The First Mix Pass

Back to your first pass!

Before you put the Desk into play, note that both Large and Small Faders can be selected to Manual (no LEDs lit) by pressing individual fader status buttons (or using the FSM button on the front panel to toggle all faders). Manual status (for faders only) enables dynamic moves to be made without writing those moves to the mix pass. Also, the VCAs are bypassed in Manual.

Once the mix has started, pressing the status button on faders in Absolute will have no effect. If you press the button on a fader in Manual, it will switch to Absolute.

When a fader in Manual is switched to Absolute after the start of a mix, its current level will be written back to the start of the mix. Starting a mix with all faders in Manual, and with Overwrite selected, provides a great way to build up a basic mix – simply pop faders into Absolute when you are happy with the level. Note that when a fader is switched from Manual to write, it will always be forced into Absolute, whether in a new mix or in a subsequent pass, even if USE TRIM (see Page 5-31) is selected.

Now press PLAY to move forward, and begin writing mix information. The fader moves (and data written with respect to any other automated objects) will be held in RAM. An indication of the memory currently available is displayed in the Free Mem box below the Mix Pass list.

At any time you can stop mixing, rewind the system, and this will create a mix pass. As soon as you rewind, all automated objects switch to Replay (known as Play for switches – see Page 5-38). If you have selected Overwrite as the automation mode for faders and cuts, all your mix moves up to the first rollback point will have been saved in RAM and will play out as you move forward again. The fader levels and cut states at the point of rollback will be written to 23:59:59:24:(29). The mix pass start and end times will be shown in the Fr: and To: boxes above the Mix Pass list.

If you decide that the movements in your first pass are not worth keeping, hit Discard before you roll back; the faders will remain in Absolute. If you then roll back (the faders switch to Replay), hit the JOIN button (see Page 5-19) to get them back into Absolute at the right levels. Alternatively use the 'Pre Enable' snapshot as described on Page 5-79.

You can, of course, rollback as many times as you like, as you work your way through the track. Remember though, that each time you rollback (unless you simply play back and do not touch any controls), a new mix pass will be created. If you wish to play back from the start of the pass, simply either hit the appropriate TC1-5 button, or stab in the Fr: box, to locate the system to that point.

As you play forward again and reach the previous rollback point, any faders and cuts that have not been selected to a write status will continue to play the previous mix levels/states. Simply move a fader or press a switch to start writing new information. When you reach the final rollback point, ie. the mix To: time, all faders will drop into Absolute.
At any time, you may choose to name the current mix pass with the Name function (see Page 5-13). Having done so, note that this name, with a numbered suffix, is used for subsequent passes. If you name a pass which is not the current pass, that name will not be carried over to the next pass. Also, if you Revert to a previous pass, the name of that pass will be used for subsequent passes.

To write a static pass without playing through the entire track, simply take the tape machine off-line, and use the TC buttons to locate the Desk to the end of the track and back to the start.

Updating a Mix Pass

Once you are happy with the basic mix, select faders and cuts to Rollback/Join mode. This will mean that, as you update your basic mix pass, new dynamic mix data will only be written to the point of rollback. When you rewind and play through the rollback point, any previously active faders will automatically drop back into write.

If you are ready to write dynamic switch ‘moves’, ie. punching inserts in/out or flipping FX sends on/off, then also select these objects (Auxes) to Rollback/Join. If you are still experimenting, leave them in Static. See Page 5-38 for more on Switch Automation.

At this stage you have a choice of write status for the faders – Absolute or Trim. The choice is made by pressing the USE ABS or USE TRIM buttons on the front panel, or on-screen by selecting the Fader Status pop-up (see opposite) in the Automation menu and toggling the Use Abs/Use Trim box. If you want to make any faders or switches ‘safe’ at this stage, to avoid new moves being written accidentally, select them to Protect Replay (see Pages 5-57 and 5-61 for more details).

If you wish to rewrite fader moves completely, select USE ABS and touch the fader (for Large Faders in Motors On) or press the fader status button to write information. The red LED will indicate that the fader is in Absolute. If moves have already been written but are just generally too loud or quiet, use Trim. Select USE TRIM and touch the fader or press the fader status button as above. The green LED will indicate that the fader is in Trim status. Large Faders use their VCA signal path for Trim status in Motors On, to provide total control without destroying previously written moves.

You can set up a mixture of Absolute and Trim statuses by first pressing USE ABS and switching selected faders to Absolute with their fader status buttons. Then select USE TRIM and repeat the process for Trim faders.

When you use Trim status, the fader effectively becomes a gain control for any moves you have previously made. For example, if you have made some rides on a vocal and you decide that the actual rides are correct but you would like them all 2dB louder, you can put the fader into Trim and move it 2dB higher.

Note that faders in Trim will switch to Absolute when crossing the final active rollback point. In Motors On, a Trim fader will move to the actual mix level position as it switches to Absolute, so there is no change in level.
Insert Mixing

When it comes to updating mix data, the J Series Computer stores automation information in two separate 'streams' of data – one for 'absolute' mix data and one for 'trim' data. When you make a new pass of a mix in Trim fader status, you are listening to the new trim data added to the absolute data. Furthermore, the J Series system can update in one of two fundamentally different ways – Insert Mixing On or Off.

