Indication of Slave Type

There may be occasions when you become confused as to which Slave Type faders have been set.

With the Group Setup menu on screen, make the group in question current by selecting it with the left/right cursor keys. slaves which are of the current type, as shown in the menu, will display a solid green LED as normal. slaves which are of a different type will show a solid green LED plus a slow flashing red LED.

Now move through the Master/Slave Types list with the left/right cursor keys to determine which faders are of which slave type. As a new type is selected, any of the current group that are of that type will show just the solid green LED.

Alternatively, you can proceed as follows. Pressing the status button on a channel that has both LEDs lit will cause the slave type of that channel to become the current type, and the Master/Slave Types list will confirm this. The flashing red LED on this channel will go out to show that the channel is now of the current type. Pressing the button again will remove that slave from the group. Remember that slaves can only be deselected individually if they are of the current type.

Clearing a group can be simply carried out by making the group current and then stabbing on Clear Group.

Software Groups and Automation

If Software Groups are used in an automated mix, there may be situations where you want to clear some, or all, of the current groups and set up new ones. Merge & Dissolve is provided for just such occasions. It merges the current group data with the mix data for the current pass in a new mix pass prefixed with the letter G, and then clears the grouping information for that Software Group. The fact that a new mix pass has been created provides a previously unavailable level of undo should you wish to return to the ‘un-merged’ mix.

An error message pop-up will appear if Merge & Dissolve is used on a One of ‘n’ Uncut type group. Merge & Dissolve does not work on a collection, as the mix data for the collection is not held on a single master channel, but collectively across all members of the collection.
Operational Applications

As the grouping system works from the playback data of the master, it is very simple to add grouping onto something to see the effect, and then remove it if it is no good. For example, having written the cuts for one backing vocal track, that track can then be used as a master for the rest of the backing vocals. By using a Slave Cuts Only type group, only the cuts would affect the other slaves; any fader rides on the first vocal track would have no effect.

If the result of this is OK, just leave the group in place. If the effect is no good, dissolve the group and carry on. No mix information has been written, so there is nothing to delete or correct.

Note that it is not necessary to have grouping in place while fader moves are being written. Any existing moves can be later ‘mapped’ onto other faders.

Master and Slave Cuts – Any cut from the master is applied to the slave. If the master is uncut, the slave can be cut as normal (provided it is in a write status). It is not possible to uncut a master cut that is applied to a slave by using the slave’s cut button. The way around this is to use Merge and Dissolve, then update the cut information on the slave fader as normal.

Using Inverted Cuts – Slave Inverted Cuts have the opposite effect to that applied from the master. Cut the master and the slave uncuts; uncut the master and the slave cuts.

Using Mixed Slave Types – Assume you have two stereo piano tracks and you need to switch between them several times during the mix. If the tracks are returning via Channels 25 & 26 and 27 & 28, set up the group so that Channel 25 is the master and Channel 26 a Slave Cut type slave. Now select Channels 26 and 27 to be Inverted Cut type slaves. Cutting Channel 25 cuts Channel 26 and uncuts Channels 27 and 28. Uncutting Channel 25 uncuts Channel 26 and cuts Channels 27 and 28. In this way you can simply switch between two stereo pairs with just one cut button.

We’ll leave you to discover the many other possibilities!
Switch Groups

Switch Groups are used to group together automated objects on the console. Note that, as with software groups (see Page 5-67), this facility can be used in and out of an automated mix. By now you should be aware that the automated objects are FX1-6 On/Off, Cue Stereo On/Off, Insert In/Out, EQ In/Out, Large and Small Fader Cuts, Group Fader Cuts and Solos.

Up to 500 (yes, five hundred!) Switch Groups can be set up. Hit the SWITCH GROUP SETUP button on the front panel, or select Switch Groups from the MIX-DESK/Groups menu. This produces the Match and Play Switch Groups Setup menu (see opposite).

By stabbing on the yellow box at the top right of the pop-up, you can choose the group type from Master/Slave or All Master. Alternatively use the up/down cursor keys on the front panel to toggle the choice. A Master/Slave group has a single designated master object; activating a slave object will have no effect. With an All Master group, any object in the group will control all other objects in that group.

The yellow number below box indicates the group number. Groups must be set up sequentially, i.e. you cannot create Group 2 without first creating Group 1. Once set up, you can move from group to group with the left/right cursor keys on the front panel, or by stabbing and dragging to change the number.

To assign objects to a group, simply press the object’s button/switch. With a Master/Slave relationship selected, the first object pressed will become the master and it will appear highlighted in blue in the scrolling list to the left of the pop-up. Having selected the master object, subsequent selections will be designated slaves. When selected, these appear in the list below the master.

If, having selected a number of objects for the group, you decide to change the master, stab on the Set Master box. You can now select a new master by either stabbing in the list or simply pressing the relevant hardware control. Note that you cannot allocate a new master to the group if it does not already appear in the list.

Having set up a group, stab outside the pop-up and try it out. You will notice that you cannot switch object states individually if they are assigned to a group. If required, you can change a group to the All Masters type after you have created it. Also note that a Cut can be included in a Software Group (see Page 5-67) at the same time as being in a Switch Group.
To remove an object from a group, first access the correct group and then either toggle the physical object, or press Remove and stab in the list on the offending item.

