

WHOLEHOG

Handbook

Version 1.09

FLYING PIG SYSTEMS

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Credits

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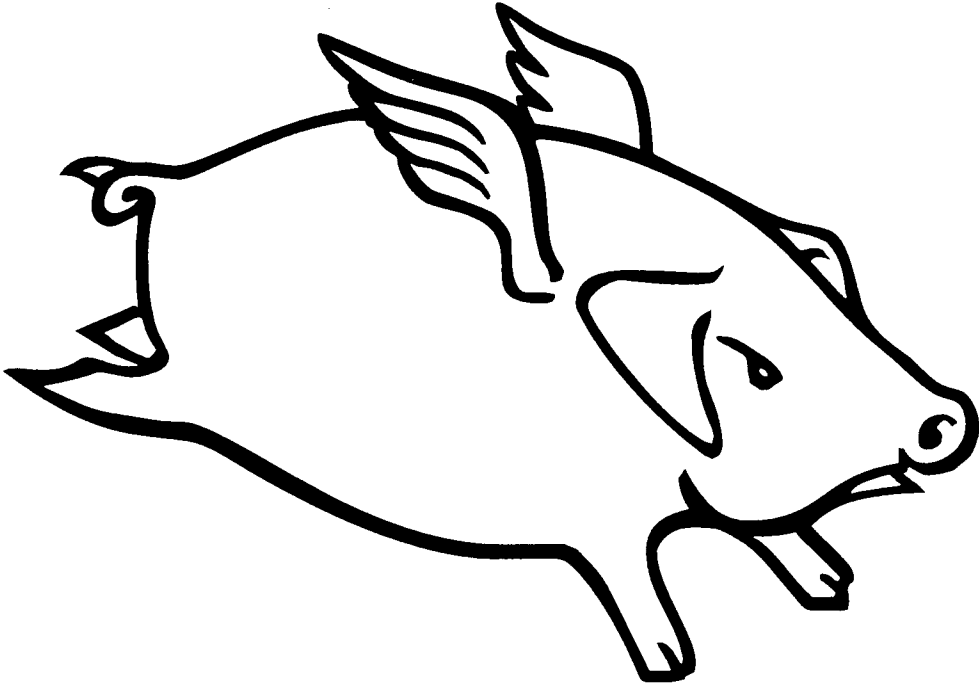
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An introduction to using
the WHOLEHOG.



Welcome to the WHOLEHOG

Why the WHOLEHOG Is Different

Welcome to Flying Pig System's WHOLEHOG™.

Until recently, lighting desks only controlled dimmers. Life was easy: the fader's setting corresponded to the dimmer level, and each desk channel could control nothing more than intensity.

Moving lights have made traditional lighting desks obsolete. The numerous control channels required quickly overwhelm the limited capacities of most lighting desks. Plus, these desks treat colour, beam, and focus just like intensity, resulting in bizarre playback effects. Worse, programming is a nightmare since parameters can't be grouped and manipulated as a whole.

The WHOLEHOG is designed specifically for the additional demands of multiparameter lights:

- An individual fixture is once again viewed as a fixture and not a collection of separate parameters.
- Fixtures have meaningful parameter names and level settings. For instance, if you're adjusting the colour, the display tells you the actual colour—like blue—rather than some mysterious percentage value.
- Parameters are grouped into properties called intensity, colour, beam and focus; each of which can be individually manipulated across a set of fixtures.
- Flexible playback operation gives full control over individual fixtures and parameters. The Latest Takes Precedence Plus (LTP+) system works by fixture and parameter. This means that cues and sequences can be combined in numerous ways to achieve a wide variety of effects.
- Fixtures have custom control settings and can be easily programmed to respond differently to control signals. For instance, you may not want to crossfade a colour scroller or wheel – a snap change is better. In contrast, pan and tilt are normally crossfaded. The WHOLEHOG distinguishes between different types of fixtures and parameters and can be setup to feed crossfades to pan and tilt and snap changes to the colour wheels.
- A fixture library has information on most multiparameter lights; fixtures chosen from it will be automatically configured and ready for instant use. No extra personality cards are required and new fixtures can be added at any time.

Despite all this complexity, the desk remains easy to use. It's logical layout and numerous displays give quick access to powerful features and provide constant status feedback. Programming is simple: there are five buttons for all actions: **Assign**, **Append**, **Insert**, **Merge**, **Delete**. Select what you want, press one of the action keys, and press where you want it to go. This *source – action – destination* procedure is used throughout the console.

Using the Handbook

We suggest that you work your way through the entire *Handbook* to get a thorough understanding of all the console's features. However, the *Handbook* is organised into progressively more advanced chapters for those who want to get started quickly:

For those new to the WHOLEHOG and moving lights

- *Finding Your Way Around* introduces the layout of the console and the main functional areas.
- *How the Hog Thinks* gives a brief tour of the console's features, explains the concepts and how to use them. Also read *Computer Techniques* in the reference section if you have never used a computer before.

Setting up the WHOLEHOG for the first time

- *Setup* explains how to connect up, configure and patch the console.
- *Programing* takes you through all programing: scenes, chases, presets, etc.
- *Playback* explains how to output your programing using the various types of masters, how to use chases, and how to set timing information.

For more familiar WHOLEHOG users

- *Creating a Show* examines the best ways of putting together your programing, depending on the type of show you are doing.
- *Screen Displays and Tools* introduces the additional functions that are available through the control rack screen.
- *Stack Synthesizer* explains how to use the screen based stack synthesizer.
- *Macros* explains how to program, edit and use macros. This is an advanced feature, and we recommend that you seek training before using this facility.

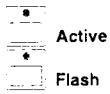
Reference and Troubleshooting

- *Questions and Answers* lists common problems encountered by users.
- *Computer Techniques* covers basic computer techniques for those people unfamiliar with them.
- *What's New* highlights the changes made by the latest versions of WHOLEHOG software. Read this section to absorb quickly what changes have occurred if you haven't used a WHOLEHOG for some time.
- *Changing Software* gives complete instructions on how to load new software onto your WHOLEHOG.
- *Troubleshooting* gives a checklist of things to try when your WHOLEHOG does not appear to be functioning as expected.
- *Technical Diagrams* contains 20 diagrams covering the serviceable parts of the WHOLEHOG.
- *Button Reference* gives a button by button explanation of functions

Terminology

There are two key terms used throughout this handbook and the desk: *scene* and *stack*. A scene is what's known as a "cue" or "memory" on other desks. A stack is simply a sequence of scenes. A chase, for example, is one type of stack.

Symbols



Different types of text are used to differentiate between different items in the system. Text appearing on the control rack screen and console displays use **this kind of type**.

The text used for buttons to be pressed looks like this: **Button**.



There are two buttons in the fader section without printed names: **Flash** and **Active**. In addition to activating intensity, **Flash** selects stacks during programming and playback.

Symbols, or icons, are used throughout the desk to make it easy for you to quickly see what's going on. All the symbols are introduced in the *How the Hog Thinks* chapter.

