



Avolites Pearl 2000
Software Release Notes
September 2000

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9000*

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1. INTRODUCTION

This document provides a list of the new features and enhancements in the Pearl 2000 September 2000 SP1.1 software as well as detailed instructions on how to upgrade. This document is intended for users who are already familiar with the Pearl layout. If you do require further information, then please send an Email to Shahid@avolites.com

To carry out the software upgrade you will need a program disk. Click <http://www.avolites.demon.co.uk/software/prog/prl92000.exe> to download the program Disk.

To make a program disk:

1. On a PC, execute the downloaded file.
2. Insert a blank 1.4MB formatted disk and click on Unzip.
3. Label the disk "Pearl 2000 SP1.1 Sep 18 2000"

Program disk contents:

- prlflash.dat Main program file.
- Ram2000.prl AVOS Pearl 2000 +R50 Sep 18 2000
- aps.cmp The full personality database in one file.
- P2000per.cmp Built-in personality cache file
- P2000.doc The release notes.

2. System Requirements

The Pearl 2000 September 2000 SP1.1 software is designed for a Pearl desk, which meets the following specification:

1. AVOS Pearl 2000 +R50 Sep 18 2000 installed. Refer to section 3.2
2. Extended memory fitted.
To check for extended memory. In SYSTEM, press [A] SERVICE, [D] TESTS, [D] MEMORY CHECK.
3. Midi upgrade. This applies to Pearl 1000 desks fitted with a Borris 1 motherboard
4. VGA card installed

3. HOW TO UPGRADE

Before installing check that your desk meets the System Requirements, see section 2 and make sure that you have backed up your show, because you will be required to carry out a WIPEALL afterwards. To carry out the upgrade, follow the instructions from section 3.1 onwards. Here is a to do list

- Check the AVOS and upgrade to Pearl 2000 +R50 Sep 18 2000, if necessary
- Upgrade the main software
- Execute a Wipeall
- Load the built in personality files
- Import your show disk.

3.1 How to ENTER the AVOS SYSTEM

You will need to ENTER the AVOS menu in order to install new software.

To enter AVOS:

- In SYSTEM mode press [A] SERVICE then press [A] RUN AVOS. Type in 68340 then hit [ENTER].
- Alternatively,
- If the desk will not respond. Power OFF the desk and lift the lid after undoing the 5 retaining screws. Place a jumper on the end link in the group of 8 links in the centre of the Borris motherboard. Switch ON the desk.

The AVOS menu will appear on the LCD screen and if the correct AVOS is installed the top line will be: - 'Pearl 2000 +R50 Sep 18 2000'. If the date is earlier than this or Pearl 2000 is not indicated then you will need to upgrade the AVOS by following the instructions in section 3.3, otherwise process directly to section 3.2

3.2 How to upgrade the AVOS to Pearl 2000 from version 1.7

1. Copy the file called ram.prl from the program disk to a 720k formatted disk. If a 1.4Mb disk is the only disk that is available then this can be formatted to 720k by first placing some opaque tape over the disk density marker, this is the second hole at the lower end of the disk.
2. Insert the 720k disk into the Pearl disk drive and in the AVOS menu, select the option called AVOS EXTENDER.
3. Wait about 10 seconds for the AVOS to be loaded.
4. The desk will automatically reset and re-enter AVOS, if this does not occur then follow the instructions in section 3.1
5. You have now Pearl 2000 August 98 AVOS installed. To complete the AVOS upgrade, proceed to section 3.4.

3.3 How to install the August 1999 AVOS

ENTER the AVOS menu (see above). Note if the message on the top line of the LCD screen reads 'Pearl 2000 Aug 05 1999' then you do not need to upgrade the AVOS, proceed directly to section 3.4. NOTE that the AVOS upgrade that is supplied on the program disk is for upgrading from an existing Pearl 2000 AVOS. If the AVOS

installed in the desk is not Pearl 2000 or it is v1.7 then you must first upgrade to the Pearl 2000 AVOS, see section 3.2

1. Insert the program disk in the drive and press [E] AVOS Extender
2. Hit [ENTER] when prompted and wait about 10 seconds.
3. After loading the new AVOS the desk will reset. If the desk does not re-enter AVOS then follow the instructions in section 3.1. The top line should now read 'Pearl 2000 Aug 05 1999'. Proceed to section 3.4

3.4 How to install the Pearl 2000 +R50 Sep 18 2000 AVOS

ENTER the AVOS menu (see above). Note if the message on the top line of the LCD screen reads 'Pearl 2000 +R50 Sep 18 2000' then you do not need to upgrade the AVOS, proceed directly to section 3.5. NOTE that the AVOS upgrade that is supplied on the program disk is for upgrading from an existing Pearl 2000 AVOS. If the AVOS installed in the desk is not Pearl 2000 or it is v1.7 then you must first upgrade to the Pearl 2000 AVOS, see section 3.2