To add objects to the Switch Group you are creating, just hit the relevant switches. Alternatively, select Add, and the pop-up shown in the lower screen opposite will appear. Stab on the Channel or Group number to select the Channel/Group of your choice – a numerical keypad will appear for entry of the number required. Now select an object by stabbing on one of the yellow boxes (note that only one object can be selected at a time) and OK out of the pop-up. Repeat as necessary.

There is an alternative method of assigning objects and Hardware Group Solos and Cuts to Switch Groups. Hit Select Group and the same pop-up as used with Add (see above) will appear. Make your choice and OK out of the pop-up. Repeat as necessary.

Clear Group will clear down all selections for the currently displayed group.

When automated, switch group data is written directly to the mix for each object. Having written a series of master-controlled on/off states for a group of switches, data for individual switches in the group can be modified by simply removing them from the group, or by clearing the entire group down.

Switch Groups – An Example

One simple use of the Switch Group facility is in the switching of FX Sends in an automated mix. Assume you need to switch reverbs on a particular channel at the start of each chorus. Since you need one send to switch on as the other switches off, set them like this before you set up the group. Remember that once assigned to a group, objects may not individually change state, and if you do start with both switches on (or off), once in a group, both switches will change to the same state when either is pressed.

Back to the example. Now set up an All Masters group. This will save any confusion later, as you will be able to press either switch in order to execute the changeover. Once this is done, the required effect can be manually written to the mix.

Hopefully, this simple example will give you a taste of the unlimited possibilities that the combination of Switch Groups and automation can achieve. We’ll leave the rest to you.
<table>
<thead>
<tr>
<th>Draw</th>
<th>Name</th>
<th>Do</th>
<th>Undo</th>
<th>Name</th>
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<td>17</td>
<td>33</td>
<td>49</td>
<td></td>
</tr>
<tr>
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<td>18</td>
<td>34</td>
<td>50</td>
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<td>3 Solo Idea</td>
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<td>35</td>
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<td>4 Major Upset</td>
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<td>5 2nd Verse</td>
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<td>53</td>
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<tr>
<td>6 A&amp;R (Ignore)</td>
<td>22</td>
<td>38</td>
<td>54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Best so far</td>
<td>23</td>
<td>39</td>
<td>55</td>
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<tr>
<td>8 Master Bal</td>
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<td>32</td>
<td>48</td>
<td>Unbeatable</td>
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</tbody>
</table>

Snapshots

In addition to all the dynamic automation options, the J Series Computer also offers a console-wide ‘snapshot’ facility for all automated objects.

Pre Enable Snapshot

Snapshots can be taken whether the dynamic automation system is enabled or not. However, each time you enable the mix system, a ‘Pre Enable’ snapshot of the state of the console just prior to the AUTO ON button or the Enable box being selected, will be taken. If previous automation settings have not been cleared, enabling the mix system may set up undesirable fader levels and switch states, and destroy your carefully prepared balance. Do NOT Panic! By recalling the Pre Enable snapshot, you will be able to get back instantly to the state before the automation system was enabled.

Note that, with the automation system enabled, recalling a Pre Enable snapshot will set the Small Fader VCA’s to their stored levels, and these levels may not be reflected in the physical positions of the Small Faders. Furthermore, switches will flip to Record if their state is changed by the snapshot.

To recall the Pre Enable snapshot, stab on the Do Pre box in the MIX-DESK /Automation menu (when the text on this box is white, it indicates that there is no Pre Enable snapshot currently present). Alternatively, you may select the MACRO LAYER 2 button and then press the DO PRE button on the front panel, assuming that the SSL Default Project macros have been installed.

As well as the automatic Pre Enable snapshot, you have the ability to save up to 62 additional snapshots. Hit the front panel SNAPSHOTs button, or select Snapshots from the MIX-DESK menu, to call up the Snapshots pop-up (see opposite).

To take a snapshot of the current automated object settings, select Take followed by a stab on one of the 62 grey boxes below. The box will turn yellow to indicate that a snapshot is now present in that store. The same function can be activated from a front panel TAKE SNAPSHOT button (see Page 5-81). Note that ‘occupied’ stores can be over-written with ease and, if this happens, any existing name will be unchanged. This apparent oversight in the software can prove useful if you simply want to repeatedly update a fader balance snapshot while tracking. See Delete on Page 5-81 if you want to remove the contents of a snapshot before overwriting it.

Snapshots can be named (up to 11 characters) by selecting Name followed by a stab on the appropriate box.

To restore snapshot settings to the console, select Do followed by a stab on the appropriate yellow box. Alternatively, use the DO SNAPSHOT button (see Page 5-81).
### Snapshots

<table>
<thead>
<tr>
<th>Draw</th>
<th>Take</th>
<th>Do</th>
<th>UND</th>
<th>Name</th>
<th>Delete</th>
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<tbody>
<tr>
<td>1</td>
<td>Rough</td>
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</tbody>
</table>

**Auto Off:** Ignore Protection  **Auto On:** Use Protection

**FILE/SETUP**
- DiskTrack
- Overview
- Events
- Machines
- Misc

**RECALL**
- Fader Protection
- Switch Protection
- Fader Status

**Machines**
- Faders
- Project
- Join to Mix
- Auto Modes

**FREE:**
- Mem: 97%
An **Undo** function is provided at the top of the pop-up in case you recall the wrong snapshot (note that this may be programmed for a macro key if required – see Section 8). At the bottom right of the snapshot list you will see two boxes labelled **Undo** and **Pre Enable**. When these boxes are yellow, and if required, the associated snapshot may also be recalled from here with the **Do** function.