Safety Instructions

Please keep in mind the following safety instructions:

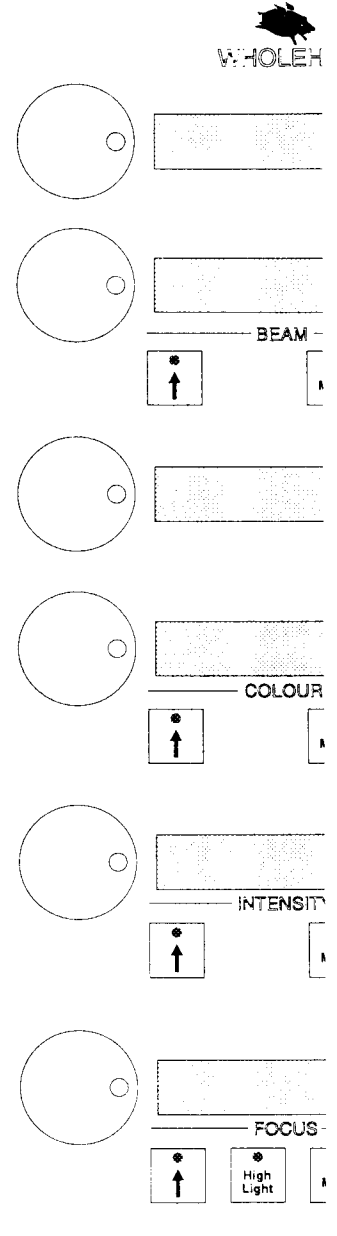
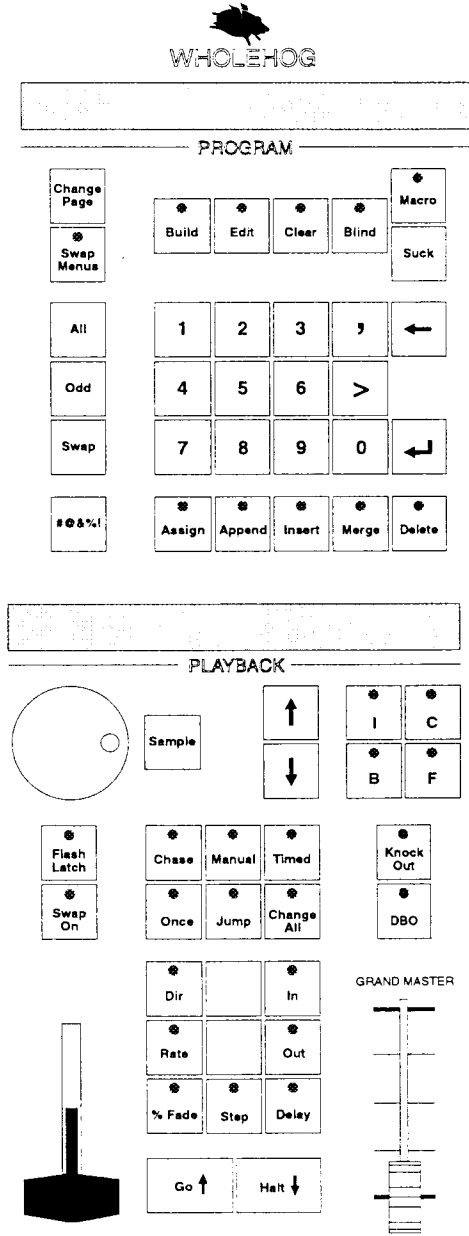
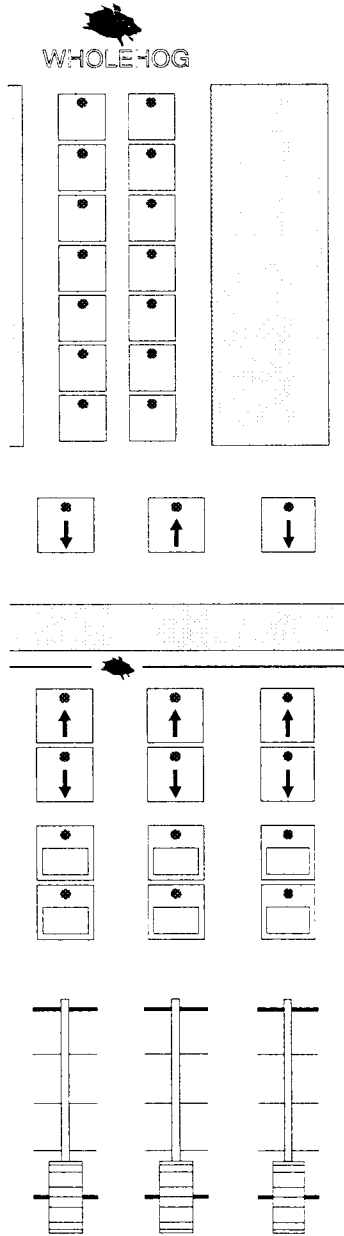
- Do not use the WHOLEHOG if the power cord is damaged or not properly connected to a grounded socket.
- Protect the system from extremes in temperature and wet weather.
- Do not move the control rack while in use. Its hard drive is sensitive to movement.
- Resting drinks on the console is not a good idea.
- Always handle the system with care and use the flight case when moving. Certain components used by the console and computer rack are sensitive to shock and a large drop could make them inoperable.
- Repairs should only be undertaken by an authorised service representative. The warranty is void otherwise.

As long as these instructions are followed, and the system is treated with care, the WHOLEHOG should last for many years. There's little maintenance to be done; just use a dry cloth to clean the console and control rack surfaces from time to time.

Additional Help

If you're having problems, call us at the FPS: in the UK (44) 81 579 5665 or in the US (310) 317 4886. Someone is always available to field questions from 9:30 AM to 6 PM (local time) Monday to Friday. There are also 24hr pager services in the US and the UK which are monitored for last-minute problems.

An overview of the WHOLEHOG's two parts: the console and the control rack.

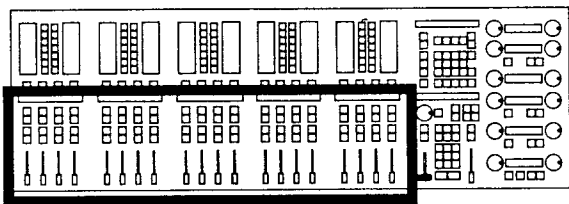


Finding Your Way Around

Console

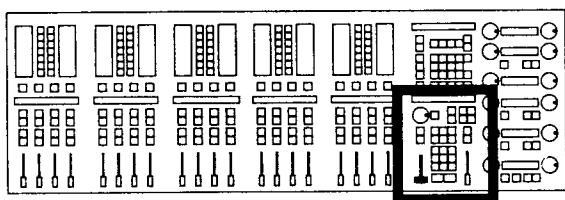
The console is divided into six functional areas:

Faders



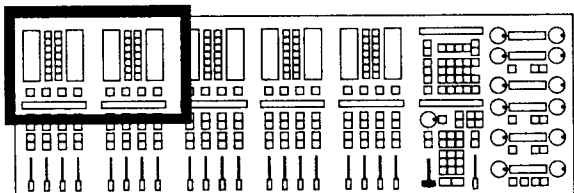
Playback is controlled primarily through the faders which access scenes, chases, and timed stacks. They're organized into 20 columns of four dedicated buttons and a fader. The display immediately above each column shows its contents.

Playback



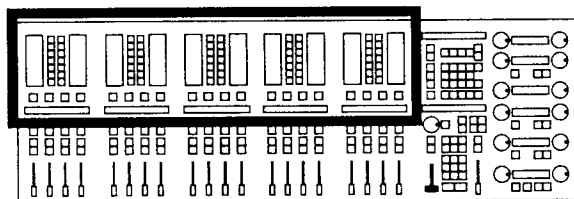
The faders' many functions make it impractical to give each fader its own complete set of function buttons. Instead, faders are linked to the shared function buttons in the playback section.

Scene Masters



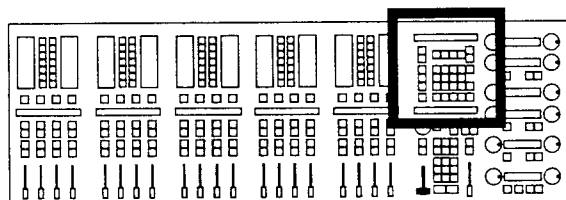
Individual scenes are controlled using the scene masters. Scenes can be bumped, latched, or faded in or out with timing settings. The displays beside each set of buttons tell you what's loaded.