For those of you who were brought up on a diet of G Series software, the concept of Insert Mixing was introduced with G3.2 software, and the means to turn Insert Mixing On or Off was provided in the Mix Options setup menu. If you have not previously used a G Series mix system, or were unaware that this facility existed, the basic differences between Insert Mixing On and Off are as follows:

**Insert Mixing On** (up until recently the only option in J Series) – Dropping into write will either revise the current absolute pass and erase trims when in Absolute status, or trim the current absolute pass when in Trim status. Dropping back to Replay will return objects to the last pass level/state of the current mix pass (depending on the automation mode currently selected – Rollback, Static, Overwrite etc.).

**Insert Mixing Off** – Dropping into write will either revise the current absolute pass and erase trims when in Absolute status, or trim the currently loaded ‘Reference Mix’ when in Trim status. Dropping back to Replay, regardless of status, will return to the Reference Mix.

The Reference Mix is the last mix pass loaded from, or saved to, disk, and is displayed in the Reference Mix box (marked with a *) at the top of the Mix Pass list. The current pass can also become the Reference Mix by using the MAKE REFERENCE MIX button (which replaces the MERGE TRIM button used in earlier software). This combines the current Absolute and Trim data to make a new absolute pass, which in turn becomes the new Reference Mix.

Insert Mixing can be switched on or off from the front panel by means of the INSERT MIXING ON button (when lit, Insert Mixing is on). This function is replicated in the MIX-DESK/Automation/Fader Status pop-up (see opposite). A default setting can be saved in a Project under the ‘Desk Setup’ entry.

As with G Series, first mix passes in Absolute always use Insert Mixing On, and the INSERT MIXING ON button lights to show this.

**Switching Between Insert Mixing On and Off**

It’s possible to switch between Insert Mixing On and Off at any time, provided you have not made any updates since the last rollback – in other words provided the AUTO ON switch is not flashing. If you attempt to change modes when AUTO ON is flashing, the INSERT MIXING ON switch will flash and the system will remain in the current mode until you roll back and save the data in a mix pass.
Figures 1 through 5 illustrate Insert Mixing modes in Absolute status.

When you drop into Absolute, original Reference Mix moves are replaced by new moves; in Trim status, the most recent update of the Reference Mix becomes the source of moves being 'trimmed'.

When you drop back to Replay, by rolling back, dropping out on fader status buttons or using Snap/AutoGlide (see Page 5-49), which mix would you expect to replay? – the most recent update mix pass, or the original Reference Mix? (see Fig. 3).
Insert Mixing On always results in a return to the most recent Mix Pass (see Fig. 4).

![Diagram of Insert Mixing On](image)

**Fig. 4** Dropping Out With Insert Mixing On

Insert Mixing Off returns the system to playback of the Reference Mix. This is true regardless of the number of updates you make over the same spot (see Fig. 5).

![Diagram of Insert Mixing Off](image)

**Fig. 5** Dropping Out With Insert Mixing Off

Whenever a mix is saved to, or loaded from disk, or the MAKE REFERENCE MIX button is selected, a new Reference Mix is created. Subsequent update mixes are stored in the Mix Pass list; the Reference Mix remains unchanged.

The following example may help to define and explain the uses of each mode:

If a series of trim updates have been written to a lead vocal fader, to the point where everyone is reasonably happy with the results, it would be a good idea to save this Mix Pass to disk. Doing so will create a new Reference Mix.

With Insert Mixing On, you continue to make subtle level changes throughout the song then listen back to them, only to discover that you like the changes you made up to the end of the first chorus, but after that it went horribly wrong. Reverting to a previous pass will discard the moves you liked as well as those you didn’t.

By selecting Insert Mixing Off, dropping in on the lead vocal channel at the end of the first chorus and then immediately out again, the system will replay the moves of the Reference Mix from this point on, while retaining the updates you made up to that point.
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<td>DeskConfig</td>
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</table>
Insert Mixing and Trim

When using Trim as an update status, the moves being updated (or trimmed) are those of the last Absolute pass (Insert Mixing On) or the Reference Mix (Insert Mixing Off). To update existing trims, you must first either save the pass to disk or use the MAKE REFERENCE MIX function.

Small Fader Automation

To update mix data on the Small Fader, press the status button (ST), located just above the Match (M) and Play (P) buttons, and it will drop the fader into whichever status you have selected as the active write status (Absolute or Trim).

Since Small Fader automation is VCA-based, you will find the ‘SF MIX to meters’ function useful. This displays the Small Fader control voltage levels (computer output) on the console’s channel meters. A similar function (LF MIX) is provided for the Large Faders should you be working in Motors Off. SF MIX and LF MIX buttons can be found in the lower half of the audio centre section.

In addition, a toggling entry in the FILE/SETUP /Desk Setup menu (see opposite) determines whether the MIX-DESK /Faders display (see Page 5-59) displays input levels to the computer – Follow Faders, or the computer’s output levels returning to the console – Follow Output, ie. the equivalent of G Series bargraphs.

Immediate Pickup, Autotakeover (Page 5-51) and Level Match (Page 5-53) Mix Options are particularly useful for Small Fader automation.
Switch Automation

As previously discussed, the J Series Computer's switch automation system is totally independent of the fader automation, and even has dedicated status buttons, MATCH (M) and PLAY (P), located on each module above the Large Fader Solo and Cut buttons (see right). Between each pair of switches you will find the red Object 'REC' LED, which will light whenever switch data on that physical module is being written. The Group Faders in the centre of the console also have their own dedicated MATCH and PLAY buttons for the Group Solos and Cuts.

