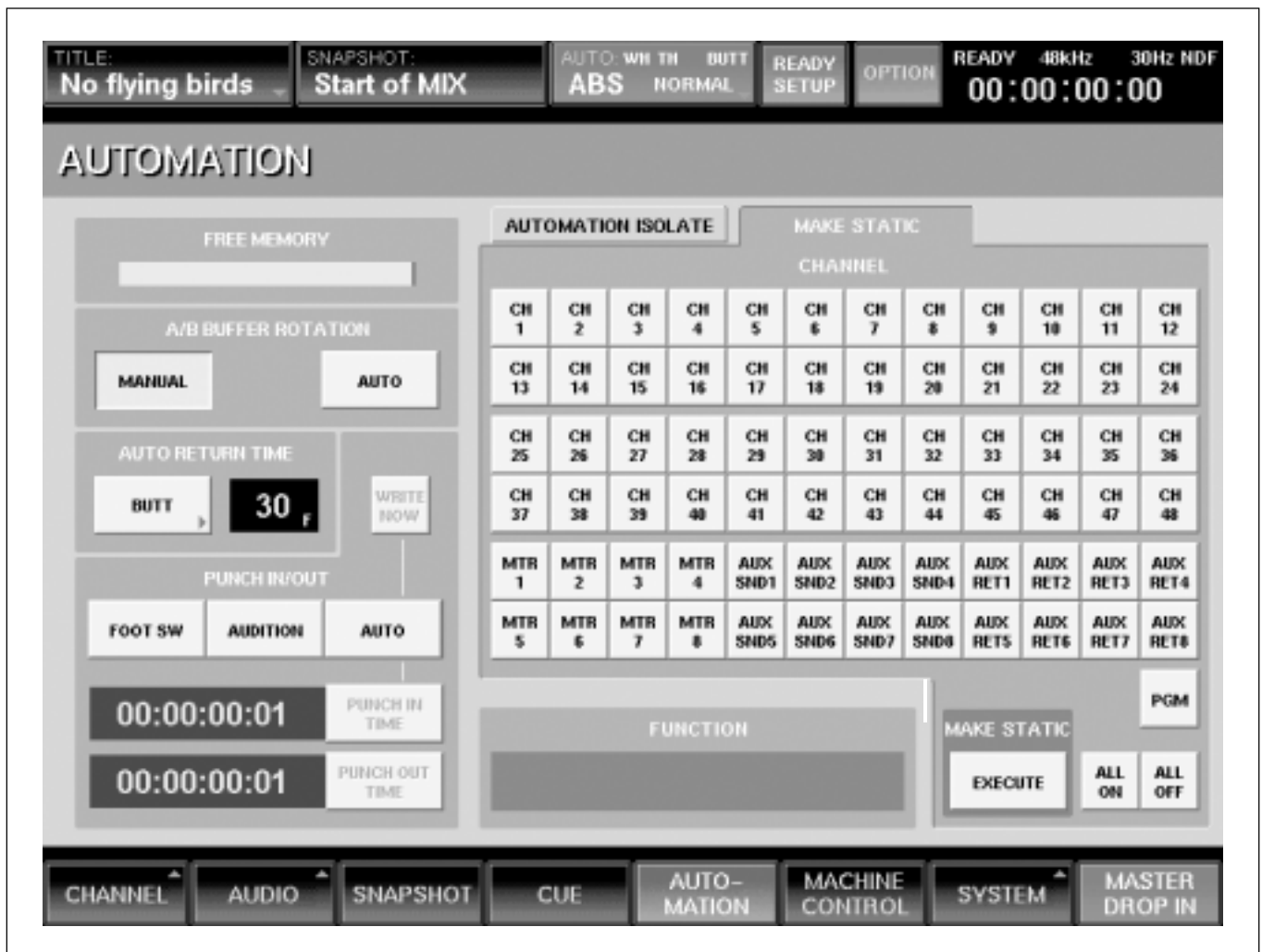
WRITE HOLD

Any controls set into automation record during normal operations will drop out, returning to ready status, if the source material is stopped or rewound. The system monitors timecode in order to operate this way. WRITE HOLD retains the record status without reference to timecode.

TOUCH HOLD

This option applies to faders. Normally, any faders set to automation record will have data written only when contact is made with their touch sensitive fader knobs. Using TOUCH HOLD, touching any fader will cause it to latch into automation record.

Automating Faders



AUTOMATION GUI displaying MAKE STATIC option

General

Before using the automation on any control for the first time, it is wise to clear automation data which may be resident in memory if the system has been in use by others. The following assumes that all important project data has been saved in an open slot in the Title Manager.

To Clear Automation Data

- 1 Touch the **AUTOMATION** label in the middle at the bottom of the GUI to display the AUTOMATION GUI.
- 2 Touch the **MAKE STATIC** tab in the upper part of the GUI.

- 3 Touch the **ALL ON** button to highlight all channel and signal paths green. Or touch individual buttons relating to channels and outputs, if more appropriate, to highlight them green.
- 4 Touch the **EXECUTE** under the MAKE STATIC label. A confirmation pop-up will appear. Touch **YES** to complete the operation

Dynamic and Snapshot automation

It is important to note that it is possible to dynamically automate individual controls as well as to restore snapshots, both to timecode. This could cause conflict when, for example, the same control is restored from a snapshot whilst also being controlled dynamically. Therefore it is advisable to isolate controls from dynamic automation when they are included in

snapshots using AUTOMATION ISOLATE, which is described later. For now, make sure **(TC LINK)** under the SNAPSHOT heading, is turned off.

To Automate Moves on One or More Faders

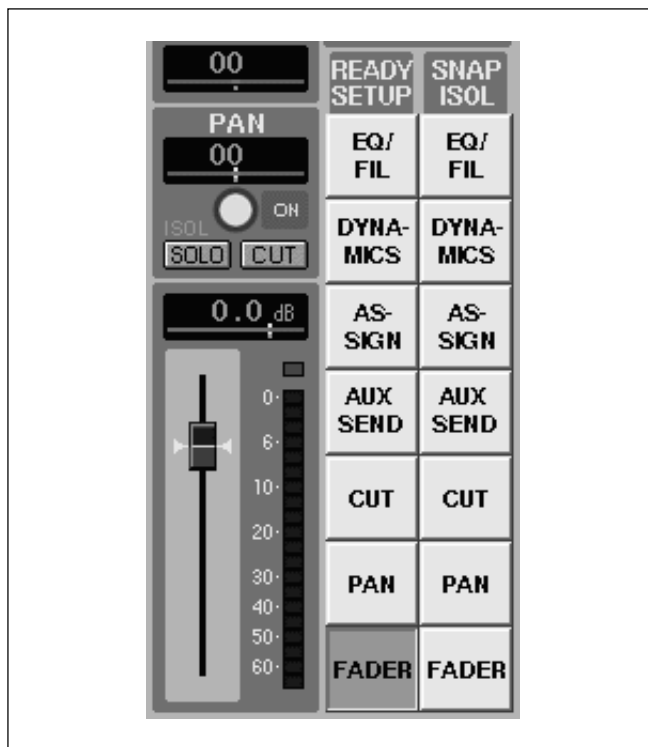
- 1 Press **(ABS)** (short for absolute) on the panel under the TC AUTOMATION heading above the timecode display. The AUTO button in the middle at the top of the GUI turns red and indicates 'ABS' at the lower left. In this mode the exact fader positions and moves will be recorded.
- 2 Make sure the defaults, 'BUTT' and 'NORMAL' are displayed in the AUTO button. If not, touch it for a pop-down, that requires an individual operation for each selection.
- 3 Touch **(READY SETUP)** to the right of the AUTO button and it highlights.
- 4 Touch the knobs of the faders to be automated. Their **(WRITE)** buttons flash on and off red with a fast double flash in the red part of the cycle. This indicates that the faders are ready to have any moves recorded by the automation system. The fast double flash serves as a reminder that **(READY SETUP)** is selected. If a fader is moved when it is touched, it will not matter as, during the ready set-up mode, faders spring back and the level setting will remain.

Note

Please note that it takes just one touch to set a fader ready for automation record, and that a second touch will take it out of ready mode!

The ready status of any fader is displayed in the CHANNEL GUI. Either touch **(CHANNEL)** at the bottom left of the LCD or press the **(ACCESS)** button for the channel to be viewed. The dB level display above the fader icon, to the right of the GUI, will change colour from green to yellow to indicate its automation ready status.

The **(FADER)** button in the READY SETUP column will also highlight orange when the fader is ready. In fact, touching the **(FADER)** button or the dB legend is another way of setting a fader in and out of automation ready.



But please note that touching **(FADER)** in the GUI sets both the channel and multitrack faders into automation ready mode simultaneously.

- 5 Then touch **(READY SETUP)** to de-select it, or roll the material, when it will be de-selected automatically. When **(READY SETUP)** is off, the **(WRITE)** buttons will flash regularly without the double flash. The regular flashing indicates the normal automation ready mode.
- 6 Then, whilst the material is playing, touch any fader knob and its **(WRITE)** button will light solidly, indicating that automation data is being recorded. The dB level display above the fader icon in the CHANNEL GUI will also turn red. Make some fader moves and the exact fader positions and moves will be recorded. The dB level display will indicate changes and moves.
- 7 If a mistake is made or changes are required to what has just been recorded, simply wind back the material and overwrite by touching and moving faders. When overwriting a previous pass, the two small cyan arrows either side of the fader knob icon will indicate the last mix settings.

Automation Operation

How to wind back

There are various ways to locate to points within the material; these depend on the source storage media:

Quick Rollback

- Press and hold the **■** transport key. Then press the **◀◀** for every 5 seconds to be rolled back. Then release **■** and the system will rewind and play again from the specified point.