4. Insert the program disk in the drive and press [E] AVOS Extender
5. Hit [ENTER] when prompted and wait about 10 seconds.
6. After loading the new AVOS the desk will reset. If the desk does not re-enter AVOS then follow the instructions in section 3.1. The top line should now read 'Pearl 2000 +R50 Sep 18 2000'. Proceed to section 3.5

3.5 How to install the Pearl 2000 Sep 2000 Software

1. Make a backup of your show.
2. ENTER the AVOS menu, see section 3.1
3. Insert a blank 1.4Mb Disk and press [D] Save program. Keep this disk safe and use it to reload your original program should there be a problem with the upgrade.
4. Insert the program disk and press [B] Burn a New Program
5. Hit [ENTER] when prompted and wait until the message "100% Completed" appears. If the progress indicator stops short of 100% then there is a problem with the disk. You must recreate the program disk, but first format the disk, if possible format the disk in the desk.
6. Press [EXIT], then [A] Start the System. At this point the desk might lock up, if this happens then you will need to carry out a Hard WIPEALL, see section 3.6
7. Otherwise carry out a soft WIPEALL. Proceed to section 3.7.

3.6 How to carry out a Hard WIPEALL

You will need to do this if the desk does not respond after upgrading. Otherwise carry out a soft Wipeall, see section 3.7

1. Switch OFF the desk
2. Lift up the top panel after undoing the 2 screws.
3. Place a jumper on 2 legs of the Wipeall link.
4. Wait until the desk has properly initialised (about 10 seconds max) and then switch OFF the desk.

5. Replace the jumper onto one leg of the link, close the lid and tighten the screws by turning one-quarter turn clockwise.
6. Power ON the desk and reload your show from your backup disks.
7. Proceed to section 3.8

3.7 How to carry out a Soft WIPEALL

You will need to carry out a Wipeall after loading the new software.

1. Turn the keyswitch to SYSTEM
2. Press [A] SERVICE
3. Press [F], twice and wait for the Pearl to reset.

3.8 How to cache the built-in personality files

The built-in personality file will have to be re-loaded after upgrading the software. To do this:

1. Turn the Keyswitch to SYSTEM
2. Press [E] UTILITIES MENU
3. Insert the program disk
4. Press [D] Cache Personality Files. During this operation please disconnect all MIDI devices connected to the desk.
5. Wait for the file to be loaded (Cached) and then CHECKED. This will take about 3 minutes.
6. When the message "Personality Files successfully cached, Hit <EXIT>" appears, hit [EXIT]. If the message does not appear or the desk freezes, you will have to remake the program disk and repeat the process from step 1.

4. What's NEW in the Pearl 2000 September 2000 Software

The September 2000 software is based on the March 2000 software but with the following differences

4.1 Improvements

1. Supports the HR III Tablet
2. Supports the New Dallas Clock chip
3. Support for the ST9 R50
4. Format and Save now works correctly
5. There is now a warning message to warn the user when an attempt is made to patch a dimmer over a fixture.
6. Record by Channel/Fixture option in the AVOLITES menu
7. Memories no longer flash on the stage when memories are copied in Program mode and Takeover mode is selected.
8. Record Stage can now be used without problem in the Chase Record Menu

9. It is now possible to define and patch a fixture with more than 30 attributes
10. It is now possible to record into a memory a fixture with more than 30 attributes.
11. When converting a Simple chase step to a complex chase step, Autoload function is no longer assigned to the new step, previously this was unintentionally done and would cause problems when the step was executed. Autoloads are now only available in the Theatre Stack
12. It is now not possible to trigger an Autoload from a chase step. Because of the problem in item 11 above, it was previously possible to create an Autoload for a chase step, when the Autoload was subsequently executed the desk would crash.
13. The playback LED sometimes continues to blink after a timed memory has unloaded. This is now fixed.
14. The patch now no longer disappears after importing a show disk created on a Pearl fitted with Nov 98 software.
15. If the DMX processor stops working, then a small 'T' will appear on the LCD display.
16. Channels used in the previous step of a chase are now switched OFF before the next step is loaded. This prevents the fixtures from 'blinking or jumping' after the fade has finished.
17. It is now possible to delete preset focus 12 when the Theatre stack is active.
18. The playback faders 13 to 15 can now be used to manually fade a Theatre Stack. Previously the desk would cease if a chase was connected and manual mode was used.
19. Autoloads from a theatre stack now take the highest priority such that if a fixture is used both in the step that launches the Autoload and in the Autoload itself, then the fixture control will be assigned to the Autoload.
20. Sometimes the desk would cease for no apparent reason, especially after a heavy programming session, the cause was pinned down to an internal function, which copies a block of memory from one location to another. The maximum size of the block was limited to 16-bits, this limit has now been removed and so this particular problem will not occur.
21. The aps.cmp file is the database of personality files in compressed form and has an internal limit of 350. There are now over 400 personality files in our database and so I decided to increase this limit to 1000 personality files. Please use this file in place of the fully expanded personality files, the aps.cmp file compresses the full database to about the size of a peanut and requires a lot less effort to transport over the Internet and can fit on one disk. The same file can also be used with the Sapphire 2000 and Azure 2000.
22. The desk can sometimes cease if there is no QWERTY keyboard plugged in. This only applies to Pearl desks fitted with a Borris motherboard. This is now fixed.