Automated switches have two possible statuses – Record and Replay. Note also that switch automation is subject to the effect of Automation Modes (see Page 5-15), and therefore Rollback Points (see Page 5-17). Furthermore, remember that switches may be subject to Switch Protection (see Page 5-61), Switch Groups (Page 5-75) and Hardware or Software Fader Groups (See Pages 5-5 and 5-67 respectively).

Recording Data

There are two possibilities when it comes to recording new data for the console's automated switches. The simplest is to press the switch, which changes the switch status from Replay to Record and illuminates the red REC LED on that module.

However, the action of pressing the switch also changes its state. For example, on a Large Fader which is already cut, pressing the Cut button will uncut it as well as putting the Cut into Record. Once in Record, all subsequent cut/uncut actions will be recorded, overwriting any previous switch data.

Note that while there is only one indicator for all the switches on each module, pressing an individual switch will only put that one switch into Record; all other switches will remain in Replay unless they are also pressed.

As an alternative to dropping in and changing the condition of a switch just by pressing it, selecting the MATCH (M) button and then the switch, will cause the switch to 'match' the current condition when going into (and remaining in) Record. For example, pressing MATCH (it lights up in yellow) while a Large fader is cut, and then pressing the Cut button will put the Cut into Record with the fader remaining cut (er............. matching! Got it?)

Note that MATCH itself has no effect on the automation data and, if pressed in error, can be pressed again to cancel without any detrimental effect.
In order to drop out of Record, pressing the PLAY (P) button (which lights up in green) primes the system to drop back into Replay of any previous data the moment you press a switch that is in Record. This will cause the state of the switch to match the existing automation data, for example changing from cut to uncut if the original data has the switch uncut at the moment you dropped out.

If only one switch on this particular module is in Record, the REC LED will go out; if other switches are also in Record, they will continue to record and the REC LED will remain lit. Either way, the PLAY button lamp will go out. Note that PLAY itself has no effect on the automation data, and if pressed in error, can be pressed again to cancel without any detrimental effect.

Perhaps you have more than one switch in Record on a particular module, and want them all to simultaneously drop back to Replay.......No problem, just press the PLAY button twice in quick succession, causing all switches to drop back into Replay of existing data.

**Revising Existing Data**

The above methods will allow you to write entirely new data for cuts and switches, as well as extending and appending existing data in a simple and logical fashion. In the following descriptions, the word ‘event’ is used to describe the action of changing the state of a switch from On to Off (or vice versa), and the period of time the switch remains in the new condition.

What if you want to delete a single event which falls in the midst of a whole series of other events, all occurring in quick succession? In such instances, selecting both MATCH and PLAY before dropping in, will result in the following:

Both buttons will illuminate. Pressing a switch will cause it to ‘match’ the current condition already in mix data and enter Record status. The MATCH lamp will go out and the PLAY lamp will flash, indicating that the switch will remain in Record until such time as the original automation data once again matches the state the switch was in when you dropped in. At this point the PLAY button will go out, the REC LED will go out, and the switch will flip automatically into Replay, thereby replacing the single event.

For example, a channel has a series of cuts, of which one uncut has been written in error. To overwrite one event without the risk of spoiling any subsequent data, prime both MATCH and PLAY before pressing the Cut. At the moment you wish the Cut to remain cut (instead of uncutting), press the Cut switch. Note that you can do this at any time after the cut that you want to extend has started to play through. The system will overwrite the original uncut command, and when the next cut command is remembered, that Cut will drop out of Record into Replay. All subsequent cuts/uncuts will remain unaltered.

An alternative method of editing switch automation data is provided by the Trim Mix facility (see Page 5-83).
Switch Automation and Insert Mixing

When applying switch automation, for example to a cut, Insert Mixing Off mode applies the same rules as for fader automation, but with one slight difference: switch automation only ever modifies the absolute data (there can be no trimming).

In Insert Mixing On, dropping out of record (either by manual use of the PLAY button, or automatically by using both MATCH and PLAY) will return the object to the current mix pass absolute state, and replay subsequent events.

When working in Insert Mixing Off, dropping out will cause the switch to match and replay data from the Reference Mix. Be aware that, when using both MATCH and PLAY buttons simultaneously (to overwrite a single event and then automatically drop back into replay), the system will monitor events from the Reference Mix and will return to replay of the Reference Mix after the next event.

Starting Again

If at any stage you decide to scrap the mix passes created so far, hit the CLEAR AUTO button on the front panel. If the automation system is enabled when you do this (ie. the AUTO ON button is lit), the entire desk will drop into Absolute, enabling you to begin mixing again straight away. Note that the same effect may be achieved by means of the MIX-DESK /Project /Settings /Clear function (see Section 2).

Each time that the automation system is enabled, a 'Pre-Enable' snapshot is taken of the levels (faders) and positions (switches) of all the console’s automated objects. You can always get back to where you started from by stabbing on the Do Pre box (next to the Enable box) in the Automation menu (see opposite). The same function is available by selecting MACRO LAYER 2 and pressing the DO PRE macro key (if SSL’s default set of macros is set up on your console). Once again, faders will switch to Absolute, ready for a new mix.
Saving Mixes

Remember that up to five mix passes may be held in RAM and, beyond use of the **Keep** function (see Page 5-13), you will soon reach a stage where you need to save your latest mix to hard disk. To do this, press the PROJECT SETTINGS button or select **MIX-DESK > Project > Settings** (see opposite). Select a tick for **Automation data** in the Save column and hit **Save**. To speed up the operation you can preset the **Save** tick and subsequently use the SAVE PROJECT button on the front panel. Note that this method also requires **Safe** to be deselected for ‘Automation data’.