Locate

- Press the LOCATE button above the transport keys to locate the last locate point set via the CUE GUI.
- In the CUE GUI, touch one of the Cues in the NUMBERS column to highlight it, and touch **(LOCATE)** in the same GUI. Then press the **▶** transport key.

Rewind

- Applies to tape recorders or hard disk systems that simulate a tape recorder. Press the **◀◀** transport key and then the **▶** key when the system has rewound to an appropriate location.

Note

For secondary automation functions, such as TRIM, to operate correctly, automation data must already be present ahead of any points where these are carried out.

Operation of A and B Buffers

Automation data is first stored in the A and B buffers. If the system is powered down, the data in these buffers will be lost. So automation data must be stored more permanently using the SAVE or KEEP functions. However, the A and B buffers do serve a useful purpose as holding places for data before it is saved permanently.

The A and B buffers have two modes of operation, Manual and Auto. These touch button options are found in the upper left of the AUTOMATION GUI:

Manual

Select the front panel **(A)** or **(B)** button under the TC AUTOMATION heading and all automation data is stored and replayed from that buffer.

Auto

The default fire-up is the A buffer, indicated by **(A)** being lit. So automation data will be stored there first.

If the source material is stopped or rewound, **(B)** will light as the next destination. This alternating process will continue while **(AUTO)** is selected.

Copying buffers

To copy the data from one buffer to the other, press and hold **(A)** or **(B)** for the source data until its button flashes. Then press the button for the other buffer. A pop-up will appear requiring confirmation before the copy operation can be completed.

Automation Drop-out Modes

When changes are made to just a section over previous moves, the new fader settings may not match the old at the end of the new section where the previous and new join. The default return mode is butt, where a jump will occur. As described earlier there are other options, summarised below:

- **BUTT**
- **RAMP (# FRAMES)**
(Set time in frames in AUTOMATION GUI)
- **HOLD TO END**
- **HOLD TO NEXT**
- **TOP TO END**

Touch **(AUTO)** in the top centre of the GUI in order to select the automation drop-out return modes listed above.

To Save a Mix

- 1 Press **(TITLE)** at the very top left of the GUI for its pop-down.
- 2 Then touch **(SAVE)** to save the data in the current Title. Touching **(SAVE AS NEW)** will save the data in the next available Titles slot.
- 3 If the work is complete, touch **(READY SETUP)** to highlight it, and then **(OPTIONS)** next to it for a pop-down. Touch **(CANCEL ALL)** in the pop-down and **(CLOSE)** to finish with the pop-down menu. All ready indications will cease. Finally touch **(READY SETUP)** once more to turn it off. The system is now completely 'safe' and automation data cannot be overwritten.

To Trim Moves on One or More Faders

A/B buffer rotation

When it comes to using the trim function, it is often a good idea to set the automation 'A' and 'B' buffer rotation to manual. This allows a source mix which is 'safe' to be kept close at hand. Otherwise, if a correction is required, confusion may result from further trimming of an already trimmed mix.

To set the rotation to manual, touch **AUTOMATION** at the base of the LCD to display the AUTOMATION GUI. Then touch **MANUAL** beneath the A/B BUFFER ROTATION heading.

To save a copy of a mix in the 'A' buffer for safety, press and hold **A** under the TC AUTOMATION heading until it flashes, then press **B**. A pop-up will appear requiring confirmation before the copy operation can be completed. Then continue to work on the mix in the 'A' buffer, which stays lit.

Note

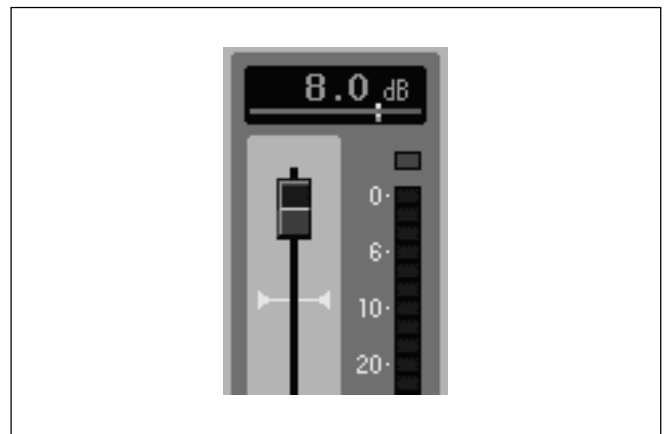
Automation data must already be present ahead of any points where TRIM operations might be carried out.

- 1 Press **TRIM** on the panel under the TC AUTOMATION heading above the timecode display. The AUTO button in the middle at the top of the GUI turns green and indicates 'TRIM' at the lower left. All faders move to their 0dB setting which is the reference point about which any trimming moves can be made.
- 2 Touch **READY SETUP** to the right of the AUTO button and it highlights.
- 3 Touch the knobs of the fader to be automated. Their **WRITE** buttons flash on and off red with a fast double flash in the red part of the cycle. This indicates that the faders are ready to have any moves recorded by the automation system. The fast double flash serves as a reminder that **READY SETUP** is selected.

As with automation using ABS mode, the CHANNEL GUI reflects the ready status in the dB level display above the fader icon as well as the **FADER** button at the bottom of the READY SETUP column, in the CHANNEL GUI.

- 4 Then touch **READY SETUP** to de-select it, or roll the material, in which case it will be de-selected automatically. When **READY SETUP** is off, the **WRITE** buttons will flash regularly without the double flash. The regular flashing indicates the normal automation ready mode.
- 5 Then, whilst the material is playing, although the physical fader knobs will not move unless touched, the knob in the fader icon and the dB display will reflect the previous mix. The previous mix will be heard, including the fader moves.

Touch any fader knob and its **WRITE** button will light solidly, indicating that automation data is being recorded. The dB level display above the fader icon will also turn red and continue to display the levels from the underlying mix, along with the knob in the fader icon.



Moving any fader above the 0dB point will trim the mix, increasing the level. Adjusting the fader below 0dB will trim to a lower level. Meanwhile as the physical fader is moved, the two small cyan arrows either side of the fader knob icon will reflect the underlying mix. The dB display will indicate the combined result of trimming the underlying mix.

This function allows relative adjustment on previous automated moves whilst those moves are retained exactly as they were, but at a higher or lower level.

All trimming adjustments will be heard and if a fader knob is released it will behave according to the current automation drop-out mode. If the return mode is RAMP for example, then a fader

Automation Operation

will glide back to the 0dB marker according to the Ramp Time setting.

- 6 If a mistake is made or changes are required to what has just been recorded, the situation may be tackled in one of several ways:
 - Press **[SAFE]** before pressing the **■** transport key to stop the material rolling. Release **[SAFE]** afterwards. In this case, the new automation data is not stored, so rewind and start again.
 - Simply wind back the material and re-trim by touching and moving faders. But remember that this method causes trim data to be further modified in trim mode.
 - Copy the 'safe' mix from the 'B' buffer into 'A' in order to redo the trim operation completely. In this case, press and hold **[B]**, under the TC

AUTOMATION heading, until it flashes, then press **[A]**. A pop-up will appear requiring confirmation before the copy operation can be completed. Then continue to work on the restored 'safe' mix in the 'A' buffer, which stays lit.

- 7 If the work is complete, touch **[READY SETUP]** to highlight it, and then **[OPTIONS]** next to it for a pop-down. Touch **[CANCEL ALL]** in the pop-down and **[CLOSE]** to finish with the pop-down menu. All ready indications will cease. Finally touch **[READY SETUP]** once more to turn it off. The system is now completely 'safe' and automation data cannot be overwritten.

Note

*Fader moves can be viewed on the AUDIO FADER GUI, including trim offsets. Touch **[AUDIO]** at the lower left of the LCD screen for its pop-up, and then touch **[FADER]** to view all faders.*

Automating Fader Cut Switches

General

Before using the automation for cuts or other switches for the first time, clear automation data which may be resident in memory if the system has been in use by others. Clearing automation data is described at the beginning of the section 'Automating Faders'.

To Automate One or More Cut Switches

The setting up for automating cut switches works on exactly the same principles as for faders. There are differences in actual operation which relate to the physical differences between faders and switches.

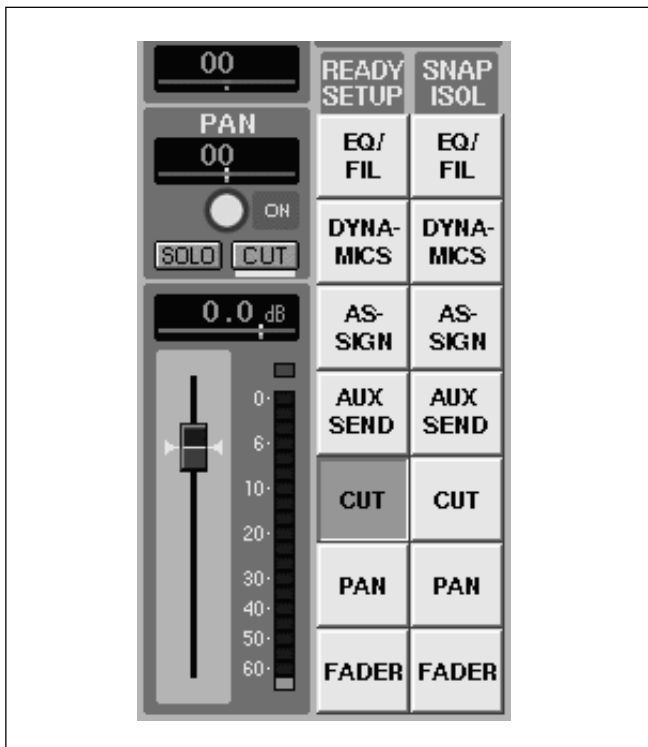
- 1 Press **[ABS]** (short for absolute) on the panel under the TC AUTOMATION heading above the timecode display. The AUTO button in the middle at the top of the GUI turns red and indicates 'ABS' at the lower left.
- 2 Make sure the defaults 'BUTT' and 'NORMAL' are displayed in the AUTO button. If not touch it for a pop-down, which requires an individual operation for each selection.