Menus



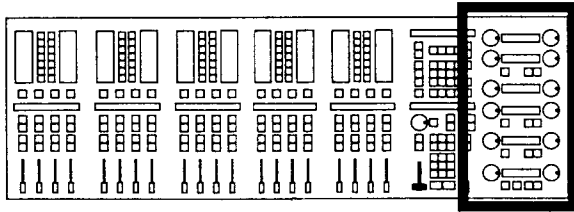
Two different sets of menus give immediate access to the desk's powerful features: groups, position presets and palettes are the programming menus; pages, globals and scene masters are the playback menus.

Programmer



This is where fixtures are chosen, adjusted, incorporated into a scene and assigned to a fader or scene master.

Parameter



The wheels in this section change the parameter settings of fixtures selected in the programer.

Control Rack

Controller

This is the rack-mounted black unit containing WHOLEHOG's brain. Every action on the desk is sent to the controller to be translated into control signals the lights can understand.

Control Screen

The screen displays information too large to fit on the console displays. For example, the fixture library and the DMX patch appear here.

Mouse

The mouse moves the control screen pointer and selects items. Some systems use a trackball built into the keyboard instead of a mouse.

Keyboard

The keyboard lets you type in names for fixtures, scenes, stacks, etc. Use custom names throughout your programming so that when a stack appears it has a less cryptic name than **Scene 17**.

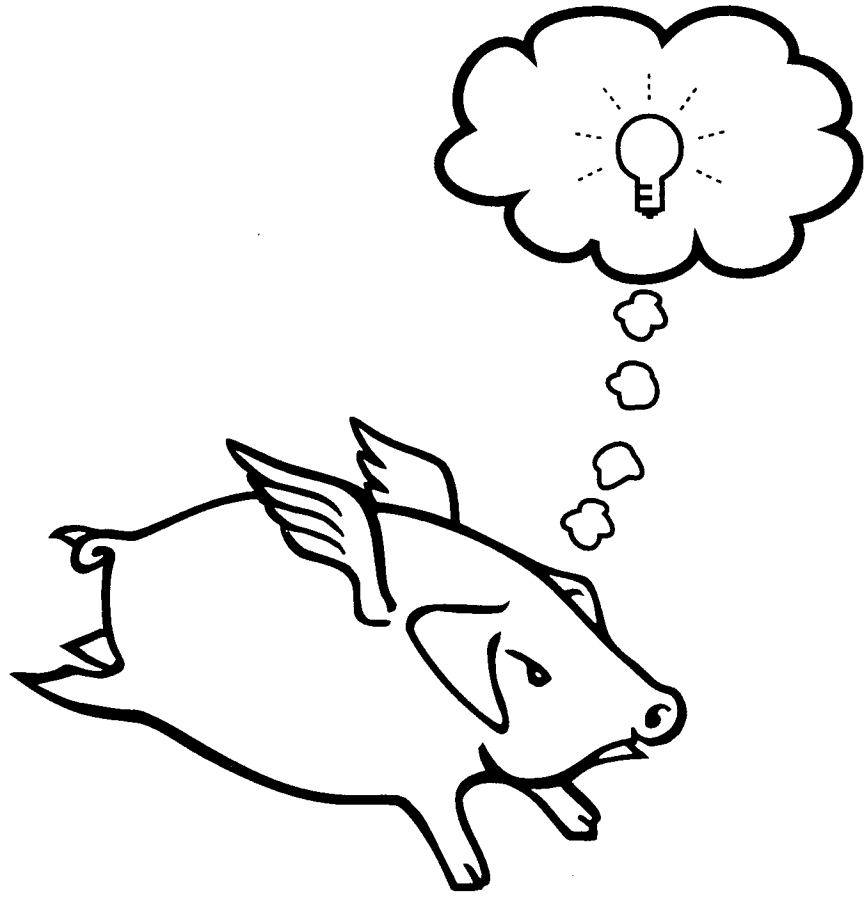
Permanent Storage

As you create a show, your programming is automatically saved to a hard drive. This means that you can turn the controller off at any time. In addition, however, shows should be archived to floppy disks for additional safety.



It's always a good idea to make backup copies of everything you create. We've done our best to make the WHOLEHOG reliable, but Acts of God and power failures may lead to loss of your prize programming. So always archive your show programming onto a floppy disk whenever possible.

An overview of the
WHOLEHOG's funda-
mental logic.



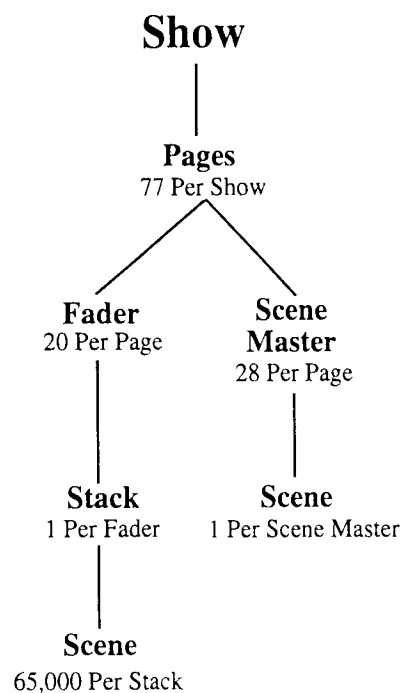
How the Hog Thinks

This chapter introduces all the features of the WHOLEHOG, so that new users can see the big picture of the console's operation. This chapter does not explain them all in depth – that will be covered in later chapters.

WHOLEHOG Organisation

Overview

Programed information in the WHOLEHOG has a heirarchy: the most basic element in WHOLEHOG programing is a *scene*; a *stack* is made up of one or more scenes. A *page* is the set of scenes and stacks that are loaded onto all the masters at one time. A *show* contains everything for a particular performance or tour. The WHOLEHOG can store many shows at once. The diagram gives a pictorial overview:



Scenes



When you program the parameters of one or more fixtures, you've created a scene. A scene is represented in the console displays by the parcan symbol at left.

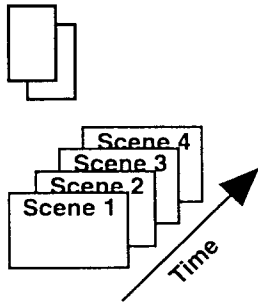
One scene might have the following settings:

<u>Fixture</u>	<u>Pan</u>	<u>Tilt</u>	<u>Colour</u>	<u>Iris</u>	<u>Gobo</u>	<u>Shutter</u>
Scan 1	100	200	White	255	Star	100%
Scan 2	100	200	Blue	255	Star	100%
Intellabeam 1	100	200	Red	255	Star	100%

There's no limit to the number of fixtures, fixture types (Intellabeam, Golden Scan, colour scrollers, etc.), or parameters that can be stored in a scene. Likewise, scenes can be manipulated any way you like – moved, copied, combined, modified, etc.

Scenes can be stored on the console's scene masters, or on the faders as part of a stack.

Stacks



A stack is a series of scenes. If this term is new to you, think of it as a chase, a sequence or a cue list – a series of sequentially activated scenes.

A stack is like a pile of index cards, with each scene being one card in the stack. You can move these stacks of cards around any way you like: copy them, insert them, merge them, split them, and entire stacks can be edited in one go – making the WHOLEHOG quick to use.

Stacks are stored on the faders; they can be played back in one of three ways:

- *Manual* mode lets you control manually when and for how long each scene is activated.
- *Chase* mode automates crossfading and timing for all the scenes in a stack.
- *Timed* mode individually customises crossfading and timing for every scene for automatic playback later on.