Additionally, you can use the **Settings** pop-up **Auto** function which, if selected, automatically sets ready for saving with the SAVE PROJECT button, any Project elements that have changed since they were last saved.

Refer to Section 2 if you are uncertain about any of the above procedures. Note that the mix saved is always the last updated pass you made, i.e. the pass that is highlighted in green in the Mix Pass list. To save a mix pass that is not the current mix, use the **Revert** function to select the pass of your choice (see Page 5-13).

If you attempt to save a mix before rolling back, the system will force a rollback and so save the latest mix you have held in RAM.

When you save a mix, using either the SAVE PROJECT button, **Save** in the **Project** menu, or **Save** on the **Settings** pop-up, a **QWERTY** pop-up appears onto which you can type a mix name (see opposite). Note that the **QWERTY** pop-up will come up with the name that mix had in the Mix Pass list, but with the pass number incremented (i.e. **START 1** in the Mix Pass list becomes **START 2** on the **QWERTY**). Modify the name as required and hit **END** or **OK**.

The saved mix becomes the Reference Mix, and its name will appear in the Reference Mix box (see Page 5-13), highlighted in green to show that this is the mix you will be updating on your next pass.

Note that, when a mix is saved to disk, all the rollback points in that mix pass will be discarded. See Page 5-17 for more on Rollback Points.
### Info for Item: Automation data

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**Ask for Info when Saving**

**Edit Info**

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**FILE SETUP**

- Overview
- Edit
- Settings
- Info

**RECALL**

- Events
- Automation
- Load
- New Project

**MACHINES**

- SnapShots
- Groups
- Save
- Copy Project

**MISC**

- Faders
- Projects
- Clear
- Reminder
The saved mix name will also be displayed in the box directly underneath the Automation data entry in the Settings pop-up. To view a list of previously saved mixes, stab in this box and a Mix List pop-up will appear (see opposite). To change a mix name, hit Edit Info at the bottom of the pop-up and stab on the item you wish to rename. The QWERTY pop-up appears for entry of the new name.

Another option available here is the choice of whether or not the QWERTY pop-up appears when you save Automation data. Toggle the box on the bottom left of the Mix List pop-up to switch between No Info when Saving and Ask for Info when Saving. If you select No Info when Saving, the system either suffixes an existing name or increments an existing numerical value.

When you are happy with your latest mix, and want to lay it off onto DAT (or whatever), you may wish to select the Final Mix Safe box, above the Mix Pass list. This places the mix held in RAM into 'Protected Replay', and the touch sense function on the Large Faders is disabled. Both faders and switch objects are placed in Protected Replay status (see Fader Protection on Page 5-57).

Loading Mixes

Previously saved mixes can be loaded at a later date via the Settings pop-up. First of all, make sure you have selected the correct Project, if the mix is not stored with the Current Project. If you are not familiar with this procedure, please refer to Section 2.

Now hit the PROJECT SETTINGS button, or select Settings from the MIX-DESK /Project menu, and stab on the box beneath the Automation data entry. This will call up the Mix List for the currently selected Project (see opposite). Stab on the mix you require, and a prompt will confirm that the system is loading your mix. Once loaded, stab outside the list to close the window, and then stab outside the Settings pop-up to close that.

The loaded mix name will appear in the Reference Mix box (see Page 5-13) on the MIX-DESK display, highlighted in green to show that this is the mix you will be updating on your next pass. This name will then be used as the 'stem' name for the automatic numbering of subsequent passes. Mix passes from the previous mix are left in the Mix Pass list, allowing mixes to be quickly compared with one another by use of the Revert function (see Page 5-13).

Mix Data and Timecode Standards

The video sync and timecode standard that a mix was created with are saved as part of the ‘Automation data’ Project Settings file. When a mix is subsequently reloaded, if the saved video sync and timecode do not match the system’s current settings, you will be offered the option to have the mix data converted. Note that this message may simply indicate that you have the wrong timecode standard selected for that particular Project (see Section 3 for more on video sync and timecode standards).
Mix Options

In addition to the choice of Absolute and Trim write statuses, a number of other mix options are available via the **Fader Status** pop-up menu (see opposite).

To activate any of the following functions, you can either stab on the relevant box or press the appropriate hardware button located on the computer front panel (also see opposite).

**Fader Status Lock**
This feature allows the current selection of fader write statuses and Fader Status pop-up options to be stored, so that each time faders return to write, they will do so under the same conditions.

With FADER STATUS LOCK not selected, each time you put a fader into write, the Use Abs/Trim, Insert Mixing On/Off, Renull On/Off, Snap On/Off, Autoglide On/Off, Immediate Pickup On/Off, Autotakeover On/Off and Preview On/Off conditions (see below) are logged by the system.

When you turn FADER STATUS LOCK on, these conditions will be locked and replicated each time you return a fader to write. Note that, with FADER STATUS LOCK selected, you will be unable to select or deselect any of the above options either from the front panel or via **Status Lock** on the Fader Status pop-up. To modify the current store, turn FADER STATUS LOCK off, select the required options, and briefly switch a fader or faders to write under the new conditions. Now reselect FADER STATUS LOCK.

Note that this facility is not available in a first pass. Once set, the FADER STATUS LOCK store will remain across mix passes and even if you load a previous mix from disk. To clear the store, toggle the automation system off and on again with the AUTO ON button.