- 3 Touch **[READY SETUP]** to the right of the AUTO button and it highlights.

- 4 Press each **[CUT]** button to be automated and note that they do not change state. Their channel **[WRITE]** buttons flash on and off red with a fast double flash in the red part of the cycle. This indicates that the cuts are ready to have any switch operations recorded by the automation system. The fast double flash serves as a reminder that **[READY SETUP]** is selected.

The ready status of any switch is also displayed in the CHANNEL GUI. Either touch **[CHANNEL]** at the bottom left of the LCD or press the **[ACCESS]** button for the channel to be viewed. A yellow bar, indicating automation ready status, will appear beneath the fader cut switch situated above the fader icon to the right in the GUI.

The **[CUT]** button in the READY SETUP column will also highlight orange when the cut is ready. Touching this **[CUT]** button is another way of setting a fader cuts in and out of automation ready. But please note that touching **[CUT]** in the GUI sets both the channel and multitrack cut buttons into automation ready mode simultaneously.



- 5 Then touch **READY SETUP** to de-select it, or roll the material in which case it will be de-selected automatically. When **READY SETUP** is off, the **WRITE** buttons will flash regularly without the double flash. The regular flashing indicates the normal automation ready mode.
- 6 Then, whilst the material is playing, pressing any cut button will drop it into automation record and its **WRITE** button will light solidly. The cut will simultaneously change state and drop into automation record. The yellow bar beneath the fader cut in the CHANNEL GUI will also turn red.

Pressing cuts individually drops them into automation record one at a time.

- 7 If a mistake is made or some changes are required to what has just been recorded, simply wind back the material and overwrite by pressing the cuts again. As soon as the material is stopped, the cuts will drop back to their ready state. Pressing any cut will drop it into automation record again whilst the material is rolling forward once more.

- 8 If the work is complete, touch **READY SETUP** to highlight it, and then **OPTIONS** next to it for a pop-down. Touch **CANCEL ALL** in the pop-down and **CLOSE** to finish with the pop-down menu. All ready indications will cease. Finally touch **READY SETUP** once more to turn it off. The system is now completely 'safe' and automation data cannot be overwritten.

To Automate Cuts Simultaneously

A method for dropping a number of cuts into automation record simultaneously is to set them into a 'CUT GROUP':

- 1 Touch **AUDIO** at the bottom left of the LCD for its pop-up and touch **FADER GROUP** to display the AUDIO FADER/CUT GROUPING GUI.
- 2 Touch one of the GROUP panels to the left of the GUI in order to set up the CUT GROUP.
- 3 Touch the button immediately to the right of the GROUP # legend, to cycle through the options until **CUT** is displayed.
- 4 Select the channels that are to have their cuts in the group by touching each individual button in the channels field occupying most of the GUI.
- 5 Make sure that **ON** is displayed for the group, set by the on/off button in the GROUP # panel.
- 6 Use the procedure described for automating a single cut. All automation functions carried out on any individual cut in the group will apply to all cuts in that group. Automation data is stored for individual channels, which allows the CUT GROUP to be disbanded at any time.

Automation Operation

Trimming Cut Switches

The trim functions for cut switches allow individual cut transactions to be time-shifted earlier or later, or erased.

Note

Automation data must already be present ahead of any points where TRIM operations might be carried out.

- 1 Press **TRIM** on the panel under the TC AUTOMATION heading above the timecode display. The AUTO button in the middle at the top of the GUI turns green and indicates 'TRIM' at the lower left.
- 2 Touch **READY SETUP** to the right of the AUTO button and it highlights.
- 3 Press each **CUT** button to be trimmed and note that they do not change state. Their channel **WRITE** buttons flash on and off red with a fast double flash in the red part of the cycle. This indicates that the cuts are ready to have any switch operations recorded by the automation system. The fast double flash serves as a reminder that **READY SETUP** is selected.

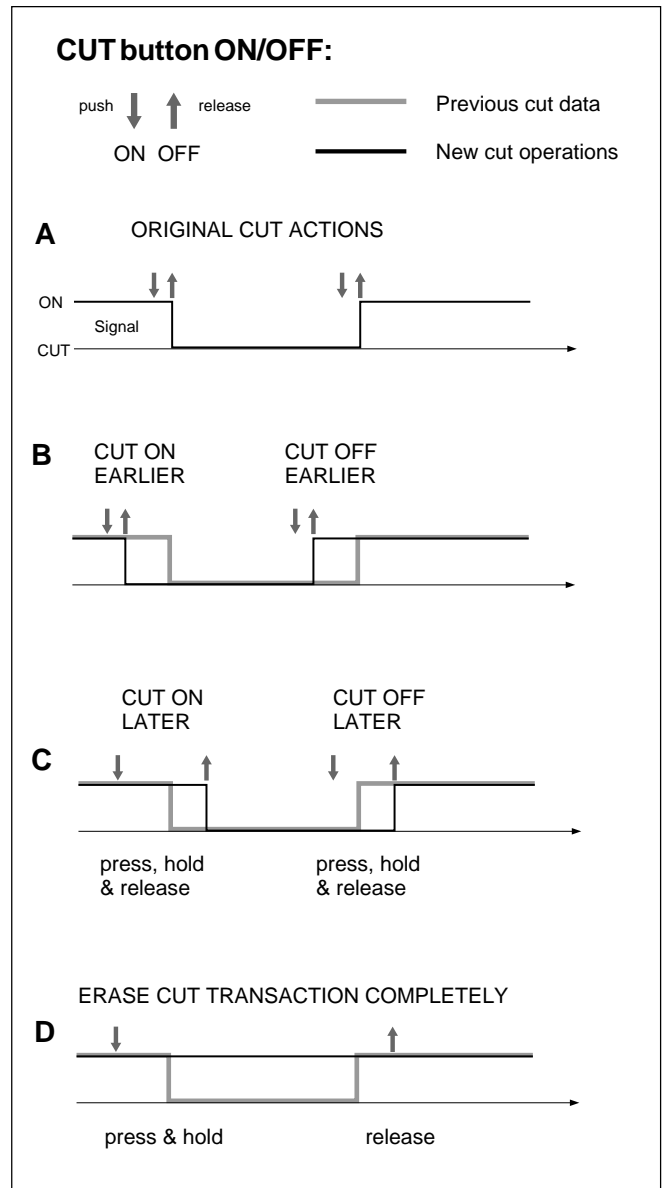
The ready status of any switch is also displayed in the CHANNEL GUI in the same way as when using the 'ABS' mode for automating cuts.
- 4 Then touch **READY SETUP** to de-select it, or roll the material in which case it will be de-selected automatically. When **READY SETUP** is off, the **WRITE** buttons will flash regularly without the double flash. The regular flashing indicates the normal automation ready mode.

- 5 Once the material is rolling, cuts can be adjusted in a number ways according to the illustrations that follow:

A - Shows the original cut actions.

B - Press and release **CUT** before original cut point to advance the cut on-point. Press and release **CUT** before the original off-point to advance the cut off-point. These operations can be performed independently in one or two passes.

C - Press and hold **CUT** from before the original cut point, and release after to delay the cut



on-point. Press and hold **CUT** from before the original off-point, and release after to delay the cut off-point. These operations can be performed independently in one or two passes.

D - Press and hold **CUT** from before the original cut point, and release after the original cut off-point to erase a cut transaction completely.

Automating Other Switches

The principles of operation for cut switches apply equally to all other types of switches. They can be set into automation ready by pressing switches on the panel, or by touching buttons on the zoomed GUIs.

Automating Knobs

General

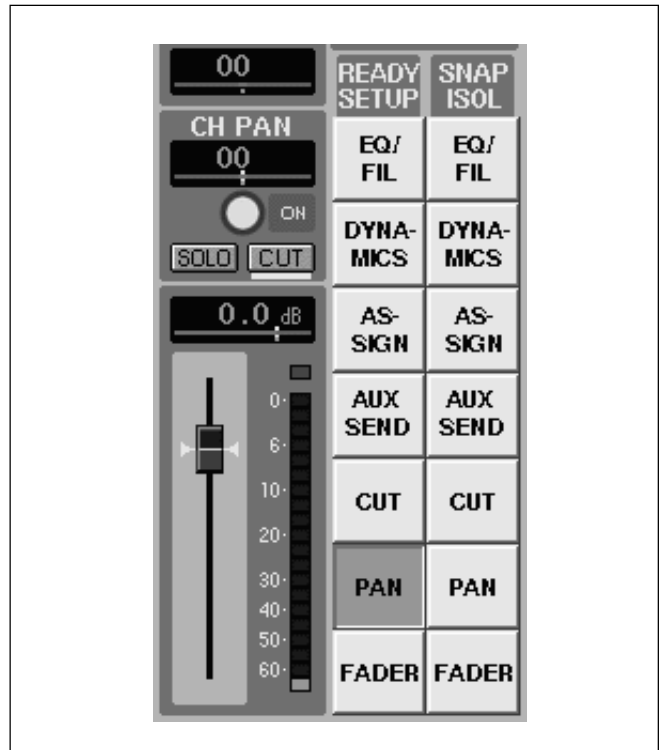
The principles for automating knobs are very similar to those for faders. Note that most level control can be assigned to the row of knobs above the faders. They can be automated using knobs or faders, provided that they are assigned to the chosen control type.