23. The desk can sometimes cease with TF on the internal red display. This problem would normally occur on power up and previously the only solution was a wipeall. I know that we have had more than one attempt to fix this problem, but now there is a new fix in place and I am about 99.9% certain that the problem will not occur.

5. What's NEW in the Pearl 2000 March 2000 Software

The March 2000 software is based on the November 1999 software. This is a list of the differences

5.1 Bugs

1. Azure 2000 and Sapphire 2000 show disk import. Both Preset Focuses and Shapes in memories are now properly imported.
2. Macro playback stops desk functions. A chase or shape will not now be interrupted when a Macro is executed
3. In PROGRAM Mode, if the AVOLITES Key is pressed while the USER Menu is on Display, then the menu display becomes corrupted. Fixed.
4. DMX lines 2 and 3 stop working when a show disk is loaded into a Borris 1 desk from a Borris 2 desk, or vice versa. The Pearl will detect and prompt the user if this occurs, an option is presented to correct DMX lines 2 and 3.
5. The Flash button response slows in proportion with the number of memories programmed. This has now been fixed.

5.2 New Peripherals now supported

6. Genius HR III Graphics tablet.
7. Avance Logic VDU card.

5.3 New functions

1. When a shape memory is taken out, the shape offset will be removed, this is now the default for new memories. To keep the offset, see option [E] in the Shape Parameters Menu.
2. Fader values in the diagnostic screen are Grandmaster independent
3. xFREE beside the free memory percentage display indicates the presence of Extended memory
4. Set DMX lines to default settings, see option [F] in the PATCH UTILITIES Menu.
5. A delay of ½ Second on start up has been inserted to improve the start up reliability.

6. What's NEW in the Pearl 2000 November 1999 Software

6.1 More Dimmers and Fixtures

In the previous software the limit was 120 Fixtures or 240 Dimmers, now it is any combination of 240 Fixtures or dimmers. Also, there are now 200 focuses and 200 groups; this is to provide compatibility with the Azure and the Sapphire.

6.2 Theatre Functions

A brand new Theatre Programming section has been developed.

See section 9

6.3 AVOLITES menu.

This menu is accessed when the AVOLITES key is held. When released the menu exits.

The following options are available in the AVOLITES menu

[A] Preset LED's =

- **FIXTURES** – The Preset LED's indicate selected fixtures. To view fixtures 31 to 60, press and hold the AVOLITES key.
- **MIMICS** – The Preset LED's indicate the intensity of the first 30 Fixtures or Dimmers on the current fixture page.

[B] **CHASE Control Buttons** – The lower row of sequence control buttons can be used to control a sequence or to control fixture selection as follows

- **CHASE CONTROL ENABLED** –

← Run a chase backwards (decrement chase steps)

→ Run a chase forwards

REVIEW Review the last recorded step.

BOUNCE Run a chase forwards then backwards.

- **FIXTURE CONTROL ENABLED**

← Select the previous fixture or Dimmer

→ Select the Next fixture or Dimmer

REVIEW Load fixtures from the Programmer into the Editor.

BOUNCE Toggle highlight (LED on means highlight is ON).

NOTE If FIXTURE CONTROL is ENABLED then the cursor keys, which are normally used to select next/last fixtures, are instead made available for screen control.

[C] **USER SETTINGS** – Access to the user settings menu is available either from here or from Softkey [C] in SYSTEM mode.

6.4 New VDU screens

Stage view - There are now two types of stage view screens.

8. Stage view Intensity.
9. Stage View Intensity and attributes.

- Use the right cursor key to change from the intensity view to the fixture view. In the fixture view, use the up down cursor keys to view fixtures in groups of 10.
- Use the left cursor key to change from the fixture view back to intensity view.