**Insert Mixing**
The effect of having Insert Mixing on or off is described on Page 5-33.

**Use Abs/Trim**
This provides the choice between Absolute and Trim write statuses. See Page 5-31 for more details.
Renull

This provides the option to have faders enter Trim from Replay, with or without a level jump. (G Series users will recognise this option as the difference between 'Join' and 'Revise'.)

With TRIM RENULL deselected, there will be a level jump which is the difference between the current absolute fader position and the replay mix level. For example, with a fader in Trim (the fader motors will be off), having rolled back you decide to drop the fader back into Trim before the rollback point. If the fader is in a different physical position to the written mix level then a level jump will occur when you punch into Trim. Note that the same effect will occur if you punch in to write after the rollback point. If you are still confused, try it for yourself – it's a lot easier to do than describe!

In Motors Off and with TRIM RENULL selected, when you punch into Trim with the fader status button, there will be a seamless transition into write.

Snap

When a Large Fader is in Replay (in Motors on), as soon as you touch the fader it will switch to the selected write mode. With SNAP selected, a fader will stay in the write mode as long as you are still touching the fader. Once you let go, the fader will jump back to its null point (its replay position) and resume playing back mix data. This is ideal where you need to make minor adjustments to a number of faders sequentially.

Autoglide

Allows the computer to move the fader back to the null point when you have finished writing. Select AUTOGLIDE, make your update and then, when you are ready to return to Replay (the null point), hit the fader's status button and the fader will 'glide' back to the correct position. With Autoglide selected, the Glide time can be set from 1 frame up to 250 or 300 frames (i.e. 10 seconds according to your timecode standard), by stabbing and dragging on the current value.

- With Snap and Autoglide both selected, releasing the fader will initiate a 'glide' back to the correct position.

AutoFade

This function, which affects the main mix bus outputs, can be used regardless of whether the automation system is turned on or not. Stab and drag in the time box to set the fade time between 1 and 60 seconds. Activate the fade by hitting the AUTOFADe button on the front panel. The button will flash when the fade is complete; hit it again to fade back up. Note that the Master Fader is inoperative while AUTOFADe is active and that the fade time cannot be modified during a fade.

- AutoGlide and AutoFade times are shown on the MIX-DESK display above the Status Bar (GL and AF - see opposite), as long as the automation system is enabled. These times can be altered from here by stabbing in the box and dragging on the numbers.
Immediate Pickup

This function is useful for Large Faders when you are working with the fader motors off, and simulates the touch sensitivity of moving faders. With IMMED PICKUP selected, moving the fader slightly will drop it into the currently selected write mode. Even when you are working with the motor faders on, Immediate Pickup can be used to intuitively drop Small Faders into write.

Autotakeover

This provides an indication of the direction you must move an update fader in a write mode, in order to return it to the null position. With the fader already in a write status, select AUTO T/OVER and make the update. Before you finish the move, press the fader’s status button and the status LEDs will flash to indicate the direction you need to move the fader to return to the null point. Flashing green indicates that you should move up, flashing red to move down. When you reach the null point, the LEDs will go out and the fader will drop back into Replay, the movement to the null point having been recorded as mix data. This feature will be well known to G Series users, and provides an alternative to Snap or Autoglide (see Page 5-49), when you wish to carry out a manually controlled (and stylish!) return to Replay.

- Note that, if Autoglide and Autotakeover are both selected, Autoglide takes priority.

Preview

With either Use Abs or Use Trim selected this enables fader levels (only) to be rehearsed on monitor without affecting the underlying mix data. The rehearsed levels can then be selectively written to the mix.

Having first selected PREVIEW, press the fader status button once or twice (depending on whether the fader is currently in Replay or Absolute/Trim), or in Motors On touch the fader knob to select Preview Absolute or Preview Trim. A slow flashing LED on the fader indicates the selection of a Preview status. A fader will remain in Preview, regardless of the amount of times a section is rehearsed, until the fader status button is pressed again to switch the fader to Absolute or Trim.

As with G Series, pressing the FSM button on the front panel will toggle all faders in a Preview status between ‘Preview On’ and ‘Preview Off’ mode, ie. the current fader level to monitor or the previous Mix Pass level. The Preview entry in the Fader Status pop-up indicates ON/OFF and this is also reflected by the PREVIEW button on the front panel – the lamp is on solid in Preview On and flashes in Preview Off.

With Preview mode selected, the first press of the JOIN button (see Page 5-19) puts Preview faders into write; any subsequent presses cause the next intermediate rollback point to be played out, as usual.
Make Ref Mix

With the J Series Computer, mix data is written in two automation streams – one for ‘absolute’ mix data and one for ‘trimmed’ mix data. When you make an update pass with faders selected to Trim, you are listening to the new trim data added to the absolute data. The absolute data may come from a previous pass made in Absolute or a previously saved Reference Mix.

When you roll back and make further trimming moves, you will still be trimming the absolute data, not adding new trims to the previously trimmed levels. Note that this is true whether you are working in Insert Mixing On or Insert Mixing Off mode (see Page 5-33). If you wish to add further trims to your last mix pass, press the MAKE REFERENCE MIX button (known as MERGE TRIM prior to v3.0 software). This will merge the trim data with the absolute data to create a new Reference Mix pass, and makes this pass current.

Alternatively, trim and absolute data will be automatically merged when a mix is saved to disk.

The merging action is graphically demonstrated in the Overview display (see Page 5-25).

Level Match

This option only has an application with Large Faders and Group Faders when the fader motors are turned off. It can, however, be extremely useful for Small Faders, or even the Master Fader, at any time. Level Match gives an indication of where a fader should be positioned to match the written mix information (i.e. the current null point), in order to avoid a level jump when switching from Replay to Absolute prior to a rewrite.