Before using the automation for knobs for the first time, clear all automation data which may be resident in memory if the system has been in use by others. Confusion may result if previous automation moves are replayed whilst leaving the system. Clearing automation data is described at the beginning of the section 'Automating Faders'.

To Automate a Pan Knob

- 1 Make sure no panel buttons are selected under the 'PANS' heading to the right of the row of knobs above the faders. Their default function is pan unless a button is selected for any other function.
- 2 Press **[ABS]** (short for absolute) on the panel under the TC AUTOMATION heading above the timecode display. The AUTO button in the middle at the top of the GUI turns red and indicates 'ABS' at the lower left.
- 3 Make sure the defaults 'BUTT' and 'NORMAL' are displayed in the AUTO button. If not, touch it for a pop-down, which requires an individual operation for each selection.
- 4 Touch **[READY SETUP]** to the right of the AUTO button and it highlights.
- 5 Turn a pan knob to the right (clockwise) and note that its surrounding LED position indicator does not follow when **[READY SETUP]** is selected. This sets it into automation ready, indicated by the channel **[WRITE]** button above it flashing on and off red, with a fast double flash in the red part of the cycle. The fast double flash serves as a reminder that **[READY SETUP]** is selected. Turning the knob to the left (anti clockwise) will take the pan out of automation ready, at which time the **[WRITE]** button will cease flashing. In 'ABS' mode, the exact moves and settings will be recorded by the automation system.

The ready status of any knob is also displayed in the CHANNEL GUI. Either touch **[CHANNEL]** at the bottom left of the LCD or press the **[ACCESS]** button for the channel to be viewed. The positional readout, below the CH PAN legend to the right of the GUI, will change colour from green to yellow, indicating automation ready status.



The **[PAN]** button in the READY SETUP column will also highlight orange when the fader is ready. Touching this **[PAN]** button is another way of setting a channel pan in and out of automation ready. But please note that touching **[PAN]** in the GUI sets both the channel and multitrack pans into automation ready mode simultaneously.

- 6 Then touch **[READY SETUP]** to de-select it, or roll the material in which case it will be de-selected automatically. When **[READY SETUP]** is off, the **[WRITE]** buttons will flash regularly without the double flash. The regular flashing indicates the normal automation ready mode.
- 7 Then, either before or whilst the material is playing, touch the CH PAN positional readout, touch **[MASTER DROP IN]** or press the **[WRITE]**

Automation Operation

button to drop into automation record. The readout will change colour from yellow to red and its **WRITE** button will light solidly indicating automation record in progress.

- 8 Make sure **PAN ON** is highlighted in green and then make panning moves and adjustments as required. They will be reflected in the LED position indicator and the GUI readout and bar.

For a larger display of the pan readout, either touch the pan area in the GUI or touch **CHANNEL** at the bottom left of the LCD for its pop-up, then touch **INPUT/PAN/ASSIGN**. The INPUT/PAN/ASSIGN GUI, which has a larger area devoted to the channel pan at the lower right, will be displayed. The pan readout in this GUI can also be used for the ready set-up and automation drop-in.

- 9 If a mistake is made or changes are required to what has just been recorded, simply wind back the material and overwrite. After locating back, either before or after rolling the material again, drop into automation record, by touching the CH PAN positional readout, **MASTER DROP IN** or pressing **WRITE**.

When overwriting a previous pass, the two small cyan dots above and below the pan bar indicator, will reflect the settings for the previous mix as a reference.

To Automate a Number of Knobs

- 1 Use the set-up procedure described in the previous section.
- 2 Drop into automation record using **MASTER DROP IN** to set all knobs to write simultaneously, or press individual **WRITE** buttons.

Trimming Knob Moves

A/B buffer rotation

When it comes to using the trim function, it is often a good idea to set the automation 'A' and 'B' buffer rotation to manual. This allows a source mix which is 'safe' to be kept close at hand. Otherwise, if a correction is required, confusion may result from further trimming of an already trimmed mix.

To set the rotation to manual, touch **AUTOMATION** at the bottom of the LCD to display the AUTOMATION GUI. Then touch **MANUAL** beneath the A/B BUFFER ROTATION heading.

To save a copy of a mix in the 'A' buffer for safety, press and hold **A** under the TC AUTOMATION heading until it flashes, then press **B**. A pop-up will appear requiring confirmation before the copy operation can be completed. Then continue to work on the mix in the 'A' buffer, which stays lit. Using the trim function for knobs allows previous settings and moves to be offset or dynamically trimmed.

Note

Automation data must already be present ahead of any points where TRIM operations might be carried out.

- 1 Press **TRIM** on the panel under the TC AUTOMATION heading above the timecode display. The AUTO button in the middle at the top of the GUI turns green and indicates 'TRIM' at the lower left.
- 2 Touch **READY SETUP** to the right of the AUTO button and it highlights.
- 3 Turn each knob to be trimmed to the right (clockwise). This sets them into automation ready, indicated by the channel **WRITE** buttons flashing on and off red, with a fast double flash in the red part of the cycle. The fast double flash serves as a reminder that **READY SETUP** is selected. Turning knobs to the left (anti clockwise) will take them out of automation ready, at which time their **WRITE** buttons will cease flashing.

In 'TRIM' mode the system records any knob changes and moves as differences or offsets from the underlying mix with reference to the knob position at the automation drop-in point.

The ready status of any knob is also displayed in the CHANNEL GUI in the same manner when using 'ABS' mode.

- 4 Touch **READY SETUP** to de-select it, or roll the material when it will be de-selected automatically. When **READY SETUP** is off, the **WRITE** buttons will flash regularly without the double flash. The regular flashing indicates the normal automation ready mode.

5 Roll the material and make any adjustments as required. Although changes will be heard from the underlying mix, the LED knob position indicators will only display changes being made for the current pass. Any knobs being automated, which are displayed on the LCD, will indicate a combination of the previous mix and the actions in the current pass. The two cyan dots, above and below the pan bar, indicate the settings for the previous underlying mix. The bar and the position readout indicate the result of combining the underlying mix and the new trim operations.

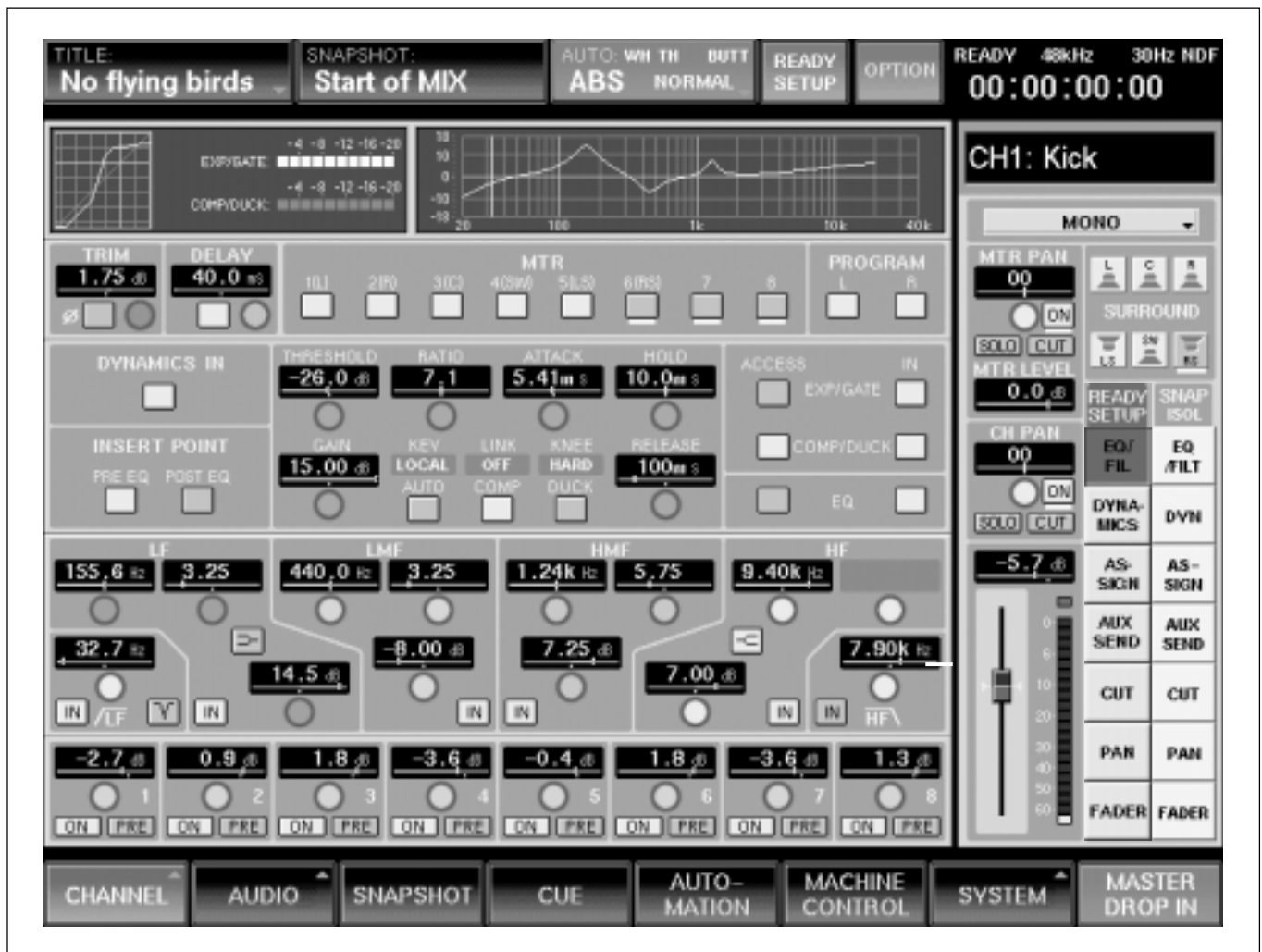
This function allows relative adjustment on previous automated moves whilst those moves are retained exactly as they were, but at a higher or lower level.