**Delete** enables an unwanted snapshot to be deleted from RAM. Stab on **Delete**, and then stab on the appropriate snapshot box. You will be asked to confirm the operation. To make deletions permanent, you must save a new ‘Snapshot Positions’ element in Project Settings pop-up.

If the SSL Default Project macros have been implemented, you will find **TAKE SNAPSHOT** and **DO SNAPSHOT** buttons on the front panel. When selected, these functions present the operator with a numeric pop-up, allowing selection of the snapshot number to be saved (or recalled).

Selecting **Inc** for either **Take** or **Do**, will cause the system to pre-load the numeric pop-up with an incremental snapshot number. Each time a ‘Snapshot Positions’ Project element is loaded, the number will be reset to 1. Following this, the first time **TAKE SNAPSHOT** is selected, the system will default to saving Snapshot 1; the next time it will increment to Snapshot 2 and so on (the same applies for **DO SNAPSHOT**). Each time the numeric pop-up is presented, the next number can either be overridden (by stabbing on the numeric pop-up, typing on the QWERTY keyboard or the front panel numeric keypad), or OK can be selected to action the **TAKE** or **DO**.

The system will increment each time a snapshot **TAKE** or **DO** is OK’d, as long as the next snapshot store contains information. If **DO SNAPSHOT** encounters a blank snapshot location, it will continuously present that numbered snapshot each time **DO SNAPSHOT** is pressed. If you wish to use this facility, you should therefore fill snapshot positions incrementally, without leaving spaces. When the system reaches Snapshot 62, it will present 62 on the numeric pop-up until a new value is selected, at which point, it will again increment from that location.

In the top left hand corner of the Snapshots pop-up, **Draw** determines whether or not the Snapshots display will be called up when using the ‘Take Snap Key’ or ‘Do Snap Key’ macro functions (see above). With **Draw** selected (red), the Snapshots display will appear, followed by the numeric pop-up.

The two light yellow boxes at the foot of the snapshot list, determine whether faders or switches that have been set to **Protected Manual** mode (see Pages 5-57 and 5-61), will have their settings overwritten by a recalled snapshot or not. The choice can be made for when the automation system is on or off.

Simply stab on the boxes to toggle between **Use Protection** and **Ignore Protection**. Note that any control in **Protected Replay** will be overwritten by a snapshot whether automation is on or not.
Editing Mix Data

Once you have automation data written for faders and objects, that data may be edited graphically with the pen and tablet interface. Select **Overview** from the **MIX-DESK** menu and scroll the Overview display horizontally so that the channel you wish to edit is in view. Now centre the playhead (Desk position) on the area you want to edit by stabbing on that spot. Select the **Edit** menu followed by **Edit Mix**. Now select **Trim Mix** and you will be prompted to stab on the channel you wish to edit; the Edit Mix Data pop-up will then appear (see lower screen opposite).

The two timecode boxes on the left hand side of the pop-up show the length of the edit window. Stabbing on the timecode displays moves the window up or down by half a window with each stab. You can also stab and drag on the timecodes to change the values.

To assist in the editing process, it is possible to create multiple generic ‘SL 9000’ marks, from this pop-up, at the playhead position. The positions of any Marks are indicated by blue lines across the display and timecode references to the left. If a mark represents a named event or cue, its name will be shown on the right hand side of the pop-up.

If there is a audio clip present on the Overview display in the area you wish to edit, the edit window will show this in blue; otherwise the window will have a black background. Audio clips on the Overview display may be generated by the **Capture Clips** facility (see Page 5-87) or if your system is fitted with a DiskTrack.

If the edit window is under 10 secs, the **Wave** function on the Edit Mix Data pop-up enables a waveform display of any DiskTrack audio clip present in the edit window. This provides an obvious advantage when editing mix data. The associated **Gain** function enables the amplitude (magnification) of the waveform to be adjusted within a range of 1-24.

In the bottom left hand corner of the pop-up is a box which, when stabbed, gives you a list of automated controls whose mix data you can edit on this display (the same as the list for Overview display). The currently selected item will be displayed in the box and the Edit Mix Data display will subtly alter if you change to a different selection.

For the time being, we will concentrate on the editing of switch data. Before moving on, select a switch object from the list. See Page 5-85 for information on editing fader data.
Editing Switch Data – We’ll assume that you wish to create an ‘on’ condition for the switch where it is currently stored as ‘off’ in the mix data. The vertical red line on the left of the display indicates the current Off state. Press the pen on the line and a vertical yellow bar will appear. Now drag the pen to the right of the yellow bar. This produces a white line on the display that gives an indication of your edit (in this case, turning the switch state to on). Drag the pen down for your desired duration of the On state. Release the pen and a red outline will define the edited information. Note that you can write mix data ‘On’ in a forward and backward direction. When you press the pen to edit, a timecode box appears at the bottom of the pop-up, indicating the current pen position.

To write an Off state, stab the pen on the red line to the left before the start of an existing On state and drag downward for the length of the desired Off state. Take note that you can only write an Off state forwards in time. Once again, when you press the pen to edit, the timecode box the bottom of the screen, shows the current pen position.

Existing switch events can be edited in the same way by stabbing on the event boundary and dragging up or down to move the event start or end.