Select LEVEL MATCH and then press the status button on the relevant fader. The fader status LEDs will flash to indicate which direction to move the fader to find the null point – green for up and red for down. Alternatively, all faders may be switched into Level Match by hitting the FSM button on the front panel. (Note that you cannot return to ‘Local Fader Level Match’ by pressing the FSM button again.) Once you are lined up (both LEDs solid), turn off LEVEL MATCH and drop the fader into write without any nasty surprises from level jumps.

Always/New Pass – Play/New Pass

With previous software, the Mix Pass list only updated when new data was written with the system in Play. Any mix data created with a Join to Mix (see Page 5-91), Trim Mix (see Page 5-83), or by using the pen to locate in the Overview display (see Page 5-21), did not create a new mix pass – it simply held the data as part of the current mix. The user now has a choice to always create a new mix pass regardless of how the data was written (Always/New Pass) or to continue to use the system in the original manner (Play/New Pass). Toggle the box to select the mode. When Always/New Pass is selected, and a mix is created using Edit Mix (see Page 5-83), Offline Trim, (see Page 5-91), Join to Mix (see Page 5-91), Copy or Swap (see Page 5-95), the pass number 0-4 is changed to a single letter. This initial (E, O, J, C or S respectively) prefixes the mix name.
We recommend that **Always/New Pass** is used as the default setting for this option, in order that you never accidentally lose any data or the opportunity to revert to a previous pass, by combining a new modification with that existing data (as with **Play/New Pass**). There may be occasions, however, particularly with **Copy/Swap** (see Page 5-95), when you wish to repeat a procedure several times. In this case it would be better to select **Play/New Pass** in order to prevent the creation of a new mix pass after each operation, which may cause a previous pass to be forced from the Mix Pass list as it overflows. Remember that **Keep** (see Page 5-13) can be used to prevent this happening or, for total insurance, save the mix pass to disk before using **Edit Mix, Offline Trim, Join to Mix** etc.

The settings of the following items in the **Fader Status** pop-up are saved in the ‘Desk Setup’ element of a Project: Fader Status Lock On/Off, Insert Mixing On/Off, Use Abs/Trim, Renull On/Off, Snap On/Off, Autoglidle On/Off and Time, Autofade On/Off and Time, Immediate Pickup On/Off, Autotakeover On/Off, Preview On/Off and Always/New Pass – **Play/New Pass**.

### Fader Status Copy

This useful feature enables the current selection of fader statuses to be stored and recalled at a later stage.

At any time, select fader statuses as required, then press and hold the front panel **FADER STATUS COPY** button until it flashes. Now at any subsequent time, fader statuses and controls can be reset to the stored settings by a quick press of the **FADER STATUS COPY** button. The current status store can be cleared by turning the **AUTO ON** button off and on again.

Faders stored with a Preview status will be reset to their active status unless **Preview On** (see Page 5-51) is currently selected.
Fader Protection

Comprehensive facilities are available to select faders or objects to ‘protected’ modes so that valuable mix data is not overwritten accidentally. See Page 5-61 for Switch Protection.

Press the FADER PROT button on the front panel or select MIX-DESK /Automation /Fader Protection. This calls up the Fader Protection Modes pop-up (see opposite). There are three different modes available here, Automated (unprotected), Protected Manual and Protected Replay. Do not confuse Protected Manual with the Manual status for faders described on Page 5-29. Note also that the faders in the lower half of the Fader Protection pop-up simply act as a colour key to the different modes, and do not provide any active function.

To select individual Large or Small faders to the different modes, toggle the fader status key on the channel concerned. No LEDs lit indicates that the fader is in standard Automated mode. A red LED indicates Protected Manual – where new mix information cannot be written but moves made on that fader will be heard on the monitors. A green LED indicates that the fader is in Protected Replay – where no new information can be written to the mix, and moving the fader will have no effect on the monitoring.

Alternatively, you can assign any number of faders to protection modes by first toggling the grey box in the middle of the pop-up to the desired mode, and then selecting the Large, Small or Groups box on the left of the pop-up. Selecting Large or Small calls up the Channel Selector pop-up. Choose the faders you wish to protect (see Section 1 for instructions on how to use of this pop-up) and hit OK to confirm your choice. The LEDs on the faders you have protected will indicate the mode they are in. Selecting Groups calls up the Groups Selector, a similar but miniaturised version of the Channel Selector pop-up.

The FSM key can be used to toggle all faders through the various modes, subject to the Large, Small, Groups or Master boxes on the right of the pop-up being selected (blue).

When mixing, Protected Manual is a useful mode for selected Small Faders, where you want the audio to pass via the fader track (bypassing the VCA).

In Motors Off, when a fader is taken out of Protected Replay back to ‘Automated’, mode during a mix, its motor will be turned on so it can return to the correct automated position.

Deselect the FADER PROT button, hit OK (or stab outside the pop-up) to clear the Fader Protection Modes pop-up from the screen.

The MIX-DESK /Faders display provides an useful console-wide view of currently selected fader protection modes. See Page 5-59.