6 If a mistake is made or changes are required to what has just been recorded, the situation may be tackled in one of several ways:

- Press **[SAFE]** before pressing the **■** transport key to stop the material rolling. Release **[SAFE]** afterwards. In this case, the new automation data is not stored, so rewind and start again.
- Simply wind back the material and re-trim by touching and moving faders. But remember this method means that trim data is being further modified in trim mode.
- Copy the 'safe' mix from the 'B' buffer into 'A' in order to redo the trim operation completely. In this case, press and hold **[B]** under the TC AUTOMATION heading until it flashes, then press **[A]**. A pop-up will appear requiring confirmation before the copy operation can be completed. Then continue to work on the restored 'safe' mix in the 'A' buffer, which stays lit.

7 If the work is complete, touch **[READY SETUP]** to highlight it, and then **[OPTIONS]** next to it for a pop-down. Touch **[CANCEL ALL]** in the pop-down and **[CLOSE]** to finish with the pop-down menu. All ready indications will cease. Finally touch **[READY SETUP]** once more to turn it off. The system is now completely 'safe' and automation data cannot be overwritten.

Automating Sections of Controls



To Automate a Complete EQ Section

To set up automating of complete sections of channels on a channel by channel basis, using the EQ section as an example, first display the CHANNEL GUI, then:

- 1 Press **ABS** (short for absolute) on the panel under the TC AUTOMATION heading above the timecode display. The AUTO button in the middle at the top of the GUI turns red and indicates 'ABS' at the lower left. In this mode the exact fader positions and moves will be recorded.
- 2 Make sure the defaults 'BUTT' and 'NORMAL' are displayed in the AUTO button. If not, touch it for a pop-down, which requires an individual operation for each selection.

- 3 Touch **READY SETUP** to the right of the AUTO button and it highlights.
- 4 Touch **EQ/FILT** under the 'READY SETUP' heading to the lower right of the GUI. All EQ knob readouts will turn from green to yellow and yellow bars will appear beneath all EQ related switches, indicating that the complete EQ section is ready for automation data to be recorded. The channel **WRITE** button will also flash.

Other sections set for automation in the same way:

- **DYNAMICS** button for the full Dynamics section.
- **ASSIGN** button for all MTR and Program Bus Assign buttons.
- **AUX SEND** button for all Aux Sends.

5 With all controls selected, individual controls can be de-selected from ready by touching them one at a time in the CHANNEL GUI. For a larger view of the EQ section, touch the EQ section avoiding areas where controls are placed, or touch **CHANNEL** at the bottom left of the LCD, and then touch **EQ/FILT**.

6 Touch **READY SETUP** to de-select it, or roll the material when it will be de-selected automatically.

7 Press the **WRITE** buttons for individual channels or touch **MASTER DROP IN**. All automation ready controls, knob readouts and bars beneath switches, in the GUI, will turn from yellow to red, indicating automation record.

8 If a mistake is made or some changes are required to what has just been recorded, simply wind back the material and overwrite. After locating back, either before or after rolling the material again, drop into automation record by pressing individual channel **WRITE** buttons, or touch **MASTER DROP IN** to have all channels drop into automation record simultaneously.

9 When the work is complete, touch **READY SETUP** to highlight it, and then **OPTIONS** next to it for a pop-down. Touch **CANCEL ALL** in the pop-down and **CLOSE** to finish with the pop-down menu. All ready indications will cease. Finally touch **READY SETUP** once more to turn it off. The system is now completely 'safe' and automation data cannot be overwritten.

Trimming Sections of Knob Moves

The trimming of sections of knobs uses the same procedure described under 'Trimming knob moves'. It is described briefly as follows:

Note

Automation data must already be present ahead of any points where TRIM operations might be performed.

1 Press **TRIM** on the panel under the TC AUTOMATION heading above the timecode display. The AUTO button in the middle at the top of the GUI turns green and indicates 'TRIM' at the lower left.

2 Make sure the defaults 'BUTT' and 'NORMAL' are displayed in the AUTO button. If not touch it for a pop-down, which requires an individual operation for each selection.

3 Touch **READY SETUP** to the right of the AUTO button and it highlights.

4 Touch **EQ/FILT** under the 'READY SETUP' heading to the lower right of the GUI if not already highlighted.

5 Touch **READY SETUP** to de-select it, or roll the material when it will be de-selected automatically.

6 Press the **WRITE** buttons for individual channels or touch **MASTER DROP IN** in order for any trimming moves to be recorded by the automation system.

7 If a mistake is made or some changes are required to what has just been recorded, the situation may be tackled in one of several ways:

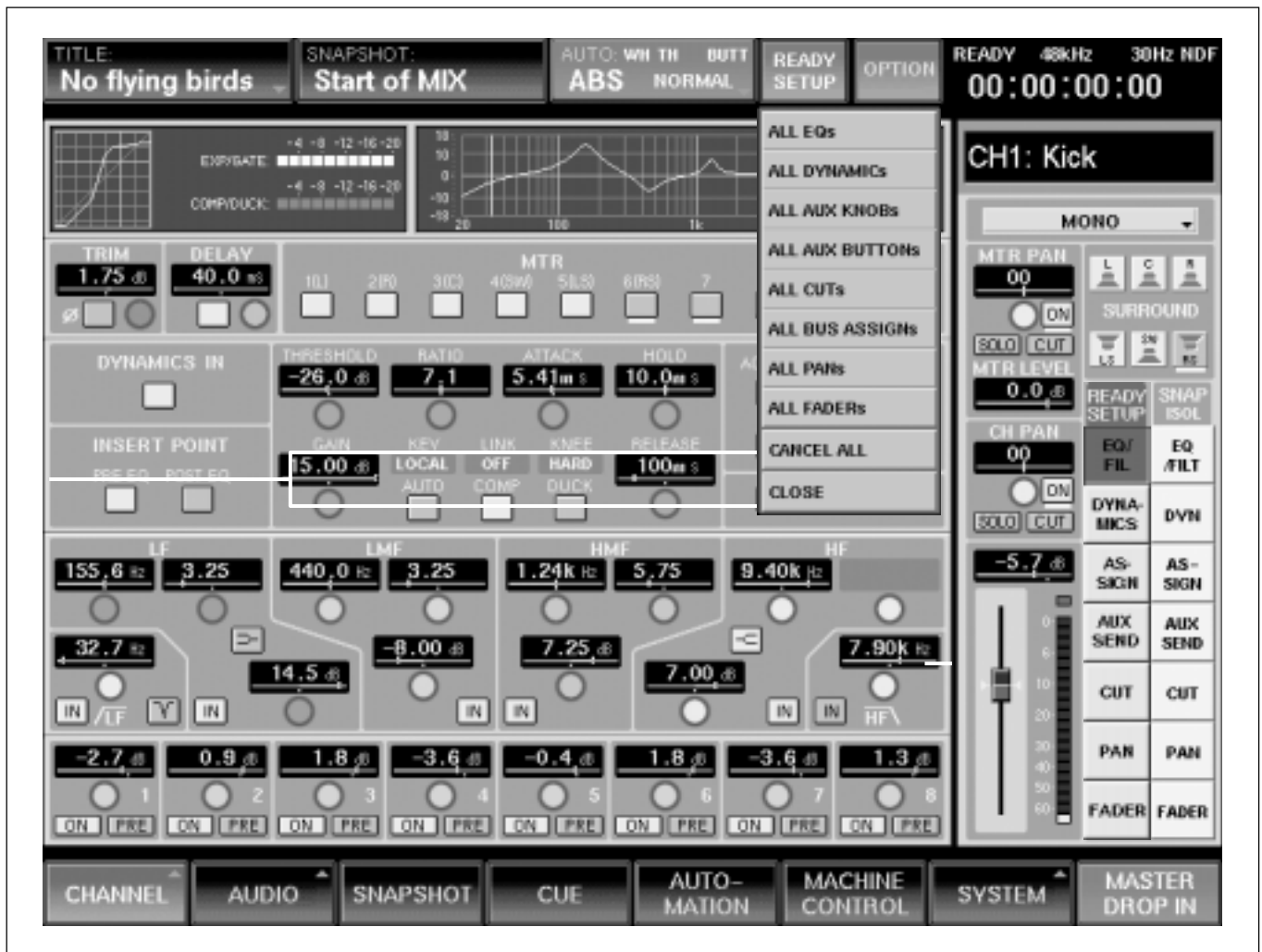
- Press **SAFE** before pressing the ■ transport key to stop the material rolling. Release **SAFE** afterwards. In this case, the new automation data is not stored, so rewind and start again.

- Simply wind back the material and re-trim by touching and moving faders. But remember that this method means that trim data is being further modified in trim mode.

- Perform trimming operations on a 'safe' mix in order to redo the trim operation completely.

8 When the work is complete, touch **READY SETUP** to highlight it, and then **OPTIONS** next to it for a pop-down. Touch **CANCEL ALL** in the pop-down and **CLOSE** to finish with the pop-down menu. All ready indications will cease. Finally touch **READY SETUP** once more to turn it off. The system is now completely 'safe' and automation data cannot be overwritten.

Automation Operation



To Automate All EQ Sections

The R100 allows the automation to be set up in order to record data from sections of all channels and signal paths on a global basis. Using the EQ section as an example, first display the CHANNEL GUI, then:

- 1 Press **[ABS]** (short for absolute) on the panel under the TC AUTOMATION heading above the timecode display. The AUTO button in the middle at the top of the GUI turns red and indicates 'ABS' at the lower left. In this mode the exact fader positions and moves will be recorded.
- 2 Make sure the defaults 'BUTT' and 'NORMAL' are displayed in the AUTO button. If not, touch it for a pop-down, which requires an individual operation for each selection.