All this will seem a lot simpler when you actually try it yourself. Cuts/Uncuts/FX On/Off etc. can all be very simply written off-line with this facility, and then further modified to taste.

The Ref channel on the right hand side of the pop-up shows, as a guide, the written mix information for a channel you may wish to reference your edit to. This can be useful where you wish to match a cut on another channel, for example. The reference channel can be selected by stabbing on the Ref: Ch 1 box in the Edit Mix menu. A pop-up will appear asking you to stab the channel on the Overview display that you would like as your new reference.

The boxes at the foot of the Edit Mix Data pop-up have the following functions:

- **Zoom In** As implied; stab on the area you wish to zoom in on
- **Zoom Out** Does just that
- **Revert Edits** Loses edits you made since entering the display
- **Cycle** Cycles the selected window with preroll
- **Mark** Places a Mark at the playhead position on the relevant channel. These marks can be used to specify edit points for audio (DiskTrack only)

The red < to the right of the pop-up gives an indication of the current Desk position, relative to the edit window. If the < is white, the playhead is out of range. When you stab on the <, a red line appears across the edit window so you can accurately position the playhead. Stabbing immediately to the right of the reference channel will move the Desk to the pen stab position.
Editing Fader Data – If you choose to edit fader data, $\pm 0$ dB and $\pm 10$ dB scale markers appear at the top, and additional options appear at the foot of the Edit Mix Data pop-up. You will also notice two horizontal lines across the display which represent the edit boundaries, i.e. the time limits within which editing can take place. The maximum allowable is two minutes; the timecode values of the current start and end of the band are shown to the left. If the edit boundaries are out of limits, they will be shown in red; once within the limit, they will turn green. To move the start or end times, stab on the relevant timecode number and drag. Once the boundaries are set, you can use the following functions:

Selecting Shift and dragging sideways will raise (to the right) or lower (to left) all the mix data between the markers. This allows a region of automation data to be trimmed in overall level. Shifting all the way to the left will close the fader as indicated by the scale at the top of the display.

Curve will introduce a dip or peak into the data. Squash will expand existing moves if the pen is dragged right, or compress if dragged to the left, eventually squashing the data to the blue line connecting the two boundaries.

When finished, hit OK to clear the Edit Mix Data pop-up. Subject to the setting of Always/New Pass – Play/New Pass in the Fader Status pop-up (see Page 5-53), the Edit Mix function will (Always/New Pass) create a new mix pass prefixed with the letter E. If this option is set to Play/New Pass, the system simply merges the modified data into your current mix. If you want to keep your current mix version, it should be saved to disk before using the Edit Mix function.

Capture Clips

Capture Clips is an innovative new feature which allows the system to capture audio ‘clip’ information from console channels, via the opening and closing of gates in the channels’ dynamics sections. The system assumes that audio is present when no LEDs are lit on the gate meter. Once captured, an on-screen representation of the audio can be used as an aid to the editing of automation data (see Page 5-83).

First you need to set up the gates on those channels which have the necessary audio coming through them. If this is your first experience with Capture Clips, we suggest you read through this section before proceeding, so that you are aware of the potential benefits of the function.

Note that clips will be captured from the first time you play the tape after the Capture Clips function is armed. Make sure that the tape is located to the correct start point before you select channels as described below. To avoid capturing excessive material, you should start and end the run in silence. The simplest way to do this is to select a Solo button on an unused channel. If you don’t start and end with the gates closed, the system may assume that there is a clip running from 00:00:00:00 up to the start of the track, and another clip running from the end of the track to 23:59:59:24(29)!
Now select **MIX-DESK /Events** and stab on the **Clips** box at the top left of the Events List. This produces two new boxes to the right – **Capture** and **Clear**.

To select the channels you want to capture clips on, stab on **Capture**. The Channel Selector pop-up will appear (see opposite). Select the relevant channels and OK out of the pop-up. To select a sequential range of channels, simply hold down the fader status button of the first and press the button on the last.

The **Clips** box should now be red, ie. armed. Play the multitrack. When you hit Stop, you will be given the option to **Save** or **Discard** the captured clips. If you save the clips, select the **Overview** page and you will see the captured audio for each channel represented by a series of pink blocks.

If you subsequently wish to discard the clips on one or more channels, select **Clips** followed by **Clear** on the Events List. This again calls up the Channel Selector pop-up. Choose the channels on which you want to clear the Captured Clips information, then press OK.

The J Series Computer’s mix system provides a set of automation modes which are specifically designed for use with captured clips. See below.

### Additional Automation Modes

Apart from **Overwrite**, **Static**, **Rollback/Join** and **Rollback** (see Page 5-15), the J Series mix system provides four other automation modes. These are: **Clip Fill**, **Clip End**, **Cycle Fill** and **Cycle End**. All these modes can use Absolute or Trim as their active write status, according to the current USE ABS/USE TRIM selection.

Different modes can be selected for groups of objects by selecting the AUTO MODES button or **Auto Modes** in the **Automation** menu (see opposite). Note that the **Auxes** selection covers all automated switches on the console’s I/O channels, with the exception of the Large and Small Fader Cut buttons.

**Clip Fill** – This and the following mode are ideal for use with ‘captured clips’ (see above) or DiskTrack audio. **Clip Fill** is a clip-specific ‘static’ mode. If you operate automated objects as a channel’s associated clip travels past the playhead, you can freely adjust switches or faders to set up satisfactory settings without having to worry about writing data to the mix. Only when you rewind the system will you write the current setting for that switch or fader for the length of the entire clip in which the rollback point is created.