NOTE that the cursor keys cannot be used for screen control unless the Sequence control keys are assigned to fixture selection, or there are no selected fixtures in the programmer.

Shape - Up to fifteen shapes can be viewed in this screen

Script File – When the script files are on the LCD screen, the VDU screen also changes to the script file view. This can be a problem if you wish to change the view on the VDU, to get around this first change the LCD screen to channel output.

6.5 Takeover after GO

When a Sequence GO is actuated, fixtures owned by other playbacks can be **taken over** by the Sequence playback provided TAKEOVER AFTER GO is ENABLED, see option [E] in the second CHASE PARAMETERS Menu. This is the default and only option for a Theatre stack.

Note that if takeover GO is enabled then fixtures will be released from the programmer but only in Run Mode Takeover.

6.6 Enhanced script files

- Copy script files.
In the Script file Parameters menu, press [PHOTOCOPY] and follow the instructions on the Prompt line.
- Copy/Cut/Paste a single or multiple steps within the same script file or to another script file. In the EDIT SCRIPT FILE menu, press [INSERT] and follow the instructions on the prompt line.
- Theatre stack GO
A Theatre stack GO can be recorded as a script file action, by hitting GO while creating a script file. This means that the theatre stack can be controlled from MIDI time code or from the 24-hour clock.
Note that during the script file programming of a Theatre stack please make sure to set to zero all playbacks, which are to be used for Theatre stack auto-loads, otherwise the auto-load will be recorded as a separate step.
- The 24-hour clock can be used to drive the script file.
In the SELECT A TIMER SOURCE menu, select option [C] CLOCK TIMECODE.

6.7 Disk import from the Azure 2000 and the Sapphire 2000

6.7.1 Azure show disk import details:

- **DMX patch** - This is unchanged.
- **Fixture/Dimmer Patch**

On the Azure there are up to 200 Dimmers and 200 Fixtures while on the Pearl there are 240 Dimmers or Fixtures.

The first 240 fixtures or dimmers patched will be imported. The fixtures are assigned first starting from handle 1 and dimmers are assigned on the remaining handles. Additional fixtures or dimmers are discarded.

- **Playbacks**

For each Roller (1 to 3) and each Page (A to J) on the Pearl, the memories and chases are mapped from the 50 Azure playbacks as follows (in this example page A is shown)

41 Roller.3 A 11	42 Roller.3 A 12	43 Roller.3 A 13	44 Roller.3 A 14	45 Roller.3 A 15	46 Discarde d	47 Discarde d	48 Discarde d	49 Discarde d	50 Discarde d
31 Roller.3 A 1	32 Roller.3 A2	33 Roller.3 A3	34 Roller.3 A4	35 Roller.3 A5	36 Roller.3 A6	37 Roller.3 A7	38 Roller.3 A8	39 Roller.3 A9	40 Roller.3 A10
21 Roller.2 A6	22 Roller.2 A7	23 Roller.2 A8	24 Roller.2 A9	25 Roller.2 A10	26 Roller.2 A 11	27 Roller.2 A 12	28 Roller.2 A 13	29 Roller.2 A 14	30 Roller.2 A 15
11 Roller.1 A 11	12 Roller.1 A 12	13 Roller.1 A 13	14 Roller.1 A 14	15 Roller.1 A 15	16 Roller.2 A 1	17 Roller.2 A2	18 Roller.2 A3	19 Roller.2 A4	20 Roller.2 A5
1 Roller.1 A 1	2 Roller.1 A2	3 Roller.1 A3	4 Roller.1 A4	5 Roller.1 A5	6 Roller.1 A6	7 Roller.1 A7	8 Roller.1 A8	9 Roller.1 A9	10 Roller.1 A10

- **Preset focuses**

Pearl Focus (1-200)	Azure Palettes (10 pages, 20 Focuses per page)
Preset Add keys 1 to 20	Page 1, 1 to 20
Preset Add keys 21 to 30	Page 2, 1 to 10
31-200 Numeric selection	Page 2, 11 to 20 through to Page 10

- **Script file** – All 99 script files are imported.
- **Theatre stack** – The theatre stack is fully imported, however theatre stack control is moved to playback 12,13,14 & 15 and any Autoload, which is programmed to load onto playback 12 to 50, will be ignored.

6.7.2 Sapphire 2000 show import details:

- **DMX patch** – This is unchanged
- **Fixtures and Dimmers**
The first 240 dimmers or fixtures patched are imported, starting the search from Sapphire handle 1 and proceeding to 400.
- **Memories and chases**

The first 15 playbacks on the Sapphire are mapped to the 15 playbacks on the Pearl. Memories 16-20 on the Sapphire will be discarded. On the Sapphire there are 100 pages whereas on the Pearl there are 30 pages by 10 pages, so only the first 30 pages will be imported.