Names can be given to any stack or scene; doing so makes it easier to keep track of what's going on. Thus, a stack might be:

Intro

Drums

Singer

Stage Right

The display above each fader shows one step at a time. The one displayed is called the current step: most editing operations start at the current step, and if you were to activate the fader, the current step would be output.

Pages



Often you'll find that you need more than the 20 faders to store your stacks on. This is when pages become handy. A *page* is one set of stacks and scenes loaded on the faders and scene masters. By changing pages you can instantly load a whole new set of scenes and stacks onto the faders and scene masters.

Pages are a way of organising your programming to make cues and stacks as accessible as possible. For example, many LD's like having a page for each song.

Pages are changed—and created—in two steps:

1 Select a new page.

2 Press the **Change Page** button in the program section.

Any page's scenes and stacks can be previewed and manipulated without being loaded just by pressing the page button without pressing **Change Page**. The displays will now show the previewed page. To return to the original page, press the original page button.

Shows

Everything programmed is stored in a show. The WHOLEHOG uses shows to keep track of programming; think of a show as a drawer in a filing cabinet in which information is held for later access. By opening a new drawer – a show – you instantly access a whole new set of folders – the pages.

In addition to everything we've covered so far, a show also stores:

- Fixture library
- Instrument schedule
- DMX patch
- Rig schematic
- Presets, globals, palettes

WHOLEHOG Programming

Even though there are many things you can program on the WHOLEHOG, all programming actions use the same basic button pushes:

1 Point to the where you are copying stuff from. This could be from a scene master, a fader or many other things we will introduce later on. You ALWAYS point in the following way: for scene masters, press the scene master button; for faders, press the fader's **Flash** button; for items in menus (which we introduce later), push the menu button. This is known as *choosing the source*.

2 Press the appropriate action button—like **Assign** or **Merge**.

3 Point to where you want the stuff to end up, in the same way as step 1. This is known as *choosing the destination*.

The WHOLEHOG automatically figures out what you want to copy, be it a scene, stack, etc. from the context of what you pointed at as your source and destination. The copying action depends on the action button you pressed:

Assign copies the scene to a fader, scene master, or global. It also puts presets and groups on their menu buttons. Assign replaces anything previously in the destination; however, a scene assigned to a stack only replaces the current step and not the entire stack.

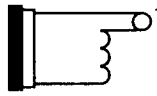
Append adds a scene or stack to the end of a stack.

Insert adds a scene or stack just after the current step of a stack.

Merge combines a scene with another scene. It can also combine two entire stacks together step by step.

Delete erases the destination.

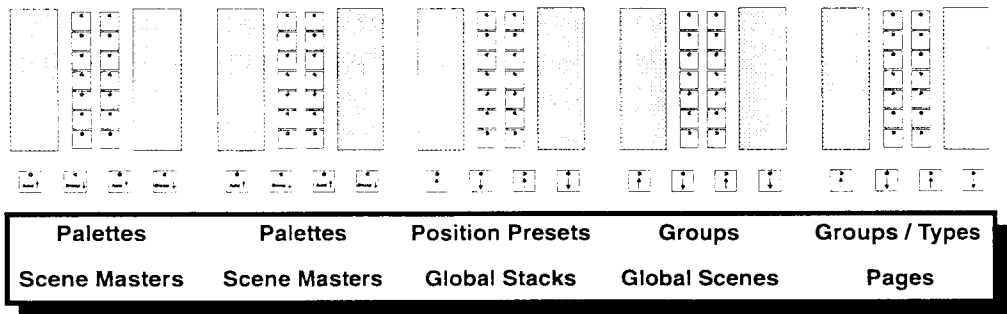
The source scene or stack is never deleted or modified in any way.



A lot of programming errors result from operators forgetting to chose their source, so if these buttons don't seem to be working as you think they should, consult the Programmer console display. It tells you what you chose for source - action - destination. Check that it was what you intended.

WHOLEHOG Menus

As well as many scene masters and faders, the WHOLEHOG has several menu panels. These menu panels give you direct access to all the advanced features that make the WHOLEHOG so quick and easy to program. Note that the menus can swap function between programming (top line in the box below) and playback menus (bottom line). This is controlled by the **Swap Menu** button in the Programmer panel.



Groups



Fixtures of the same or different types can be grouped together in any combination and programmed as one. Grouping avoids continuous entering of a large number of fixtures into the programmer; instead just press the group button. A group might consist of the following fixtures:

Golden Scan	1 > 3, 5 (1 through 3 and 5)
Intellabeam	Odd
Scrollers	6,7

To create a group:

- 1** Select the desired fixtures in the programmer.
- 2** Press **Assign** or **Merge**.
- 3** Press a button in the group menu.

Position Presets



There may be times when you want to use the same pan and tilt values for a group of fixtures in many different scenes and stacks. This is often desired when aiming at a position on stage. If that position changes, how do you then change all the scenes and stacks?

Position presets are the answer. Think of them as groups for focus parameters instead of fixtures. So if you're often likely to change a focus parameter, or frequently use the same stage focus position, create a preset while programming. This lets you positionally focus your lights at a button's touch and update all your settings by just changing the preset. To create one, see the *Programming* chapter.

Palette



Use the palette to store intensity, colour, and beam settings used throughout a show. Just like groups, palette setup is only done once. Afterwards, only one button must be pressed to retrieve each of those settings. However, unlike position presets, changes to the palette do not automatically update throughout programming.

Globals



Globals are handy for scenes and stacks used on many pages. Globals are not part of any page, but you can copy them into a page. For instance, if a favourite "look" is used throughout a show, set it up as a global. If you need to alter this look everywhere, just change the global - the desk then automatically updates all the pages. You cannot activate a global stack or scene while it is still in the global menu - it has to be transferred to a scene master or fader.

WHOLEHOG Playback

The way the WHOLEHOG acts during playback is as important as the way it programs. Understanding the playback logic is important if you are going to taking full advantage of all its features.

ICBF

Most desks consider all parameters to be the same type. This works fine when only dimmers are used but causes problems once multiparameter lights are used. Mayhem often results when pan and tilt are treated the same way as intensity.

Fortunately, the WHOLEHOG is not like most desks. Instead, it groups parameters into one of four categories: intensity, colour, beam, and focus. Each one is treated differently to give full playback control. You can see this distinction in the fader section: the **Active** button (the unmarked top row) controls colour, beam, and focus, while the **Flash** button and the fader itself control intensity only.

Use **Active** to set fixtures to their programmed colour, beam, and focus settings. Then bring up the scene's intensity with the fader or **Flash** button.

Crossfading

Whenever a fader is moved, a scene activated, or a chase started, the WHOLEHOG will crossfade linearly to the new settings *at all times*. You do not need any special masters or programming to achieve proper dipless crossfades.

LTP+

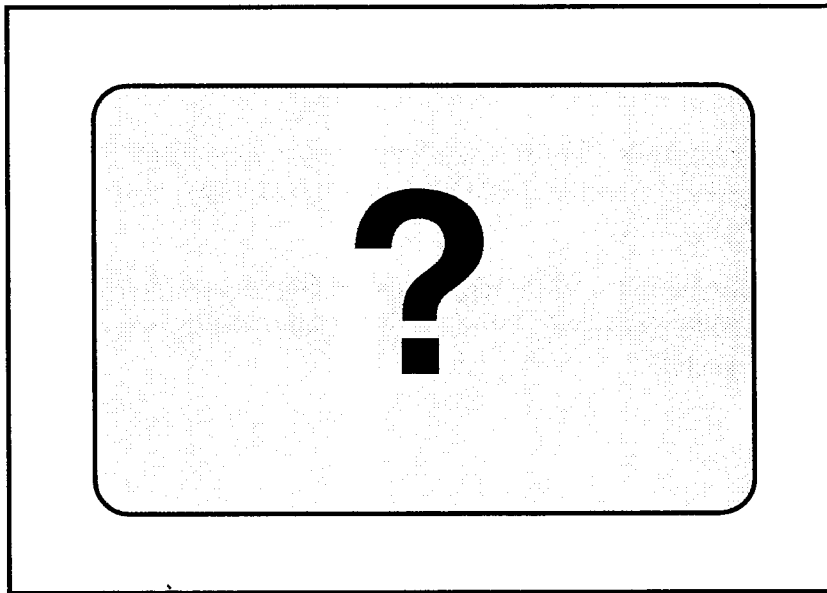
Latest Takes Precedence (LTP) is widely used with multiparameter lights because it is more appropriate than Highest Takes Precedence. Obviously, it makes no sense to have a "higher" colour or gobo. Unfortunately, LTP has acquired a bad name due to the numerous quirks in its various implementations.