**Clip End** – This is another clip-specific mode. You can dynamically write moves and, at the point of rollback, the last settings will be written to the end of the current clip, or the next clip if you have written moves in the gap between clips.
Cycle Fill – This and the following mode are designed for use around the times set in the cycle 'from' and 'to' timecode boxes located on the right of the MIX-DESK display. Cycle Fill is cycle-specific 'static' mode. When you rollback (within the cycle window), the position of any switch or fader, which has been put into write, will be written for the length of the cycle window.

Cycle End – This is (not surprisingly) a cycle-specific mode. While you are dynamically writing data, the moves will be written to the mix. If you roll back before the cycle end, the last position you left the fader or object in will be written to the cycle end time.

Off-Line Trim

This useful facility enables fader levels to be trimmed, up or down, off-line. Select Offline Trim from the MIX-DESK /Automation menu and the pop-up shown opposite will appear. Stab on Large Faders, Small Faders, Hard Groups or Soft Groups to select the types of faders you wish to trim. Obviously you can select more than one fader type, if required. The relevant boxes turn blue once a selection is made. Use the channel selector to select individual faders. Enter in the trim start and end times (the times default to the current mix start and end times). You have a choice of fixed -1dB, -1/4dB, +1/4dB and +1dB trims, selected by simply stabbing on the appropriate box. The trim will be carried out as soon as you do this. Alternatively, enter the required trim value in dB, between -10 to +10 dB to two decimal places, by stabbing on the Value box. To enter a negative trim, either press -, enter the value and then hit =, or enter the value and stab on the Ng box. If you enter a figure via the value box, stab on Do Trim to effect the trim. Progress will be shown by a yellow indicator in the Status Bar.

Subject to the setting of Always/New Pass – Play/New Pass in the Fader Status pop-up (see Page 5-53), the Off-line Trim function will (Always/New Pass) create a new mix pass prefixed with the letter O. If this option is set to Play/New Pass, the system simply merges the chosen data into your current mix. If you want to keep your current mix version, it should be saved to disk before using the Off-line Trim function, especially if you intend to make several incremental trims.
Joining Mixes

This feature allows you to join any mix from any Project to the current mix. Selected automated objects may be chosen from either mix. Stab on Join to Mix from the MIX-DESK / Automation menu, and this (not surprisingly) will produce the Join to Mix pop-up (see opposite).

First select the 'Project' mix. The box to the right of Disk Project will show the name of the Current Project. If the mix is not in this Project, stab on the box to reveal a list of other Projects. Select the Project you want by stabbing on it.

The Automation version box to the right will display the last version number of automation data saved to the selected Project. The mix name and creation date, and the mix start and end times, are shown on subsequent lines. To change to a different mix, stab in the mix name box which produces the Mix List for the selected Project. Alternatively, stab in the version number box and enter the required number on the numerical pop-up.

Below the And bar you will see start and end times of the current mix.

In the lower half of the pop-up you will see what is effectively a sentence, punctuated with variables (the yellow boxes), describing the components of the join. The Disk Project and Current Mix boxes determine which mix you will join from and which mix you will join to. Stab on either box to toggle between joining selected objects from the Disk Project mix to the Current Mix or joining selected objects from the Current mix to the Disk Project mix. If all objects on all channels, all groups and the Master Fader are to be joined, then this selection becomes immaterial.

The variables can be modified as follows:

“Join all automatable items” – Stab on all to produce a pop-up from which selected objects can be chosen. Objects highlighted in red will be included in the join; objects in grey will be excluded. If you select none of the objects, the box will read no.

“on all Channels” – Stab on all and select the required channels from the Channel Selector.

“, all Groups” – Stab on all and select the required groups from the Group Selector.

“and also the Master Fader” – Stab on the box to toggle between also and not.

Now determine which type of join you require. You have a choice of Butt, Insert or Timeshift. The selection is toggled by stabbing in the box to the lower left of the pop-up. Appropriate timecode boxes appear in the lower right of the pop-up, according to your choice. A Butt join requires a single timecode entry of the join point. Insert requires the entry of insert from and to times. A Timeshift join is used where you wish to take a section of automation data from one mix and insert it at a different start point in the other mix. For example, you might want to take the saved mix data for the third chorus of a song and insert it in your current mix at the first chorus. Enter the start and end times of the section to be inserted in the from and to boxes; enter the insert start point in the at time box (see screen on Page 5-94).
When you are satisfied that the join parameters have been set up correctly, stab on OK and Joining..., plus a progress indicator, will appear in the Status Bar while the mix data is merged.

Subject to the setting of Always/New Pass – Play/New Pass in the Fader Status pop-up (see Page 5-53), the join function will (Always/New Pass) create a new mix pass prefixed with the letter J. If this option is set to Play/New Pass, the system simply merges the chosen data into your current mix. If you want to keep your current mix version, it should be saved to disk before using the Join to Mix function.

**Copying and Swapping Mix Data**

Mix data can be freely copied or swapped from one channel to another. This is carried out via the Copy And Swap Channel Data pop-up located under Copy/Swap in the RECALL menu.

Note that both Copy and Swap functions work with the current automation data, regardless of whether this has yet become a mix pass or not.