- **Script file** – All 99 script files are imported.
- **Theatre stack** – The theatre stack is fully imported, however theatre stack control is moved to playback 12,13,14 & 15 and any Auto-loads, which are programmed to load onto playback 12 to 20, will be ignored.

- **Preset focuses**

Sapphire Focuses (1-200)	Pearl Preset focuses
1 to 30	1 to 30 on the Preset Add keys
31 to 200	There are only available by numeric selection

6.8 **IMPORT the Visualiser Patch**

The Visualiser is a PC based moving lights & dimmers simulation tool. It provides invaluable assistance in the creation of a show and we highly recommend it. To order one please send an email to may@avolites.com

This function allows the desk to be automatically patched to the same selection of Fixtures and Dimmers as on the Visualiser with the added benefit of automatic fixture calibration.

On the Visualiser select [File] followed by [Export Report] and save the file to a floppy disk.

Plug the disk into the Pearl and execute [WIPEALL] then in PROGRAM Mode select [DISK], [G] LOAD, THE VISUALISER, CSV FILE.

6.9 **Visualiser interface**

The MIDI port on the Pearl can be used to connect the desk to the PC COM port. This port can then be used to exchange information between the desk and the Visualiser on the PC.

Using this method opens up the following functions

- The 4 DMX lines are sent to the Visualiser in a compressed form.
- Fixtures selected on the desk are shown in blue on the Visualiser screen
- Preview a memory, a chase step or a theatre stack step.
- Import the Visualiser patch file.

6.10 DMX in

This can be used to snapshot memories from another console.

To use, press [INCLUDE] followed by Softkey [A], [B], [C] or [D] to load the data from the DMX-in port into the programmer. The fixtures patched on the selected DMX line will be loaded with data from the DMX-in port and placed in the programmer.

6.11 Millennium Date compliance

The day of the week is now correctly computed in the years 2000 onwards.

To view the Y2K compliance certificate you should visit the Avolites web site, then go to the software download pages and retrieve the Y2K document.

6.12 Shape Offset

The Shape offset is normally left behind when a shape memory is taken out. To make it so that the shape offset is removed with the memory:

1. Select option [G] SHAPE GENERATOR in PROGRAM mode
2. Select option [G] PLAYBACK PARAMETERS
3. Press the playback SWOP for a shape memory.
4. Press [E] TOGGLE SHAPE OFFSET so that SHAPE OFFSET REMOVED appears in the main view.

6.13 Release notes display

The built-in release notes are displayed whenever the desk is switched ON. Hit [ENTER] to disable the release notes screen. Once disabled the release notes may be viewed at any time in SYSTEM by pressing [F] VIEW RELEASE NOTES.

NOTE that when the release notes are on view, the OK wheel, on the red 4-character display, stops rotating even though the desk is operating normally

7. Record Options explained

The record options are used when recording from new or updating, the scene or 'look', in -

- A memory
- A chase step
- A theatre stack step

Note the same effect is achieved whether the Program is in LIVE or in BLIND mode.

7.1 Record by CHANNEL

7.1.1 New Scene

For all of the fixtures that are in the programmer, only those channels will be saved which are also in the programmer.

7.1.2 Updating a Scene

For all of the fixtures that are in the programmer, only those channels will be saved which are also in the programmer.

7.2 Record by FIXTURE

7.2.1 New Scene

All of the fixtures and channels, in the programmer, will be saved.

If a fixture is present in the programmer but some or all of its channels are not, then these channels will be taken from the stage.

7.2.2 Updating a Scene

All of the fixtures and channels, in the programmer, will be saved.

If a fixture is present in the programmer but some or all of its channels are not, then these channels will be taken from the stage, but only if

1. The channels are not already in the scene.

Or

2. The channels are in the scene but are recorded as absolute values i.e. not preset focuses. This exception is here to protect against the accidental overwrite of preset focuses, however, please note that the other channels in the scene will be overwritten, so to avoid this make sure that the scene to be updated is on the stage, alternatively set the Record mode to Channel.

7.3 Record by STAGE

All of the fixtures and channels, in the programmer, will be saved. Also, those fixtures not in the programmer but for which the intensity channel is ON on the stage will be saved.

Further, the Record by Fixture rule is used when recording from new or when updating a scene.