- 3 Touch **[READY SETUP]** to highlight it, and then **[OPTIONS]** next to it for a pop-down. Touch **[ALL EQs]** in the pop-down and then **[CLOSE]** to finish with the pop-down menu. The **[WRITE]** buttons for all channels and signal paths which include EQ processing will flash, indicating automation ready mode.

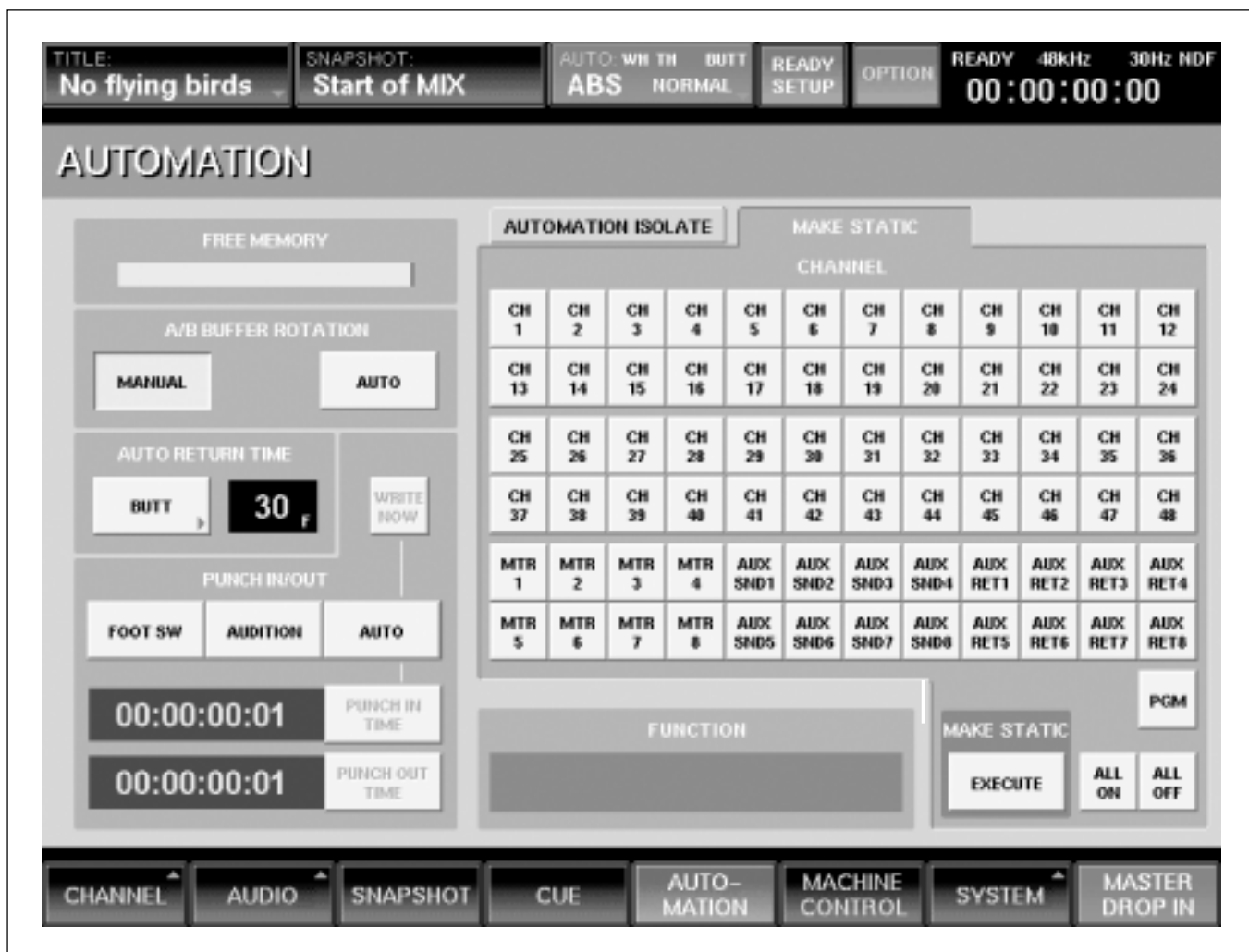
Global automation ready set-up exists for other controls and sections as below. They are selected using the **[OPTIONS]** pop-down:

- **[ALL DYNAMICSs]** for all channels and signal paths which include Dynamics processing.
- **[ALL AUX KNOBS]** for the Aux Send Levels for all channels.
- **[ALL AUX BUTTONS]** for the Aux Send Cuts for all Channels and the Aux Returns.

- **ALL CUTS** for the Channel Fader and MTR Fader Cuts for all Channels and the Aux Returns.
- **ALL BUS ASSIGNS** for Program and MTR Bus Assign buttons for all Channels and the Aux Returns.
- **ALL PANS** for the Channel and MTR Pans for all Channels.
- **ALL FADERS** for the Channels, MTRs, Aux Returns, Bus Masters and Program Faders.

4 The rest of this procedure follows that described earlier in this section so please refer to the beginning of ‘Automating Sections of Controls’.

Footswitch, Audition & Auto



General

The FOOT SW, AUDITION and AUTO functions allow the settings for controls in automation record to be written as automation data over specified periods.

- FOOT SW allows the drop-in time period to be set using a footswitch.

- AUDITION allows the drop-in time period to be set manually using the **SAFE** button.
- AUTO allows the drop-in time period to be set by specifying timecode points.

Automation Operation

Note

Automation data must already be present ahead of any points where the following operation might be performed.

Automation Drop-in Using FOOT SW

Plug a momentary action footswitch into the jack on the rear panel behind the PGM L and R bar meters.

- 1 Touch **FOOT SW** to the left of the AUTOMATION GUI so that it highlights green. 'FOOT' will appear in the AUTO button at the top centre of the LCD.
- 2 Select the **ABS** or **TRIM** button according to whether the underlying data is to be overwritten or trimmed, and make sure **SAFE** is turned off, i.e. its LED is off.
- 3 Set the faders to have automation data recorded into ready and then drop them into automation record. This will be confirmed by the **WRITE** buttons being lit solidly for the channels concerned.
- 4 Play the material over the section where the settings are to be recorded and adjust the faders to suitable settings. The underlying mix will not be overwritten. It is advisable to use a 'safe' mix when performing this kind of operation in case a complete re-write is necessary.
- 5 When the fader settings are finally satisfactory, roll the material again. At the drop-in point, push and hold the footswitch for the period required for the drop-in. Pressing the ■ transport key will also drop the system out of automation data record.
- 6 Make sure the channels involved have returned to ready mode, indicated by their **WRITE** buttons flashing, then replay the material to check it.
- 7 When the work is complete, release **FOOT SW**. Touch **READY SETUP** to highlight it, and then **OPTIONS** next to it for a pop-down. Touch **CANCEL ALL** in the pop-down and **CLOSE** to finish with the pop-down menu. All ready indications will cease. Finally touch **READY SETUP** once more to turn it off. The system is now completely 'safe' and automation data cannot be overwritten.

Automation Drop-in Using AUDITION

- 1 Touch **AUDITION** to the left of the AUTOMATION GUI so that it highlights green. The **SAFE** button will light and the AUTO button at the top centre of the LCD will then display the following:
 - AUDITION
 - WH - Write Hold, which means any faders which are touched will remain armed to write automation data at all times, including when the material is rewound.
 - TH - Touch Hold, which means that automation data is being written continuously and not just when faders are being touched.
 - BUTT - Audition can operate only with butt or a jump at the join between previous and new auditioned settings.
- 2 Select the **ABS** or **TRIM** button according to whether the underlying data is to be overwritten or trimmed.
- 3 Set the faders to have automation data recorded into ready and then drop them into automation record. This will be confirmed by the **WRITE** buttons being lit solidly for the channels concerned.
- 4 Play the material over the section where the settings are to be recorded and adjust the faders to suitable settings. The underlying mix will not be overwritten. It is advisable to use a 'safe' mix when performing this kind of operation in case a complete re-write is necessary.
- 5 When the fader settings are finally satisfactory, roll the material again. At the drop-in point, release **SAFE** so that its LED is no longer lit, when automation data will be recorded. At the drop-out point press **SAFE** again.
- 6 When the work is complete, release **AUDITION** and the automation will resume 'NORMAL' mode. Check that the automation is in ready mode, indicated by the **WRITE** buttons flashing. Then replay the material to check that the revised automation data is satisfactory.

- 7** When finally complete, touch **READY SETUP** to highlight it, and then **OPTIONS** next to it for a pop-down. Touch **CANCEL ALL** in the pop-down and **CLOSE** to finish with the pop-down menu. All ready indications will cease. Finally touch **READY SETUP** once more to turn it off. The system is now completely 'safe' and automation data cannot be overwritten.

Note

*If a return mode other than BUTT was selected before touching **AUDITION**, it must re-selected manually. The mode being used previously will not be returned automatically when **AUDITION** is turned off.*

Automation Record Using AUTO

Static settings using AUTO

This procedure allows static settings to be recorded as automation data between fixed time points.