The primary aggravation of poor LTP implementations is getting rid of active scenes. Instead of removing a scene by pulling down on a fader, another fader must be brought up to turn the first one off. Hence the need for the LTP+ system used by the WHOLEHOG. Here, pulling down on a fader *will* turn it off. LTP+ is similar to standard Latest Takes Precedence, but makes it much easier to use.

The WHOLEHOG uses the following priorities to decide which scenes should get output.

- The last scene master or fader activated has precedence. If a scene master or fader is deactivated, all outputs on that master will return to their prior settings, and will be controlled by the prior masters.
- The programmer has precedence over scene masters and faders.
- The **DBO** button and Grand Master have absolute precedence, but they only affect intensities.

How to use the control screen
tools for setting up a show.



Preparing for a show takes only three steps:

- 1** Connect the WHOLEHOG's cables and turn on the power switches.
- 2** Use the **Instrument Schedule** screen window to tell the desk how many fixtures of each type will be used.
- 3** Use the **Patch** screen window to set the DMX addresses.

The WHOLEHOG is then ready for use.

These screen windows all use the keyboard and mouse. If you are unfamiliar with how these work, refer to the *Computer Techniques* appendix.

There are other more advanced set up windows which this chapter also covers:

- The **Customise** window allows you to modify the behaviour of individual fixtures. For instance, you can reverse the direction of a fixture's Pan parameter to correct for it being hung the wrong way around.
- The **Change Shows** window sets up which show the WHOLEHOG is currently running. You can also use it to copy, archive, and restore shows.
- The **Fixture Library** window allows you to edit the way that a type of fixture behaves. You can also create totally new fixture types using this screen.

Connecting the Cables

First check to see that you have everything you need. The WHOLEHOG system consists of:

- console and control rack (with mouse and keyboard)
- 1 data cable.
- 2 flexilights.

Use the labels on the back of the control rack to identify the appropriate connections:

- Connect 2 appropriately IEC wired power leads to the back panel of the control rack and the back of the console. The WHOLEHOG is equipped with an universal 100 to 240 volts A/C 50/60 Hz power supply for instant use worldwide. (IEC leads are not shipped with the console)

- Link the console and the control rack with the data cable.
- Connect the power and data cables from the screen to the back of the control rack.
- Connect the mouse and keyboard to the back of the control rack.



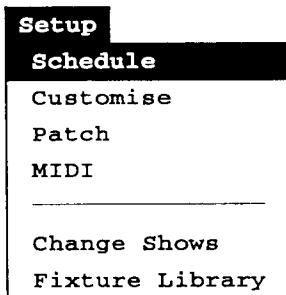
All cables (including the keyboard and mouse) must be properly connected before turning on the system. Failure to do so will prevent the system from operating properly.

Turn It On

Turn on the console by flipping the power switches on the console and the control rack (including the screen). The desk then automatically loads the most recent show.

A show has been successfully loaded when the control rack screen says **Console Ready**. Likewise, no error messages should appear in the bottom right console display. If this is not the case, then the WHOLEHOG is not 100% functional. Refer to the *Troubleshooting* section for further instructions.

Instrument Schedule



Select the Schedule window under the Setup menu. If you are unable to select it, the console may be locked – signified by light grey menus. Refer to the *Tools* chapter to unlock the console.

The screen shows all the different fixtures that are available for use. If you can't see a fixture you want to use, try scrolling with the scroll bar at the side. If you still can't find it, then you'll have to first enter it in the fixture library.

Intellabeam	6	Number:	
Super Scan	6	Capacity	
Golden Scan	0	Remaining:	15%
VL 1	0		
VL 5	0		
Dimmer	5		
Scroller	0		
Summa	0	Clear	

Numbers

Each type has a number next to it: this is the number of fixtures that the WHOLEHOG is configured to control.

Making Changes

To change a number:

- 1 Select the fixture type by clicking on it with the mouse.
- 2 Click on the box to the right of **Number**.
- 3 Type in the number of fixtures.

The capacity figure shows the room available for additional fixtures. When you reach 0%, there is no more room left.

Clear

If you want to set a group of types to zero quickly, you can select them all in the list using the mouse, and then click on the **Clear** screen button.



Your changes will not take effect until you close the *Schedule* window by clicking on the close triangle at the top left of the window or by choosing another window.

Patch

Setup
Schedule
Customise
Patch
MIDI
Change Shows
Fixture Library

Now that you've told the desk how many of each fixture type you're using, select the *Patch* window to set up each fixture's DMX address.

A brief aside for those who have never used DMX: a DMX output is a single transmission signal that can control up to 512 dimmer channels. You use DMX by daisy-chaining all the fixtures you're controlling together with a single cable. Each fixture reads its own parameter settings from the same DMX cable; the fixture knows where in the transmission signal to read from by using the "DMX address" you set it up with. Then, all the console needs to know is what each fixture's DMX address is.

Cancel		
Instruments:		DMX Output:1 Start Code: 0
Super Scan 1	Next	1: Super Scan 1 Iris
Super Scan 2	Back	2: Super Scan 1 øCol Wheel
Super Scan 3	All	3: Super Scan 1 Gobos
	Undo	4: Super Scan 1 Strobe
	Remove	5: Super Scan 1 Pan
		6: Super Scan 1 Tilt
		7: Super Scan 1 Dimmer
		8: Super Scan 1 Prism
		9: Super Scan 1 Focus
		10: Super Scan 1 Red
		11: Super Scan 1 Green
		12: Super Scan 1 Blue
		13:
		14:
		15:
		16:
Patching: All	Param	
First Parameter At:	Clear	
Dmx [1] + 1		

Instrument Selection The instruments box (top left) is where you chose which fixtures to patch. Patch one fixture at a time by clicking with the mouse on the fixture name, or select several at once by clicking on the first fixture, holding the mouse button down, moving the pointer to the last fixture, and letting go of the mouse button. Use the **All** button to grab all fixtures of that type.