8. Other fixes & enhancements

- The Preset ADD keys are no longer available for patching dimmers. Always use the Preset SWOP keys to patch or to select, Dimmers and Fixtures. Press and hold the AVOLITES key then press a preset SWOP to access Dimmers or Fixtures in the range 31 to 60 from the current fixture page.
- On the LCD CHANNEL OUTPUT SCREEN, the intensity for the 60 preset faders on the current fixture page is shown in the Dimmer attribute bank. In the other Attribute banks, the Wheel A and Wheel B attributes are shown for fixtures 1 to 30. To view the attributes for fixtures 31 to 60 press the Fixture page key a second time, the LED will flash to indicate that fixtures 31 to 60 are on view.

- Disk Drive number 1 now supported. This only affects New Pearl desks, but it does mean that if a disk drive fails, it is possible to purchase one from a PC vendor and just plug it in. Note that in order to be able to do this the AVOS must have been upgraded to August 99, before the disk drive is changed.
- USER SETTINGS moved to SYSTEM mode Softkey [C]. The user Settings are also available in the AVOLITES menu.
- QWERTY problem fixed. Previously, if the QWERTY keyboard was not plugged-in then sometimes the desk would freeze.
- The personality files are now supplied as one compressed file called aps.cmp. This is useful because the fully expanded personality file database is much larger than the capacity of one disk. The fully expanded personality database can be downloaded from our web site.
- Removed Theatre Mode from the user settings and from the Chase Record menu. This function has now been replaced with the Theatre Stack, see section 9
- The Midi port can now be used to connect the Pearl with the Visualiser. Set User setting 15 to Visualiser.
- Cursor keys are made available for screen control if
 - There are no fixtures selected, or
 - FIXTURE CONTROL is enabled, see section 6.3.
- Remote Control enhancements. The remote control functions now work on the full range of Dimmers and Fixtures.
- CALCULATOR improved. Also, no longer causes a bus error on divide by zero.
- Memory Check progress indicator now displayed on both the LCD screen and the VDU monitor.
- User setting 17 can be used to specify the number of bits of Pan and Tilt control in the range 9 to 16 bits.
- When Sound to light chases are active, fixture control off the wheels is inhibited. This problem while still present can be overcome by disconnecting the chase. To do this hit the [CONNECT] button twice.

9. Theatre Stack

A totally new theatre programming and playback section has been developed for the Pearl. This is referred to as Theatre Stack Programming or Theatre Mode. See section 9.2 on how to ENTER Theatre Stack Programming.

NOTE: When Theatre Mode is active you should be aware that:

1. There is no access to any memories programmed on playbacks 12,13,14 and 15 (on any page).
2. Chase Auto-Connect is disabled
3. Run Mode NORMAL is inhibited.

9.1 Theatre stack playback Faders.

The Theatre stack takes over playback Faders 12,13,14 and 15.

Fader 12 is the Intensity master.

Fader 13 is the manual control for the Fade-In timer, when stopped.

Fader 14 is the manual control for the Fade-Out timer, when stopped.

Fader 15 is the manual control for the LTP Fade timer, when stopped.

9.2 Entering and Exiting Theatre Mode

To activate and Edit the Theatre stack:

In PROGRAM Mode press Softkey [B] followed by [ENTER].

To Cancel Theatre Mode and restore the last 4 Playback Faders:

In PROGRAM Mode press Softkey [B] followed by Softkey [D].

9.3 Step numbers

There are a total of 60,000 steps reserved for the Theatre stack. Step numbers range from 0.1 to 6000.0. It is generally good practice to use whole numbers for steps and to keep the point step numbers in reserve for the unforeseen.

9.4 Theatre Stack programming menu

This section provides a description of the Softkeys used in the Theatre stack menus. In the top menu the prompt line indicates the INPUT Step and the CURRENT Step. The CURRENT step is the one that functions like Set Time, Record and Set Legend work on. Always make sure that you have set the CURRENT step before activating these or any other functions. To set the CURRENT step, simply input a step number and hit [ENTER].

The functions Record Live, Live Time, Next Time and Review can also be used to edit the Theatre Stack.

9.4.1 [A] ADVANCED

Do not attempt these functions until the basic concepts of the Theatre Stack are well understood.

9.4.1.1 [A] RENUMBER

Choose this option to renumber the stack. Point steps will be renumbered to whole numbers and the in between step numbers will change to accommodate these. Please use with this function with care.

9.4.1.2 [B] Assign a Fade Up Auto-load

This function makes it possible to launch a memory or a chase by pressing the GO key. To do this:

10. Set the Current step to the step number for which you wish to load a Memory or a Chase.
11. Press [B] followed by a playback button in the range (1 to 11).
12. Optionally you can input an Auto-load time, see section 9.4.1.4. This will cause the memory or chase to be loaded over a given time.

One Auto-load command per step is allowed. The Auto-load will be triggered when the FADE-In time starts for the step.