- 1** Touch **AUTO** towards the left of the AUTOMATION GUI so that it highlights green. 'AUTO' will appear in the AUTO button at the top centre of the LCD.
- 2** Set the time when automation data will start to be recorded. This can be done in two ways:
 - Touch **PUNCH IN TIME** and the current timecode point will be set.
 - Touch the timecode display to highlight its background. Then adjust the timecode number using the jog wheel or the ten-number key pad. Press **ENTER** at the bottom right of the number key pad when finished.
- 3** Set the time when automation data will finish being recorded. This can be done in two ways:
 - Touch **PUNCH OUT TIME** and the current timecode point will be set.
 - Touch the timecode display to highlight its background. Then adjust the timecode number using the jog wheel or the ten-number key pad. Press **ENTER** at the bottom right of the number key pad when finished.
- 4** Select the **ABS** or **TRIM** button according to whether the underlying data is to be overwritten or trimmed.

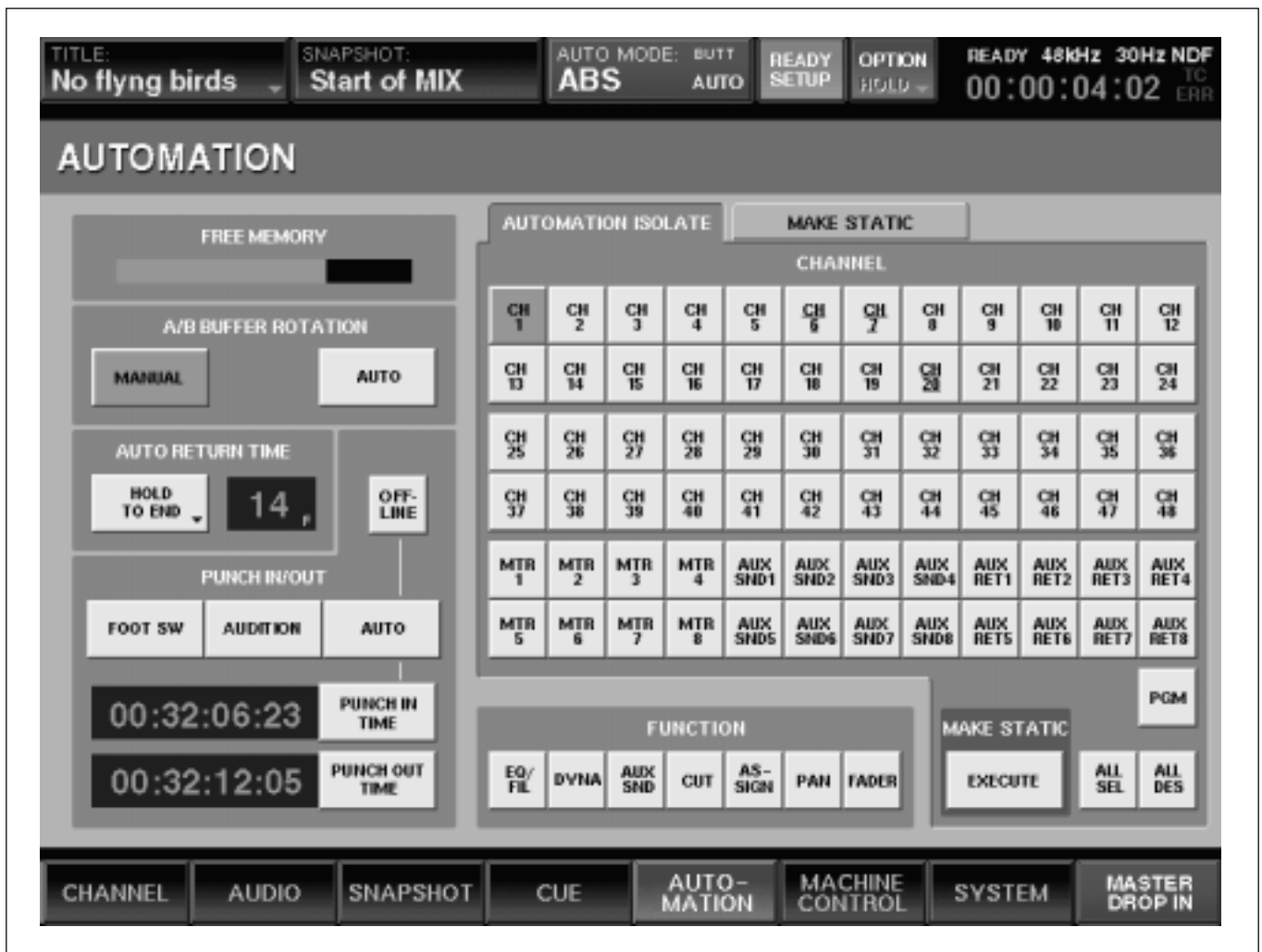
- 5** Set the faders to have automation data recorded into ready and then drop them into automation record. This will be confirmed by the **WRITE** buttons being lit solidly for the channels concerned.
- 6** Play the material over the section where the settings are to be recorded and adjust the faders to suitable settings. The underlying mix will not be overwritten. It is advisable to use a 'safe' mix when performing this kind of operation in case a complete re-write is necessary.
- 7** When the fader settings are finally satisfactory press the **■** transport key. Then press **WRITE NOW**. A pop-up will appear requesting confirmation in order to finalise the operation.
- 8** Rewind and check that the automation is in ready mode, indicated by the **WRITE** buttons flashing. Then replay the material to check that the revised automation data is satisfactory.
- 9** When the work is complete, release **AUTO**. Touch **READY SETUP** to highlight it, and then **OPTIONS** next to it for a pop-down. Touch **CANCEL ALL** in the pop-down and **CLOSE** to finish with the pop-down menu. All ready indications will cease. Finally touch **READY SETUP** once more to turn it off. The system is now completely 'safe' and automation data cannot be overwritten.

Dynamic settings using AUTO

This procedure allows dynamic settings to be recorded as automation data between fixed time points.

- 1** Repeat steps 1-5 as described in the 'Static settings using AUTO' to set the start and finish times.
- 2** Play the material from before the 'punch in time' set in step 2, to the 'punch out time' set in step 3.
- 3** Make adjustments to any of the controls set in automation record whilst the material is rolling. Automation data will only be recorded between the in and out time points set.
- 4** Rewind and check that the automation is in ready mode, indicated by the **WRITE** buttons flashing. Then replay the material to check that the revised automation data is satisfactory.

Automation Isolate



General

Complete channels or sections of channels can be set into an isolate mode in order that automation data will not affect control settings.

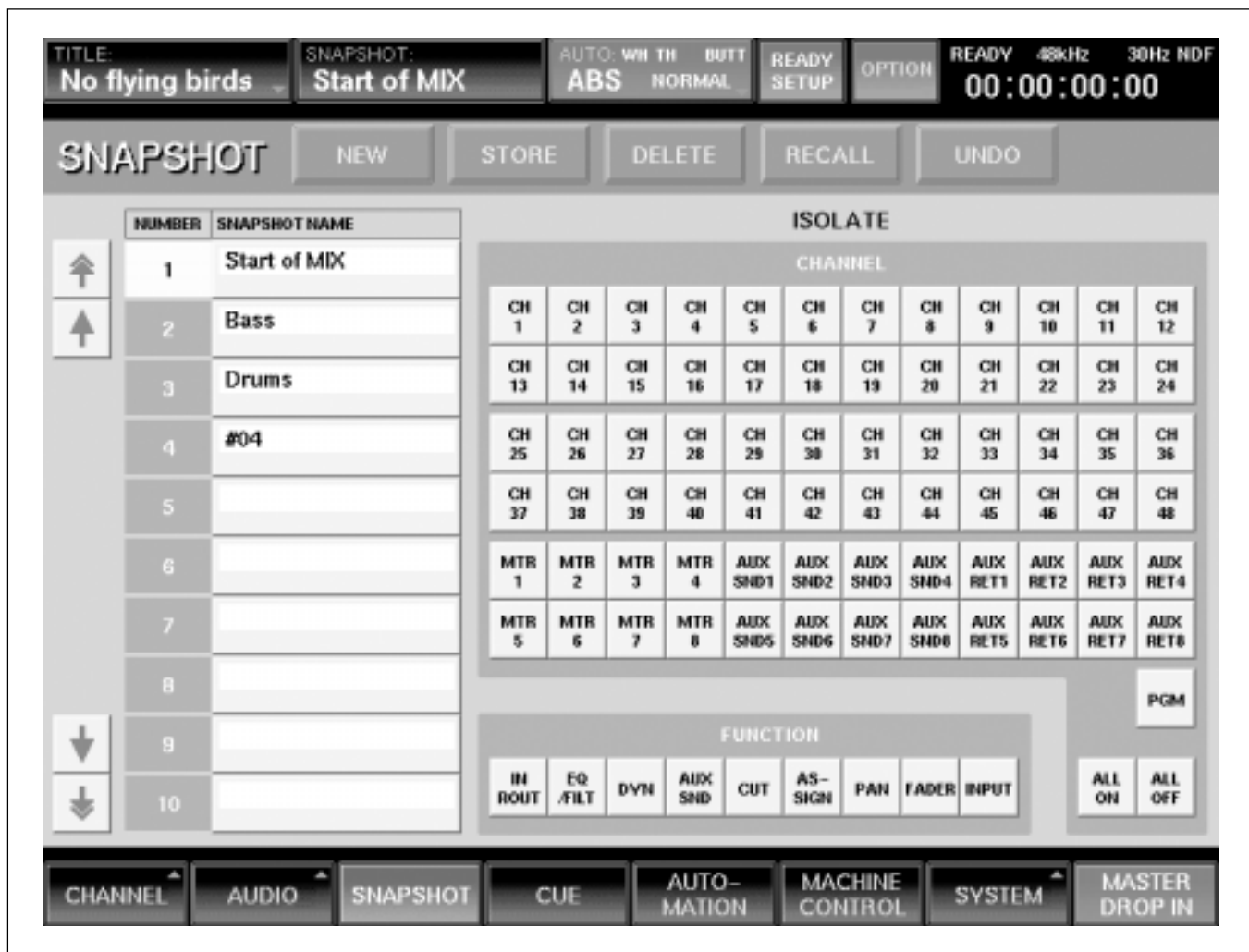
Isolating Channels or Sections of All Channels

- 1 Touch the **AUTOMATION** label in the middle at the bottom of the GUI to display the AUTOMATION GUI.
- 2 The **AUTOMATION ISOLATE** tab in the upper part of the GUI is the default and should already be selected.