- Address Selection** When you've chosen the fixtures you want to patch, set their start addresses by moving the mouse to the box on the right and clicking on the first DMX address for that group of fixtures. This action simultaneously patches one fixture after another to the appropriate addresses. The box will display the DMX address of each parameter, allowing you to check your patching.
- If you cannot see the DMX address you want in the box, use the right hand scroll bar to move up and down the 512 DMX addresses; use the bottom scroll bar to swap from one entire DMX output to another. You will see the DMX output number at the top of the box change from 1 to 12 as you use the scroll bar.
- The location window (the bottom left box) shows the addresses of the instruments you've selected. Upon patching, an entry like **DMX [3] + 121** appears here, indicating that the instrument is patched on DMX output 3, address 121. If several numbers appear simultaneously, the fixture has been patched multiple times. To remove particular addresses of a fixture's patch, choose the fixture in the instrument window and the address in the location window, and then click on **Clear**.
- Select more fixtures to patch by returning to the Instrument box.
- Changing Type** The instrument box only displays one type at a time. Use the **Next** and **Back** screen buttons to display the different types selected in the *Instrument Schedule*. Note that the box can only display 100 fixtures of one type at once. The next 100 will be accessible by clicking on **Next**.
- Fixing Mistakes** If you make a mistake patching a group of fixtures, remove them by clicking on the **Remove** button. **Undo** allows you to either clear one output on its own, or all the outputs in one go. If you want to discard all your patching changes since you opened the window, click on **Cancel**.
- Split Parameters** Some types of fixture such as dimmer / scroller combinations, or the DMX version of the VL5®, require that Intensity parameters be patched separately to all other parameters. This can be achieved using the **Param** button. Clicking on it once switches patching to intensity only. Clicking again switches to all parameters except intensity. Finally, clicking a third time returns patching to normal (all parameters).
- Start Code** Alternative DMX output start codes can be entered in this box. This is a technical specification that you shouldn't have to worry about. Unless the fixture manufacturer specifies otherwise, leave it at 0.
- Close Window** Your changes will not take effect until you close the *Patch* window by clicking on the close triangle at top left of the window, or by choosing another window.

Testing

Test your fixtures to make sure that the patch is done properly: using the programmer keypad and the **Highlight** button, flash each desk channel to make sure that they are controlling the correct lights. Next, change fixture types with the **Fixture Menu**, and check the other fixture types are also patched correctly. Finally, check the pan and tilts of each moving fixture to be sure that they are responding as desired.

Modifying Individual Fixture Behaviour

Setup
Schedule
Customise
Patch
MIDI

Change Shows
Fixture Library

In certain situations you'll want to modify the characteristics of particular fixtures. For instance, you may want to limit intensity values to preserve lamp life. Alternatively, you may want to have some fixtures' colour wheels snap change while others change slowly. Or, you may need to swap around the way a fixture's pan and tilt works to make it move the same way as other fixtures.

These changes can be made using the Customise Instruments window in the **Setup** menu.

Instruments:	Next	Default	Focus	Normal
Super Scan 1			Parameters:	Swap
Super Scan 2				
Super Scan 3				
Super Scan 4	Back			
Super Scan 5				
Super Scan 6				
Super Scan 7	All	Parameters:	Minimum: 0	
Super Scan 8		Col Wheel	Maximum: 255	
Super Scan 9		Gobos	Crossfade: Normal	
Super Scan 10		Strobe		End
Super Scan 11		Pan		Start
Super Scan 12		Tilt		
Super Scan 13		Dimmer		
Super Scan 14		Prism	Polarity: Normal	
Super Scan 15		Focus		Swap

Any changes will be copied to all instruments and parameters selected.

Instrument Selection The instruments box (top left) is used to choose fixtures to modify. It works together with the **Next**, **Back** and **All** buttons just as in the *Patch* window.

Parameter Selection The parameter box selects parameters to modify. Several can be selected at once. Once chosen, their current settings will be displayed and are ready for modification.

Modifying For each parameter, you can change its minimum value, maximum value, crossfading behaviour, and polarity. This last option is particularly useful, since you can use it to ensure that all pan and all tilts operate uniformly when the fixture is hung upside down. Check to see that these changes have the desired effects as you modify them.

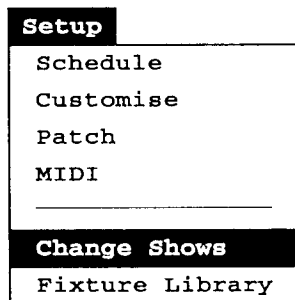
Pan / Tilt Swap

If some fixtures are hung at right angles to the other fixtures, you can swap around the pan and tilt parameters for all the odd fixtures by selecting them and clicking on the **Focus Parameters** swap option. This makes the Tilt wheel move all beams up and down, and the Pan wheel move side to side. This is different to just inverting polarity. Note that this option will not take effect until the window is closed.

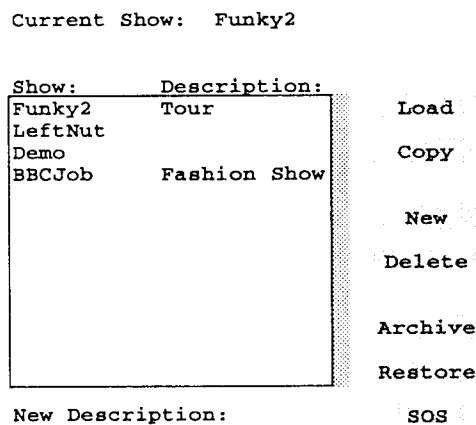
Defaults

The **Defaults** button resets all the selected fixtures back to their normal state. It works for all parameters at once, and is not dependent on the parameter selection you've made.

Naming and Changing Shows



When the WHOLEHOG is turned on, it automatically opens the last show used. Use **Change Shows** to load, archive, or restore shows. The show currently loaded on the desk is listed after "**Current Show**"



Changing Shows

First choose the show in the left box, then click on **Load**.

New Shows

If you want to create a completely fresh show, click on **New**. A window will pop up and ask you for a show name. Once you've provided one, the WHOLEHOG will create and load in the new show.

Show names can only be up to 8 characters long. They must consist of only letters or numbers. They cannot contain any spaces.

Copying Shows

In many cases, it's quicker to copy an existing show and build on its programming. To copy a show, first select a show in the box at left, then click on **Copy**. Many operators like to keep a "template" show containing all their favourite settings, groups, palettes, scenes and stacks, and then copy it to a new show before starting to program.

Description

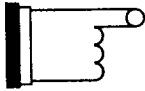
The description box at the bottom of the window allows you to attach a short description to each show. Choose the show you want to alter, then select the description box and type in your description.

Archiving / Restoring To archive a show onto floppy disk:

- 1** Choose the show in the box at left
- 2** Click on **Archive**
- 3** The screen will drop to black and white. Follow the instructions on the screen.
- 4** When the process is complete, you can return to the *Shows* window by pressing any keyboard button.

Restore does the reverse: it copies a show from a floppy disk and moves it to the hard drive. Any show on the hard drive having the same name is replaced. You cannot restore over the current show.

Use IBM PC 3.5" floppy disks, double sided and **high** density (not double density). They do not need to be preformatted.



It's always a good idea to make archive copies after a programing session. This quick time investment can save needless agony in the future.

Delete

Delete completely erases a show from the hard drive. Choose the show you want to delete, and then click on **Delete**. It takes about 15 seconds. Warning: deleted shows cannot be recovered later. You cannot delete the current show.

SOS

The **SOS** button makes emergency disks of a show for use in the unlikely event of a catastrophic hard drive failure. It makes two disks which will start the console (**Boot Disk**) and load your show for you (**Emergency Show disk**), all from the floppy drive. However, the process will take more time than from hard disk, and you will not be able to store enormous shows in their entirety. To make the disks:

- 1** Choose the show and click on **SOS**
- 2** The screen will drop to black and white. Follow the instructions to make a boot disk. If the disk is a new one, answer **Y** to **Preformat disk (y/n) ?**. Also, use only the **Y** or **N** keys – do not push Return, except in answer to **Format another (Y/N)?**

```
SOS Disk Maker Utility
(c) Flying Pig Systems Ltd 1993 All rights reserved
-----
```

```
Make Emergency Boot Disk (y/n) ?
Preformat disk (y/n) ?
Insert new diskette for drive A:
and press ENTER when ready...
Formatting 1.44M
...
Format another (Y/N)? n
```

```
Transferring system...
Making dos directory...
```

```
Transferring system files...
Transfer complete - remove disk now
```

3 Make the show emergency disk. If the show is a small one, you may be able to fit it onto the boot disk. In this case, make sure that you do not format the disk again! As the disk is created, the screen will prompt you whether you wish to include groups or palettes, and which pages to copy across. A large show will not fit onto one disk, so leave out non vital pages.