9.4.1.3 [C] Assign a Fade Down Auto-load

This function makes it possible to take out a playback previously used to Auto-load a memory or a chase. To do this:

1. Set the Current step to the step number where you wish to carry out the Auto-load.
2. Press [C] followed by the Playback button in the range 1 to 11.
3. Optionally you can input an Auto-load time, see section 9.4.1.4. This will cause the memory or chase to be taken out over a given time

One Auto-load command per step is allowed. The Auto-load will be triggered when the FADE In time starts for the step.

9.4.1.4 [D] Set Auto-load Fade Time

Use this option to set the Fade-in or the Fade-out time for an Auto-load. To do this:

1. Set the Current step to the step number where you wish to carry out the Autoload.
2. Press [D] then input a time in seconds. Use the point to input tenths of a second. Press [ENTER] to save.

9.4.1.5 [E] Delete Autoload

The Autoload on the Current Step will be deleted. No confirmation is required.

9.4.1.6 [F] Copy Current Step to ...

Copy the Current step to the given step. If the step already exists then it will be overwritten.

9.4.2 [CHANNEL]

Use the options in this menu to create a scene or a 'look'. Use the numeric keypad to select Fixtures.

Example: To select Fixtures 1,5 & 8.
Press 1[ENTER], 5[ENTER], 8[ENTER].

Example: To select Fixtures 5,6,7 & 8
Press 5 [THROUGH], 8 [ENTER].

The prompt indicates how the Input will be translated to Fixture numbers.
Fixture = Desk Channel – This means that the input number relates directly to the Fixture's handle number (Desk handle numbers are in the range 1-60, 101-160, 201-260, 301-360).

Fixture = Dimmer or other Fixture – The input is translated to a Desk channel by searching from Desk channel 1, for all occurrences of the selected Fixture Type.

Example: If the Fixture Type is set to Dimmer, and the Input is 8[ENTER], then the 8th dimmer found, starting the search from Desk Channel 1, is selected.

Example: If the Fixture Type is set to Mac 500, and the Input is 8[ENTER], then the 8th Mac 500 found, starting the search from Desk Channel 1, is selected.

9.4.2.1 [A] Select ALL

All Fixtures already in the programmer are loaded into the Editor.

9.4.2.2 [B] Select a new Fixture type

The default is Desk Channel. This function sets how the input is translated to a Fixture number.

Example, If 1 Through 10 [ENTER] is selected and:

- **Fixture Type=Desk Channel.** The desk will select the Fixtures on Desk handles 1 through 10.
- **Fixture Type=Dimmer.** The desk will select the first 10 dimmers found starting the search from desk handle 1.
- **Fixture Type=Mac500.** The desk will select the first 10 Mac500s found starting the search from desk handle 1.

9.4.2.3 [C] ODD or EVEN

When first used, a list is created made up of the Fixtures in the EDITOR. Thereafter: -

- When ODD is selected the ODD numbered Fixtures are loaded into the Editor from the remembered list.
- When EVEN is selected the EVEN numbered Fixtures are loaded into the Editor from the remembered list.

The list is cleared when a new fixture selection is made.

NOTE The order in which the fixtures were selected is preserved in the remembered list and is used to decide the ODD and EVEN placements.

9.4.2.4 [D] RECORD

9.4.2.4.1 [A] CHANNEL OR FIXTURE RECORD

Alters the Record Option between Record by Channel and Record by Fixture, the current setting is shown on the prompt line.

9.4.2.4.2 [B] RECORD STAGE

All Fixtures, which are in the programmer together with all Fixtures that are ON on the stage, are recorded into the Current step.

9.4.2.4.3 [C] SET TIMES

The times are presented for the current step.

Press [ENTER] to save the times or [EXIT] to cancel the changes. If the Current step does not exist then the previously entered times will be presented.

9.4.2.4.4 [D] RECORD PROGRAMMER

All Fixtures, which are in the programmer or in the Editor are recorded into the Current step. If a step number is entered then this will be assigned to the Current step before recording.

9.4.2.5 GROUP

Input a Group number in the range 1-200, then hit [ENTER] to load it.

9.4.2.6 THROUGH

Select a range of Fixtures, for example 1 THROUGH 10 to select all Fixtures in the range from 1 To 10.

9.4.2.7 AT %

Set the intensity for the Fixtures in the Editor. To set the intensity to 46% press [AT%], [4], point(.), [6]

9.4.2.7.1 [A] LOCATE FIXTURE

Switch ON the Fixtures so that it is in open white on the stage (unless BLIND mode is selected), without actually placing the Fixture's attributes into the programmer.

9.4.2.7.2 [B] BLACKOUT

All Fixtures, which are ON on the stage, are first loaded into the Editor and then set to zero intensity, the result is that the stage is blacked out.