See over the page for some useful rules.....
To avoid any confusion as to what takes place when faders are switched between Protected Manual and Automated during a mix, here are a set of rules:

- For faders switching between Protected Manual and Automated, where no previous mix data exists for those faders:

  In all automation modes, when Large and Small Faders are switched between Protected Manual and Automated, the faders instantly switch to Absolute and the AUTO ON lamp will start to flash. Current levels are written back to 00:00:00:00, so locating backwards will not cause the faders to close. At the Mix To: time, if faders are in Rollback or Rollback/Join, they will drop back into write as expected. If faders are in Static or Overwrite they will stay in, or switch to, Replay.

- For faders switching between Protected Manual and Automated, where previous mix data does exist for those faders:

  In all automation modes, when Large and Small Faders are switched between Protected Manual and Automated, the faders will remain in position until you rollback. At this point they will move to the underlying mix levels. At the Mix To: time, if faders are in Rollback or Rollback/Join, they will drop back into write as expected. If faders are in Static or Overwrite they will stay in, or switch to, Replay.

The Faders Display

The MIX-DESK /Faders display (see opposite) will give you an overall view of the fader protection modes you have selected, according to the key at the foot of the Fader Protection Modes pop-up. Select FADERS followed by the FADER PROT button to view both displays together. Faders will be outlined in red if in Protected Manual, green if in Protected Replay and grey if Automated.

The Faders display indicates Large, Small, Group and Master Fader levels, Large, Small and Group Fader Cut states and Group Solos. An indication of Record Ready selection on the I/O modules is also provided, and if a Large Fader stalls, the fader knob (on this display only!) will turn green.

The display can also be used to write cuts (or even fader moves) on large consoles – from your secure position in the centre of the desk. Simply hit cuts or Group solos with the pen, or stab and drag faders. Note that you cannot adjust Small Fader levels from this display.

The FILE/SETUP /Desk Setup menu’s Follow Faders/Follow Output option affects fader levels on the Faders display. Follow Faders indicates the physical positions of all faders. Follow Output indicates the computer’s output levels, ie. the equivalent of G Series bargraphs. Note that the console’s meters, subject to selection of the LF MIX or SF MIX meter select buttons, will always show the true fader control voltage levels, ie. the computer output. This option must be set to Follow Faders if you wish to adjust Large and Group Fader levels from here.
Switch Protection

As with faders (see Page 5-57), automated switches also have their own set of protection modes. When you first start mixing, it's a good idea to set all the switches to Protected Manual (see below), so that as you intuitively switch EQs in/out, Aux Sends on/off etc, you do not write these switch actions to the mix. Remember, however, that Channel Cuts and Group Cuts/Solos are also automated, and you may not wish to protect the Channel Cuts for example, in the early stages of the mix. As the mix progresses, groups of switches or single objects can be taken out of the protection mode as and when you wish to automate them.

To access the switch protection facilities, press the SWITCH PROT button on the front panel or select Switch Protection from the MIX-DESK /Automation menu, and the pop-up shown opposite will appear.

The Display All function enables you to check current protection settings for the whole console. If you believe that objects have already been selected to one of the two protection modes, use Display All to determine which modes have been used on which objects. If this is the first time you have used Switch Protection, use Display All to give yourself an illuminated demo while you check that all the object lamps/LEDs are working!

With Automated selected in the box in the top centre of the pop-up, stabbing on Display All will light the lamps/LEDs of all objects currently selected to Automated mode. If you stab on the grey box, you can toggle the entire console through the three available modes – Automated (unprotected), Protected Manual, and Protected Replay. With the channels' Match (M) buttons lit, any object whose LED/lamp is lit will be in Protected Manual, ie. any changes to the switch state will be heard on monitor but will not be written to the mix. With the Play (P) buttons lit, any object whose LED/lamp is lit will be in Protected Replay, ie. changes to the switch state will be neither heard nor written to the mix (see Page 5-38 for more on Switch Automation).

There are three basic ways to select objects to a protected mode. Set Multiple should be used where you need to set up a large number of objects, for example, all the Aux On/Off switches at the start of a mix. Set Random can be used to set up a small but varied number of objects within easy reach. Set Single is useful where you need to select a single object at the far end of the console and don't want to leave your seat!
Set Multiple – Allows you to set up protection modes on different objects across the console. This applies to both channels and groups. Stab on Set Multiple and all the non-latching object LEDs/key caps will be lit. Stab on the Channels box and the Channel Selector pop-up will appear. Make your selections, as described in Section 1 of this manual, and then choose which objects you would like to protect – FX1-6, Insert, EQ, Cue, SF Cut and LF Cut, by selecting the appropriate box (blue), on the right of the pop-up. To protect Group Cuts and Solos, stab on the Groups box and the Groups Selector pop-up will appear. Make your selection and then select either Grp Cut or Grp Solo.

Now toggle to the protection mode you require (in the box at the top centre of the pop-up), and finally hit Do Multiple (this box only appears when Set Multiple is selected) to apply the protection.

Set Random – Use this for totally random selections. Stab on Set Random, toggle to the required protection mode, and then simply press the switches you wish to place in that mode. The associated LED/lamp will light to confirm the selection. Repeat the process if you want to have additional objects in the alternative protected mode.

Set Single – User this for single switches. Select Set Single and then press the switch that you wish to protect. Its LED/lamp will light and the name and number of that switch will appear in the box directly to the right of the Set Single box. If you continue to press the switch, it will toggle through the different protection modes.

If the switch is out of reach, stab on the switch identity box and a pop-up will appear (see opposite). To change the current channel number stab on the Channel 1 box and use the numerical pop-up. Use the same procedure to change to a different Group. Now, by stabbing on the list of objects to the right of the pop-up, select (red) the switch you wish to assign to a protection mode. Note that these selections intercancel. Having made your choice, hit OK. Finally, select the protection mode as above, by stabbing in the box in the top centre of the Switch Protection pop-up.