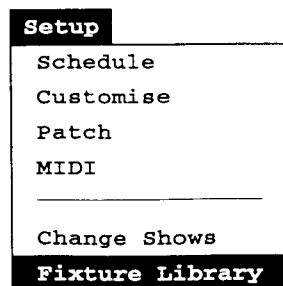
```
Make Emergency Show disk (y/n) ?
Preformat disk (y/n) ?
Transferring default library... done
Making effects directory...
Transferring default effects...
...
Transferring DemoRm palettes and groups...
[Used 56%] Transfer zgroup directory (y/n) ? copied
[Used 56%] Transfer zpalprst directory (y/n) ? copied

Transferring DemoRm pages...
[Used 57%] Transfer Start (y/n) ? copied
[Used 58%] Transfer Faith (y/n) ? copied
[Used 60%] Transfer Ending (y/n) ? skipped
[Used 60%] Transfer complete
```



We recommend that all major shows and tours make sure that they have Emergency disks made as an insurance against pre-show disasters.

Fixture Library



The fixture library is one feature that makes the WHOLEHOG so easy to use. It keeps track of all the tedious things to remember—like what channel the colour is on and what DMX value blue is—so you can concentrate on more important tasks.

Most of the time you won't have to worry about the fixture library. The fixtures will be setup and everything will appear in its proper place. However, sometimes a new fixture is used that hasn't yet been entered, or a parameter needs to be modified. If so, the fixture library is needed.

In order to control your lights properly, the console has to know what signal to send them to get the desired performance. The fixture library contains this information for all of a fixture's parameters. In addition, some characteristics—like crossfading—can be defined by the user to completely customise response. Unless these settings are correctly entered in the fixture library, the lights are not likely to perform as expected.

Changing the fixture library presumes you are very familiar with all aspects of the WHOLEHOG. If you are not, skip the rest of this section for now, and go onto the Programming chapter.

To add a new fixture or change the characteristics of an existing fixture, use the **Fixture Library** on the **Setup** menu. When the window opens, you'll see a list of fixtures available on the left side and parameter information on the right. To check a fixture's parameters, choose the fixture by clicking on it, and then click on the desired parameter in the upper right list.

Super Scan	Catalogue:0	Checksum: None	Iris	Insert
New	Delete	Intensity:7	First Col Wheel	Delete
Copy	Pan: 5	Last	Gobos	
	Tilt: 6	2: Col Wheel	Strobe	

Super Scan	Wheel: 5	Default: 0
Golden Scan	Scroll: 0	Minimum: 0
Intellabeam	Turns: 2.1	Maximum: 255
Color Scroller		

Labelling: Step:	Crossfade: Normal
Abs White	End
% Red	Start
Step Yellow	
Mauve	
Name: White	Size: 8 bit
At: 16	16 bit

Changes can be quickly made to existing fixtures, and new ones can be created at any time. These changes then become part of a revised fixture library that is a permanent part of its show. It's important to remember that fixture libraries are part of shows and *not the desk*. So if you often use the fixture library it's wise to create a "template" show you can then copy for each new show. Otherwise, just take an old show and delete outdated programming if you don't want to avoid redoing the fixture library settings.

New Fixtures

To enter a new fixture, first click on **New** and then name the fixture with the keyboard. Next, enter the number of parameters in the window that appears.

In order for everything to work properly, the console must know some basic characteristics of the new fixture. In particular, it must know which channels are the intensity, pan, and tilt channels.

These settings are entered in the area to the right of **New** and **Delete**. For each of the three parameters shown, enter its location – its number – from the parameter list. For example, if you look at an Intellabeam you'll see that its intensity is 6, pan is 1, and tilt is 2. Note that these numbers are not the parameter wheel numbers used below. (Incidentally, **Catalogue** is an internal reference code that you don't need to worry about.)

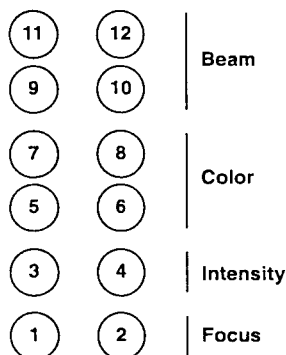
Parameter Settings

Now that the fixture has been entered, each of its parameters can be programmed to respond as you like. First, assign the parameter to a wheel on the desk. The wheel number is entered to the right of **Wheel**, which is located in the top left corner of the parameter box (the largest box on the screen). Wheel numbers are shown in the diagram to the left.

The wheel numbers also tell the console what property the parameter is (i.e., ICBF). Be consistent with parameter locations; doing so makes it easier to simultaneously program lights of different types.

Some fixtures have more than 12 parameters. No problem. Each wheel can support four parameters, giving you room for 48 in total. You can add a second parameter to a wheel by setting **Scroll** to a number other than 0. This parameter is then accessed on the desk by using **↑**.

Wheel sensitivity is set by adjusting **Turns**. A setting of 2.1, for example, means that 2.1 turns of a parameter wheel will take you from the minimum to the maximum value on that wheel.



Next, specify how you'd like parameter information to appear in the windows. There are three ways it can appear: as the actual DMX value (**Abs**), as a percentage of the total range (%), or as a discrete **step** ("blue" for parameters like colour wheels). Click on the appropriate item below the word **Labelling**.

If you need to set up steps, first figure out the absolute value that selects the midpoint of each step. You can do this with the **Abs** setting. Then select the **Step** option and chose the first step in the **Step** list, type in its name in the **Name** box, and its absolute value in the **At** box. Repeat for as many steps as you need – you don't need to program all the 48 usable steps. You don't have to enter steps in any particular order, but you must make the last step you use equal the maximum value (see below). Also, for Intensity type parameters, enter the value you want outputted when Highlight is on into step 48.

In addition, you need to enter the operational range for the parameter. These are the numbers sent directly to the fixtures. In other words, with DMX 512 it would be a **Minimum** of 0 and **Maximum** of 255. The default is the value sent to the fixture when it is not being controlled. For some types, like intensity, this should be 0. For others, it should be the value required to make an open, white beam. (colour wheel = white, gobo = clear, iris = open). Again, these steps must be done correctly in order for the Highlight and other features to work.

For some parameters, such as colour wheels or scrollers, it may not make sense for them to do crossfades. Consequently, parameters can be set to snap changes at all times (even if they are being faded-up manually). Start makes the value snap on as soon as the fade starts; end will make the snap occur right at the end.

16 Bit

Finally, if you're using a fixture with 16 bit resolution, set **Size** to 16 bit and increase the maximum value to 65,535 or less. This makes sure that 2 DMX bytes are sent for each parameter value. Otherwise, leave it at the default of 8 bit.

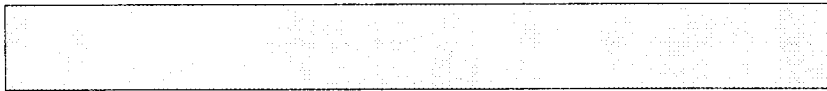
When your changes are complete, close the window to make them take effect.

Checksum

Some fixtures support error correction using checksums (eg Intellabeam HiRes). To turn on a checksum, click on **First** or **Last** to indicate whether the checksum should precede or follow the fixture's parameter information.