9.4.2.7.3 [E] +5%

Increase the intensity by 5% for all of the Fixtures in the Editor, clamped at 100%.

9.4.2.7.4 [F] -5%

Reduce the intensity by 5% for all of the Fixtures in the Editor, clamped at 0%.

9.4.2.7.5 [G] 100%

Set the intensity to 100% for all of the Fixtures in the Editor,

9.4.2.7.6 [NUMERIC]

Set the Intensity to (10% multiplied by the input digit) for all of the Fixtures in the Editor, for example if 5 is input then the intensity is set to 50%

9.4.2.7.7 [.] , Decimal point

Follow this by a number to set the intensity units. For example if the selected fixtures are set to 53% intensity and [.] followed by 7 is input then the intensity will be changed to 57%.

9.4.3 [C] SET TIMES

Set the Times for the Current step. If the step exists then its times are presented otherwise the previous recorded times.

9.4.4 [D] RECORD

See Section 9.4.2.4

9.4.5 [E] SET LEGEND

Set the legend for the Current Step

9.4.6 [F] Cut To Live

Input a Step number then hit this key to make the step live on the stage.

NOTE if the step does not exist, a blank step will be created. The step number is assigned from the input and the times will be set from the last input times.

9.4.7 [G] QUIT

Use this option to EXIT the Theatre Stack menus.

9.4.8 [DELETE]

Delete a single step or all steps.

9.5 Playback Options

The Pearl will always be in RUN MODE TAKEOVER when the theatre stack is enabled.

In playback mode the following functions are available

STOP Press to stop the Theatre stack

GO Press to launch the step, or if the step has been stopped part way through a fade, then continue the step. If GO is pressed while a step is fading then the current fade will stop (not complete) and the next step will be loaded and faded to.

[Playback ADD button 12] This works like the main GO button

[Playback SWOP button 12] This works like the main STOP button

[Playback ADD buttons 13-15] Press to GO on the timers HTP-IN, HTP-OUT, and LTP respectively

[Playback SWOP buttons 13-15] Press to stop the timers for the HTP-IN, HTP-OUT, and LTP respectively

[Playback LED 12] This LED will blink when the theatre playback master fader is at 0. All other times it shows the fader level.

[Playback LEDs 13 to 15] These LEDs indicate the Timed fader level for the HTP-IN, HTP-OUT, and LTP timers respectively.

Wheels When the Time fade is stopped the wheels can be used to manually adjust the fade up or down. The wheels simultaneously operate the fade for all 3 time faders and the 2 wheels work together. For individual time fade control use the playback faders. At the end of the step the wheels must be turned anti-clockwise before the next step is loaded.

Fader 12 – this is the Intensity master for the Theatre stack.

Faders 13,14 and 15 - When the time faders are stopped these playback faders can be used to manually adjust the fade up or down. To take over control, move the fader to full then back down to the current position of the time fade.

REMOTE CONTROL

The following keys, on the remote control, are available for controlling a theatre stack.

BLANK (Bottom left key)	- GO (works only when stopped)
AT% 100%	- STOP
7	- SNAP BACK (use to undo a GO)

10. Known Problems

10.1 Importing an April 99 Sapphire 2000 show disk

If an attempt is made to import more than 240 dimmers or fixtures then those fixtures or dimmers, which were patched after the 240th Fixture or dimmer, will not be imported.

10.2 Importing an October 99 Azure 2000 show disk

If an attempt is made to import more than 240 dimmers or fixtures then those fixtures or dimmers, which were patched after the 240th Fixture or dimmer, will not be imported.

Example: On the Azure patch 200 dimmers then 200 fixtures

Import results: 200 dimmers will be imported, then the first 40 fixtures. There is a quirk, which causes the 41st fixture to be patched to handle 41 and then parked, the 1st dimmer in this instance is not imported.

Example: On the Azure patch 200 fixtures then 200 dimmers

Import results: 200 fixtures will be imported, then the first 40 dimmers.

To avoid this problem make sure that no more than 240 fixtures or dimmers are patched on the Azure if you know beforehand that you will be required to import the show into a Pearl. Alternatively patch the fixtures first.

11. TIPS

11.1 Script file programming

1. When editing the script file, switch OFF Global Auto-run. When enabled the desk will attempt to load and run a script file that matches the timecode.
2. In script file, on the fly edit, before commencing the edit process select the option marked, 'start script from step 1'

11.2 Theatre stack programming

1. Set the current step to the one you wish to edit or create before activating a function.

11.3 Chase Programming

After programming a chase, turn the KEYSWITCH to RUN then back to PROGRAM. This causes the memory to be optimised and enables the Pearl to run at peak performance