Clear the Switch Protection pop-up by stabbing outside it or by deselecting the SWITCH PROT button.
To avoid any confusion as to what takes place when objects are switched from **Protected Manual** to **Automated** during a mix, here are a set of rules:

- Objects switching from Protected Manual to Automated, where no previous mix data exists for those objects:
  
  (a) If the objects were **on** before AUTO ON was enabled, when you switch from **Protected Manual** to **Automated** they will write their current state from zero to 23:59:59:24(.29).
  
  (b) If the objects were **off** before AUTO ON was enabled, and you switch them on at say 1 minute into the mix, then switch from **Protected Manual** to **Automated** before 1 minute, the objects will remain off and then turn on at 1 minute.

Note that, if you hit **Discard** during the first pass, and objects are currently in write, the LED will go out but the objects state at that point will be automatically written to 23:59:59:24(.29).

- Objects switching from Protected Manual to Automated, where previous mix data does exist for those objects:
  
  (a) If the objects were **on** before AUTO ON was enabled, when you switch from **Protected Manual** to **Automated** they will write their current state from zero to 23:59:59:24(.29).
  
  (b) If the switches were **off** during the first few passes, when you turn them on and decide to switch between **Protected Manual** and **Automated**, they will turn off – effectively switching to Replay:

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Software Groups

In addition to the eight Hardware Group faders in the centre of the console, and the Switch Group facility (see Page 5-75), the J Series Computer provides 32 Software Groups which can be used in or out of an automated mix.

Software Groups allow the free grouping of any fader to any other fader (large or small) on the console. Note, however, that while the master fader of a Software Group can be part of a Hardware Group, slave faders in a Hardware Group (including Group 0) cannot be slaves in a Software Group. Large faders may not be incorporated in a Software Group unless the group assignment display on the fader is blank. Cuts can be incorporated in a Switch Group at the same time as being part of a Software Group.

When used in an automated mix, Software Groups work primarily on the monitor side of the mix system. That is, you hear the effect of the grouping, but mix data is only written for the group master. Data for the slave faders can be written into the mix by using a ‘Merge & Dissolve’ function (more on this later). Once data has been written for the slaves, and the group has been dissolved, editing of fader information can be carried out in exactly the same way as if the data had been written on the slave faders themselves, and slave faders can be re-assigned to any other Hardware or Software Group.

Software Group information can be saved and recalled as part of the current Project under ‘Hard & Soft Groups’ (see Section 2).

Slave Types

The behaviour of a slave (in response to changes made to the group’s master) is determined by its slave type. Note that behaviour types relate only to slaves, leaving the master unaffected. Once a fader becomes part of a Slave Fader type group (see below), its level is adjusted relative to the master position about the 0dB mark on the fader scale, exactly in the same way as for Hardware Groups.

Each slave in a group can be one of five types, and groups may contain slaves of mixed types.

Hit the SOFT GROUP SETUP button on the front panel or select Soft Groups from the MIX-DESK /Groups menu. This calls up the Soft Group Setup pop-up (see opposite). When you call up the pop-up for the first time, Group 1 will be selected by default. In the lower left corner of the pop-up you will see a series of Master/Slave Types boxes:

- Slave Fader and Cut
- Slave Fader Only
- Slave Cut Only
- Slave Cut Inverted
- Slave Status Only

The Slave follows the Master’s level and Cut selection
The Slave follows the Master’s level only
The Slave follows the Master Cut only
The Slave Cut is inverted with respect to the Master Cut
The Slave follows the fader’s automation status of the Master

The front panel’s up/down cursor keys can be used to toggle between slave type selections. See Page 5-69 for details on One of ‘n’ Uncut.
Creating a Group

To create a Software Group, press the fader status button of the fader you wish to be master. You will see a message appear under the Group number on screen indicating that 'Master of Group is Channel X LF/SF'. The fader’s red LED will come on to confirm your choice. Should you make a mistake, pressing the status button again will deselect the fader and the LED will go off. Select another fader status button to make that fader the master.

Now press the fader status button of the first slave. Its green LED will come on to confirm that it has been selected as a slave. Repeat the process for further slaves. To deselect a slave from the group, simply press the status button again.

Note that slaves will be of the type currently selected in the Master/Slave Types menu. If you want to change a slave to a different type, first deselect it from the group. Now simply change the type by pressing the front panel’s up/down cursor keys or by stabbing on one of the other options, then reselect the slave to the group. To select a sequential range of faders as slaves, simply hold down the fader status button of the first and press the button on the last. The same procedure can also be used to deselect a range of faders.

Once slaves have been assigned to a master, all slaves must be cleared from that group before the master can be deselected.

You have now set up your first group – easy, isn’t it! To create additional groups, use the front panel’s left/right cursor keys to select the next group number you wish to use. The LEDs on the group you have just set up will start flashing to show that those faders belong to another group, and cannot be incorporated into a new one. Solid LEDs always show the slave and master selections of the current group. Flashing LEDs show the master(s) and slaves of all the other existing groups.

An additional type of group is shown under Collection Types, and offers a smarter version of Slave Cut Inverted – called One of ‘n’ Uncut (see lower screen opposite). Note that this is not included under Master/Slave Types as there is no absolute master in this type of group. Select One of ‘n’ Uncut and create your group as normal. If you now press any Cut within the group, it will uncut that Cut and cut all others. Yay!