Select Copy/Swap and the screen will look similar to the lower screen opposite. Note that, in addition to mix data, various other types of channel information can be copied/swapped from here. Select a tick for Automation data and any other element(s) that you wish to be included in the copy/swap. Leave a cross for all other entries in the list.

If you have transferred data from one facility to another, you may well want to select additional elements to copy or swap. This is particularly relevant when the facility you are working in now has a different size of console, or the console has a different layout to the one you started out in.

You can elect to carry out a Single or Multiple Copy by toggling the box to the upper right of the pop-up. For a Single Copy, select the channel you wish to copy the data from by stabbing on the left hand Channel in the banner at the top of the pop-up. A numeric keypad will appear for entry of the channel number. Alternatively, press the Large Fader status button for the same result. Stab on the right hand Channel to enter the destination channel number, or use the Large Fader status button as before.

For a Multiple Copy of data from one channel to several others, enter the source channel as above. To specify the destination channels, stab on Multiple Channels and enter your selections into the Channel Selector (if you are not familiar with this pop-up, see Section 1). To select a sequential range of channels, simply hold down the fader status button of the first and press the button on the last.

When you are satisfied with your source and destination selection(s) stab on Do It to complete the operation.
### Copy And Swap Channel Data

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**FILE/SETUP**

- **MIX-DESK**
  - Autoscans
  - Auto Compare

- **RECALL**
  - Manual
  - Options

- **MACHINES**
  - Calibrate
  - Channel Objects

- **MISC**
  - Copy/Swap
  - Centre Objects

---

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To swap information from one channel to another, stab on Copy to toggle it to Swap. The selection procedure for channels is the same as described above for the Single Copy function.

Clear the Copy/Swap pop-up by stabbing outside it.

Subject to the setting of Always/New Pass – Play/New Pass in the Fader Status pop-up, the Copy or Swap functions will (Always/New Pass) create a new mix pass prefixed with the letter C or S. Always/New Pass is the recommended default. However, if you intend to use the Copy/Swap function repeatedly, when you are copying data to and from multiple sources for example, use Keep (see Page 5-13) to avoid the current mix pass being forced from the Mix Pass list as it overflows.

Alternatively, set this option to Play/New Pass, and the system will incorporate the modified data into your current mix. See Page 5-53 for more on Always/New Pass – Play/New Pass.

Phew!
Solid State Logic

SL 9000 J Series

Computer Operator's Manual

SECTION 6

Total Recall
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Total Recall records the position of all the switches and rotary controls on the console’s channel modules as well as the positions of controls in the centre section. Once stored, these ‘setups’ can be recalled, enabling the console to be reset to within 0.25dB tolerance.

The console controls are manually reset in conjunction with a graphic display (see opposite) which compares the stored positions of controls with their current positions. To reduce the reset time, an Autoscan function can be used to rapidly locate those controls that are incorrectly set.

Total Recall can be equally used where you want to return to a specific setup stored earlier in the session or if you are moving your project to another studio. In the latter case, it makes no difference if the facility you are moving to has a larger or smaller console, or even a different layout. Total Recall information can be freely copied from one channel to another.

Total Recall (TR) setups are saved on a one-per-Version basis, in the ‘Total Recall Setup’ element of a Project. (If you are not familiar with Projects and Versions, we advise you to read Section 2 before going any further.)

Press the SAVE SELECTIVE (TR) button on the front panel. As the (TR) engraving on the button suggests, this function is designed to save a Total Recall setup regardless of what other elements have been selected for saving to a new Version of the current Project. A tick for ‘Total Recall’, in the Select Items to Save list (see opposite), is automatically selected each time this button is pressed.

If you wish to save additional elements at the same time, they can be selected at this point. They will remain selected for each subsequent ‘Selective Save’ until they are deliberately deselected, thus enabling repeated operations without unnecessary fuss.

When you stab OK or hit the OK button on the front panel, a QWERTY pop-up will appear so that you may name this version of the Project.
Saving TR Setups (cont)

When the QWERTY pop-up appears, the name of the last setup saved (or loaded) will be displayed. If this name includes a number, such as 'Burundi 2', the number will be automatically incremented for the setup (Project Version) you are about to save. If you wish to give the setup an entirely different name, simply delete the existing name and enter a new one. Each setup is also automatically stamped with the current time and date.

To view a list of the setups that have been previously saved to the current Project, you can simply hit the SAVE SELECTIVE (TR) button again. Remember though that this lists Project Versions regardless of whether they contain Total Recall setups or not. To list Total Recall setups only, stab on the box below the 'Total Recall Setup' entry on the 'Save Selective' pop-up.

To view a list of Total Recall setups in any Project, select the RECALL menu and stab on the blue 'current setup' bar (see below). The resultant pop-up also provides the means to recall a setup (see opposite).
Once Total Recall setups have been saved, they can be recalled at any future time. Select RECALL (on screen or by simply pressing the front panel RECALL button) and then stab on the blue 'current setup' bar. This produces a pop-up from which you may select a setup from any Project on the system disk (if you read the previous page you will already know this):

This pop-up is similar to the Project select pop-ups; simply stab on the desired Project name, and a list of all the Versions belonging to that Project will be revealed. Select the Version that relates to the required Total Recall setup; Now stab on the OK box (or press OK on the front panel), and the required Total Recall setup will be loaded into RAM. The 'current setup' bar will reflect the selected Version name.