- 3 Touch the **ALL ON** button to highlight all channel and signal paths green. Or touch individual buttons relating to channels and outputs, if more appropriate, to highlight them green. The automation data will be isolated from all highlighted channels, leaving their controls free for adjustment.
- 4 Alternatively, under the **FUNCTION** heading, touch 'section' buttons according to what is to be isolated on a mixer-wide basis:
 - **EQ/FIL** for all Equaliser and Filter sections.
 - **DYN** for all Dynamics sections.
 - **AUX SND** for all Aux Send controls.
 - **CUT** for all Channel, MTR and Aux Return Fader Cuts.

- **ASSIGN** for all MTR and Program Bus Assign buttons.
- **PAN** for all Channel and MTR Pans.
- **FADER** for all Channel, MTR and Aux Return Faders.

Snapshots



General

The Snapshots GUI allows static control settings to be stored and recalled. The settings for the whole mixer are saved for every Store operation whereas an Isolate function allows snapshots to be recalled on a selective basis.

To Save a New Snapshot

- 1 Touch **SNAPSHOT** at the bottom towards the left of the LCD for the SNAPSHOT GUI.
- 2 Whilst the material is either stationary or moving, touch **NEW** and a new entry will appear in the SNAPSHOT NAME column. A default number will be entered automatically.

- 3 To change the default number to an appropriate name, touch the default in the CUE NAME column, and the QWERTY Keyboard pop-up appears.
- 4 The default will be displayed in the upper entry dialogue line. Either touch **[BACK SPACE]** several times to delete it, or touch and move a finger across it to highlight it. Then type in a suitable name, such as 'START OF TITLE' in this case, using the touch QWERTY keyboard. Touch **[ENTER]** when finished.

To Revise a Snapshot

- 1 Under the NUMBER column, touch the Snapshot number to be revised. It highlights white.
- 2 Whilst the material is either stationary or moving, touch **[STORE]** in the SNAPSHOT GUI, and the Snapshot location will be overwritten with the current settings.

To Delete a Snapshot

- 1 Under the NUMBER column, touch the Snapshot number to be deleted. It highlights white.
- 2 Whilst the material is either stationary or moving, touch **[DELETE]** in the SNAPSHOT GUI. A pop-up requesting confirmation will appear. Touch **[YES]** to complete the operation.

This Snapshot location is now available for storing a New Snapshot by touching **[NEW]** in the GUI.

To Recall a Complete Snapshot

- 1 Under the NUMBER column, touch the Snapshot number to be recalled. It highlights white.
- 2 Whilst the material is either stationary or moving, touch **[RECALL]** in the SNAPSHOT GUI and the settings will be restored. Touch **[UNDO]** to reverse the operation.

To Recall a Partial Snapshot

- 1 Under the NUMBER column, touch the Snapshot number to be recalled. It highlights white.
- 2 Under the ISOLATE heading, touch individual buttons relating to channels and outputs to highlight them green. The data for these channels will not be restored. Or, if more convenient, touch the **[ALL ON]** button to highlight all and then de-select individual channels.
- 3 Alternatively, under the FUNCTION heading, touch 'section' buttons according to what is to be isolated on a mixer-wide basis:
 - **[IN ROUT]** for all Input Routing assignments.
 - **[EQ/FILT]** for all Equaliser and Filter sections.
 - **[DYN]** for all Dynamics sections.
 - **[AUX SND]** for all Aux Send controls.
 - **[CUT]** for all Channel, MTR and Aux Return Fader Cuts.
 - **[ASSIGN]** for all MTR and Program Bus Assign buttons.
 - **[PAN]** for all Channel and MTR Pans.
 - **[FADER]** for all Channel, MTR and Aux Return Faders.
 - **[INPUT]** for all Input Trim and Delay settings.
- 4 Whilst the material is either stationary or moving, touch **[RECALL]** in the SNAPSHOT GUI and the settings will be restored. Touch **[UNDO]** to reverse the operation.

Automating Snapshot & Library Entry Recall

The screenshot shows the CUE GUI interface. At the top, there are status indicators: TITLE: No flying birds, SNAPSHOT: Start of MIX, AUTO: WITH BUTT ABS NORMAL, READY SETUP, OPTION, READY 48kHz 30Hz NDF, and a timer showing 00:00:00:00. Below this is a CUE header with buttons for NEW, STORE, DELETE, RECALL, and UNDO. The main area is a table with columns: NUMBER, TIME CODE, CUE NAME, TC LINK, EVENT, NUMBER, EFFECTIVE CHANNEL, and EVENT NAME. The table contains 10 rows of data. On the left side of the table, there are several control buttons: LOCATE, SET 2 CUES, CYCLE CUES, and CYCLE ALL. At the bottom of the interface, there are several menu buttons: CHANNEL, AUDIO, SNAPSHOT, CUE, AUTO-MATION, MACHINE CONTROL, SYSTEM, and MASTER DROP IN.

	NUMBER	TIME CODE	CUE NAME	TC LINK	EVENT	NUMBER	EFFECTIVE CHANNEL	EVENT NAME
↑	1	00:00:00:01	Initial of MIX	OFF	NA			
↑	2	00:00:01:00	Intro	ON	SNAPSHOT	0	ALL	INITIAL SNAPSHOT
	3	00:00:02:20	#03	ON	EQ LIB	3	CH10	HIGH CUT
LOCATE	4	00:00:15:00	Start!!	ON	DYNA LIB	2	CH1	COMP/GATE
SET 2 CUES	5	00:00:32:00	#05	ON	NA			
CYCLE CUES	6							
CYCLE ALL	7							
	8							
↓	9							
↓	10							

Automating the Recall of a Snapshot

- 1 Touch **CUE** at the bottom of the LCD, just left of centre for the CUE GUI.
- 2 In the column headed TC LINK, make sure **ON** is displayed for the Cue point to which a Snapshot is to be linked and automated to timecode. If **OFF** is displayed, touch it to change it to **ON**.
- 3 In the column headed EVENT, touch the entry immediately to the right of the **ON** for a pop-up and select **SNAPSHOT** if not already displayed.
- 4 In the column headed NUMBER, touch the entry immediately to the right of the **SNAPSHOT** for a pop-up displaying the list of Snapshots.

5 Select the Snapshot required by touching it.

6 Make sure **TC LINK** is selected beneath the SNAPSHOT heading on the panel.

Every time the material is played past the Cue point, the Snapshot selected will be restored.

Automating the Recall of a Library Entry

EQ and Dynamics settings stored using the Library function, accessible via the EQUALIZER/FILTER and DYNAMICS GUIs, can be restored with reference to timecode as follows:

- 1 In the column headed TC LINK, make sure **ON** is displayed for the Cue point to which an EQ or

Automation Operation

Dynamics Library entry is to be linked and automated to timecode. If **[OFF]** is displayed, touch it to change it to **[ON]**.

- 2** In the column headed EVENT, touch the entry immediately to the right of the **[ON]** for a pop-up and select **[EQ LIB]** or **[DYN LIB]** according to what is required.
- 3** In the column headed NUMBER, touch the entry immediately to the right of **[EQ LIB]** or **[DYN LIB]** for a pop-up displaying the list of appropriate library entries.
- 4** Select the Library entry required by touching it.

- 5** In the column headed EFFECTIVE CHANNEL, touch the entry immediately to the right of the Library entry number for a pop-up allowing the selection of channels. They are set out in groups of eight. Touching any group of eight will open a further pop-up to select an individual channel. Select a channel.
- 6** Make sure **[TC LINK]** is selected beneath the SNAPSHOT heading on the panel.

Every time the material is played past the Cue point, the Library entry selected will be restored to the specified Channel.

Fader Gang Grouping Offsets

General

Care should be taken when using Fader Gang Groups since offsets between faders can be lost.

Setting Up a Fader Gang Group

- 1** Touch **[AUDIO]** at the bottom left of the LCD for its pop-up, and then touch **[FADER GROUP]** for the AUDIO FADER/CUT GROUPING GUI.
- 2** Touch one of the **[GROUP #]** tabs at the left of the GUI which is not being used.
- 3** If the first button to the right of the **[GROUP #]** tab is not displaying **[GANG]**, touch once or twice until **[GANG]** is displayed.
- 4** The main area of the GUI displays a button for each fader in the system. Touch three or more buttons to group them, indicated by 'GP#' displayed.
- 5** Make sure **[ON]** is displayed on the button next to the **[GANG]** button and the Fader Gang Group is complete.

Using a Fader Gang Group

Here are a few points to remember when using Fader Gang Group:

- Moving any one fader will cause all the other faders to move according to their relationship when they were set up.
- Touching and holding any single fader and then moving another will change the relationship.
- The relationship between faders is based on dBs. This will be reflected according to the fader scale markings which are not linear. The amount of fader travel is less per dB at the lower level settings, for example.
- **IMPORTANT:** Moving a fader with a higher level setting than others in the group all the way down to the end stop, then releasing touch will reset the grouping relationship.
- **IMPORTANT:** Moving a fader with a lower level setting than others in the group all the way up to the end stop, then releasing touch will reset the grouping relationship.

Note

VCA Fader Gang Grouping allows offsets to be retained at all times but please note, one fader must become the master for other faders within the group.