Note that Total Recall setups belonging to a Project created with software earlier than V4 must be loaded using the Project menu Load/Selective... function (see Section 2).
Recalling TR Setups (cont)

Select **Manual** in the **RECALL** menu and the screen will look similar to that shown below:

![Image of a control panel showing Channel 1 setup]

The main area of the display is taken up by a graphic representation of Channel 1 including, to the right, the large fader.

Before proceeding, check whether any of the controls on Channel 1 are incorrectly set. The chances are, if you have been experimenting as you read this manual, the setup you are currently viewing is the one you last saved, and no controls have changed in the intervening period! Move some of the controls on Channel 1 to see the effect.

Incorrectly set controls will be shown with a white outline, and rotary controls also indicate their current position in white with a coloured line to indicate the stored position; turn the control until the white outline disappears. Press incorrectly set switches to achieve the same result. Incorrectly set faders should be moved to the level marked by a little black >, at which point the white outline will disappear.

Alternatively, fader levels can be set by means of the 'Level Match' feature that uses the automation status LEDs on the faders to indicate their relationship to stored levels. On a selected channel, a red LED indicates that the fader should be raised; a green LED indicates that the fader should be lowered; both LEDs on indicate that the fader is correctly matched. When a Total Recall setup is associated with an automated mix, recalling that mix with the motors on will, of course, enable large Fader levels to be reset automatically.

If you have just set the controls correctly for Channel 1, you are now faced with the task of resetting controls on all the other channels and in the centre section. Before you faint at the prospect, read on and discover some of the useful entries in the **RECALL** menu.
Several options are provided in this menu to speed, and generally aid, the reset process:

This extremely useful feature will scan through the desk, starting at Channel 1, looking for discrepancies between the stored and current positions of all controls. To start the scanning process, stab on the **Autoscan** box. When an incorrectly set control is located, that channel (or the centre section) will be displayed on the screen; reset the controls as described opposite. If required, you can choose to ignore sections of the console in the scanning process (see below).

The scanning will continue automatically when an offending channel strip has been reset correctly. If you do not need to reset every control on a certain channel or channels, press **Continue** and the display will move on to the next offending control. To cancel out of Autoscan press **Stop**. Messages in the Status bar will reflect these selections and confirm when the Autoscan has been completed.

To speed the Autoscan process, you can specify those sections of the console that you are not interested in. At one level this could be the entire centre section, whole channels and/or specified groups (see Page 6-9), or simply sections of the channel strips and the centre section.

For example, you may simply want to check/reset the EQ settings across the console, in case someone has tweaked them during your lunch break. In this case, you can specify that the system should ignore all other controls apart from the EQ.

Select **Channel Objects** and a graphic picture of a channel strip will appear:
Setting the Level of Autoscan (cont)

The panel to the lower right of the display gives you the choice of ignoring the Routing section, the Inputs section, the Dynamics, EQ, FX Sends, small and large Fader. Stabbing on the Flip box for any section will toggle selected/deselected controls. Individual objects can be selected by simply stabbing on the display; stab again to deselect. Once selected, the controls to be ignored will be highlighted in white.

Selecting Centre Objects provides similar functions as above but for the centre section of the console. Stab on the objects you wish to have Autoscan ignore, and they will be highlighted in white. The sections that are covered by Total Recall include: Echo Returns, the Stereo Bus controls, the Cue/FX Master Sends, Studio Loudspeakers and Studio Headphones controls, the Compressor, the Master Fader and associated Offset control.

Select All and Flip functions are provided in both the Channel and Centre Objects menus, to facilitate the resetting of previous selections.

When control ‘masking’ has been set up, a set of indicator boxes just above the status bar (see the red Object Masking box in the screen on the previous page) will, when the RECALL menu is selected, draw your attention to the following situations:

Object Masking – Not all individual channel objects have been selected for inclusion when autoscanning the console.

Centre Masking – Not all centre section objects have been selected for inclusion when autoscanning the console, or the centre section in its entirety has been deselected in the RECALL/Options menu (see Page 6-9).

Entire channels and all, or individual, group faders may also be deselected from the Autoscan process in the Options menu (see Page 6-9). In this case the following indicators will appear:

Channel Masking – Not all channels have been selected for inclusion when autoscanning the console.

Group Masking – Not all hardware group faders have been selected for inclusion when autoscanning the console.

Note that the masking selections remain in place until reset – they are not TR setup or Project dependant. Make sure you check the masking settings before using Autoscan.
Two items on the Total Recall channel display – **PRE EQ** in the Dynamics section and **PAN OUT** in the Small fader section – are only applicable to consoles fitted with 'X5' type I/O modules. Total Recall Setups generated from X5 modules will be correctly displayed when played back on consoles with earlier module revisions, although the functions, obviously, cannot be implemented. However, at least you get an indication of how these controls were set. In these cases, you are advised to mask both items in order not to interrupt the **Autoscan** process. Note that the **PRE EQ** function does not contribute to the **Object Masking** indicator.

There may be occasions when you need to reset single controls, or just a few controls on a single channel. In this case, select **Manual** in the **RECALL** menu which, by default, will display the settings on Channel 1. If you are re-entering **Manual**, the system will display the last channel selected. To view another channel, either press that channel's large fader status button, or stab on the number below the channel display and drag the pen sideways to increment/decrement the channel number.

To access the centre section, either press the master fader's status button or stab on the channel number on the Total Recall display and drag the pen upwards to select **Centre**. Dragging the pen upwards again will take you to a display of the Control **Groups** fader levels; pressing a group fader status switch will also select the **Groups** display. To return to the channels' display, stab on **Centre** or **Groups** and drag downward, or press the appropriate fader status button.

Note that, in **Manual** mode, objects that have been deselected in the **Channel** and **Centre Objects** displays (see opposite), will appear as follows: deselected rotary controls still indicate their current and recorded settings but don't have white surrounds; switches will be 'greyed out' and you will see no visual effect when you change their state.

The **Set Auto Objs - This Channel** box, when stabbed, will automatically reset all the automated objects for the currently selected channel. **Set Auto Objs - All Channels** does the same for all channels! See also **Set/Ignore Auto Objects** in the Total Recall **Options** menu (Page 6-11).
Copy and Swap

A variety of information can be copied or swapped from one channel to another. Select Copy/Swap and to produce the Copy And Swap Channel Data pop-up:

![Copy And Swap: Channel Data](image)

The various types of items that can be dealt with here should be obvious. By toggling a cross to a tick in the column to the right, you can select which types of information you wish to copy or swap. For example, if you are only interested in Total Recall, select a tick for Total Recall Setup and a cross for all other elements.

If you have transferred data from one facility to another, you may well want to select additional elements to copy or swap. This is particularly relevant when the facility you are now working in has a different size of console, or the console has a different layout to the one you started out on.

You can elect to carry out a Single or Multiple Copy by toggling the box to the upper right of the pop-up. For a Single Copy, select the channel you wish to copy the data from by stabbing on the left hand Channel entry in the banner at the top of the pop-up. A numerical keypad will appear to enter the channel number. Alternatively, press the large fader status button on that channel for the same result. Stab on the right hand Channel entry to enter the destination channel number numerically, or simply press the large fader status button on the destination channel.

For a Multiple Copy of data from one channel to several others, enter the source channel as above. To specify the destination channels, stab on Multiple Channels and enter your selections on the Channel Selector (if you are not familiar with this pop-up, see Section 1).
When you are satisfied with the source and destination selection(s), stab on **Do It** to complete the operation. If you now initiate an **Autoscan**, or select **Manual** for the relevant channels, you will see the source settings displayed on the destination channels. Reset as necessary and then save a new setup to disk by pressing the **SAVE SELECTIVE (TR)** button on the front panel.

To swap information from one channel to another, stab on **Copy** to toggle it to **Swap**. The selection procedure for channels is the same as described opposite for the **Single Copy** function.

Clear the **Copy/Swap** pop-up by stabbing outside it.

**Hysteresis** – The hysteresis value determines the accuracy window when resetting controls. The default value is 10 and should not need changing unless instructed to do so by qualified SSL personnel.

**Auto Calibrate/Manual Calibrate** – With **Auto Calibrate** selected, the state of the desk is checked every time that Total Recall is activated. This effectively checks the reference voltages that are necessary for the accuracy of the Total Recall system. If set to **Manual Calibrate**, the desk will be checked the first time Total Recall is entered after the system has booted up, or whenever you select **Calibrate** in the main RECALL menu. **Calibrate** can be selected at any time you feel there may be a problem with one of the channels. Report any resultant error messages to suitably qualified personnel.

**Set/Ignore Auto Objects** – This determines whether the channel strips’ automated objects are reset or ignored when you play back data with either **Autoscan** or **Manual**. Just to remind you, the automated objects are: FX Sends 1-6 On/Off, Cue Stereo On/Off, Insert In/Out, EQ In/Out, Small Fader Cut and Large Fader Cut.

If the **Channels**, **Groups** and **Centre** boxes in the Options menu are selected (blue), this indicates that you wish them to be autoscanned. Stab on the **Centre** box (it turns grey) to eliminate the entire centre section from the Autoscan process; stabbing on **Channels** or **Groups** will call up the Channel or Group Selector pop-up where you can select/deselect those channels/groups you wish to be included/excluded in an Autoscan. Do this by either toggling selections on the pop-ups or by pressing fader status buttons.

As soon as you have deselected the centre section, or any channels or groups, an appropriate red box will appear above the status bar to indicate that this is the case. These boxes remain in place regardless of the RECALL menu item selected.
**Auto Compare**

*Auto Compare* (in the main **RECALL** menu), when selected, displays a grid of the potential 120 channels that may be fitted to a J Series Console:

![Auto Compare Grid](image)

This is a diagnostic tool used to check that the data held in the computer for automated switches, and the actual switch state on the console, are the same; the grid shows a comparison between the two sets of data. Channels are represented by boxes – if the box is green, computer data and the desk state match; red indicates that there is a mismatch.

Stabbing on a channel box brings up a pop-up which displays the various automated objects, shows in what state the computer determined the object was last written in, and in what state the console switch is currently positioned. The computer can only display what it thinks the Group Cut and Solo positions are; check visually for a mismatch.

Selecting **Summary** gives an overall itemised list of positions on the console. If there is a discrepancy, the computer and desk will only agree on 'nn' (being the number of correct channels) – this being less than the total number of channels. The mismatch will be highlighted in red.

Selecting **Rescan** re-reads the switch positions. Selecting **Rewrite** will store the switch positions again, thus creating a new reference between actual switch position and current computer data.