WHOLEHOG



PROGRAM

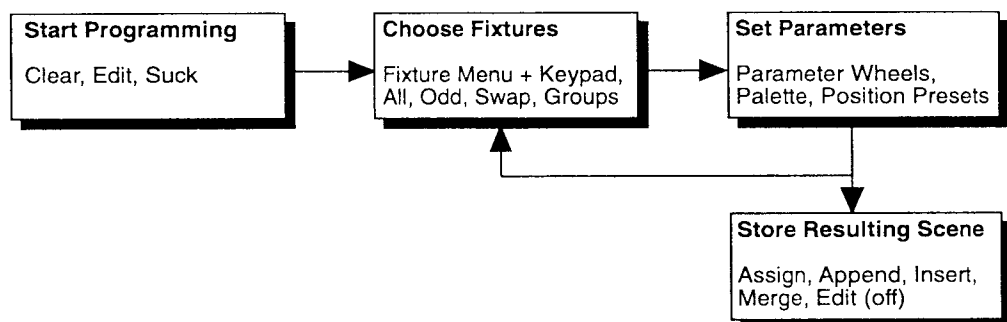
Change Page	<input type="checkbox"/>	Build	<input type="checkbox"/>	Edit	<input type="checkbox"/>	Clear	<input type="checkbox"/>	Blind	#@&%!
<input type="checkbox"/> Swap Menus									Suck
All	1	2	3	,	←				
Odd	4	5	6	>					
Swap	7	8	9	0	↵				
<input type="checkbox"/> Macro	<input type="checkbox"/> Assign	<input type="checkbox"/> Append	<input type="checkbox"/> Insert	<input type="checkbox"/> Merge	<input type="checkbox"/> Delete				

Programming

This section assumes you have correctly set up the fixture library, the instrument schedule, and the patch. These steps must be done before programming can begin.

Using the Programmer: an Overview

All programming follows the standard sequence of choosing fixtures, adjusting their parameters, and then saving them somewhere, much like the flowchart below. Nevertheless, at each stage there are many options and shortcuts available, as listed in each box.



You will find that all the programming for groups, palettes, presets, global scenes, stacks, etc. all use the same five action keys: **Assign**, **Append**, **Insert**, **Merge** and **Delete**. To keep things simple, the way in which you use them is always the same:

- 1** Choose the "source", for example the scene you want to **Assign** from.
When you have used the programmer, this is automatically set for you.
- 2** Press the action key.
- 3** Choose the "destination" to store the results of your programming.

As you program, the programmer display will change to show what programming action is being performed. If you get lost, or if the console doesn't appear to be doing what you expect, refer to this display to find out how the console is interpreting your commands.

A Simple Example - Using Assign

The easiest way to explain programming is to go through an example. So let's program an Intellibeam. But first make sure that:

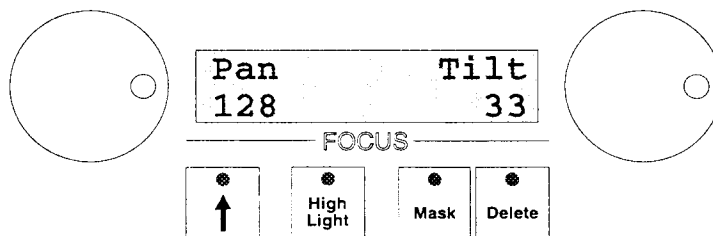
- The programming menus are selected (the LED on the **Swap Menus** button in the program section is lit).

- You have found the programming section of the console.
- You have loaded some Intellabeams or similar using the **Instrument Schedule** screen window.
- The Intellabeams are patched correctly.

1 Choose Fixture Start by pressing **Clear**; this gets rid of any old items that might be hanging around in the programmer. Next, press "Intellabeam" on the Fixture menu display (if you can't find Intellabeam, check that you've done everything on the above list). The button LED next to Intellabeam will light to indicate that the programmer's current type has now been set to Intellabeam. Finally, press **1** and then **↵** to select Intellabeam number 1.

2 Set Parameters Move the dimmer wheel to 100%, open the shutter, set colour to red, and adjust any other parameters you like. You should be able to see an active Intellabeam at this point. If not, check that the Grand Master is up and that the **DBO** and **Blind** buttons are off.

The Parameter Wheel displays show the adjoining wheel's parameter name and current value. If **--?--** is shown, then that parameter has not been programmed. Untouched parameters are not included in stored scenes, and therefore will not be played back when the scene is activated.



At this point, you can go back to **1** and choose more fixtures and adjust their parameters, if you like.

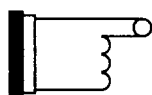
3 Store Results To save your programming, press **Assign** and then select one of the faders by touching the **Flash** button (the bottom one with the red LED). You have now programmed a scene; the display above the fader confirms this:

```

Stp 1
ICBF 1

```

The top line of the display shows the name of the stack. Of course, you can give it a more interesting name than **Stp 1** by using the **Add Names** control screen window. **ICBF** on the bottom line shows that Intensity, Colour, Beam, and Focus parameters are being controlled. The number 1 to the right of **ICBF** indicates that this is the first step in the stack.



The console automatically stores everything on the hard drive as you go along, so there is no need for any "Enter" or "Store" buttons. However, leave the console for one minute before you turn it off after any programming.

If this didn't work, make sure that the console had set the programmer as the source, indicated by the programmer display (see Programmer Display below). If it wasn't, then just use any of the Programmer keys or programming menu keys (for example: the Fixture menu) - this will then set the programmer as the source.

If you wanted to, you could assign this scene to as many faders as you like – just continue pressing **Assign** followed by the destination faders. However, be careful not to press more than one fader button for each assign command, as this will prepare the programmer for a different operation.

Programmer Display

You may have noticed some activity in the programmer display while doing the above example. That's because the display constantly updates with information to help keep track of what's going on. Upon assigning the scene to a fader, the display will look like this:

```
┌ [ 0:----] Assign to: 20
└ 8 :ICBF 1,
```

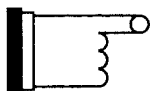
The top row shows the last action that you performed, using the format "source" - "action" - "destination". The parcan and [0:----] symbol represents the programmer, so that the display above indicates that the contents of the programmer were assigned to the current step of stack 20.

The 8 on the bottom row indicates that 8 parameters are currently attached to the parameter wheels for programming, and **ICBF** shows which types of parameters these are - intensity, colour, beam or focus.

If you now select Intellabeam number 2 for programming, additional information will appear in the programmer display:

```
┌ [ 5:IC-F] Assign to: 20
└ 8 :ICBF 1,
```

The 5 on the top line indicates that five parameters have already been programmed (assuming we adjusted five of the Intellabeam's parameter wheels). And **IC-F** reveals that intensity, colour, and focus parameters have been programmed, but not beam. In addition, you'll see that the bottom line is updated to show that Intellabeam number 2 is now being programmed.



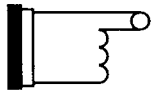
Instead of typing 2 in the programmer, you could have pressed ↵ to get Intellabeam number two. This button automatically brings the next fixture into the programmer and is useful when programming many fixtures consecutively.

The programmer remembers everything that's been programmed until **Clear** is pressed. So when Intellabeam 2 has its parameters adjusted and is then assigned to another fader, Intellabeam 1 will also be assigned. This makes it very easy to build up complex scenes, and intermediate settings can be stored at any time. To assign only Intellabeam 2, press **Clear** before programming number 2.

A More Advanced Example - using Append

In this example we'll program a colour chase on all of the Intellabeams:

- 1** Press **Clear** and then choose **Intellabeam** on the Fixture Menu. Actually, skip this step if you haven't chosen a different fixture since the last example; the desk automatically remembers the last fixture type chosen.
- 2** Press **All** to select all of the Intellabeams. Likewise, you could choose the odd or even ones with the appropriate buttons. In addition, the **'** button lets you select Intellabeam 1 and 6, for example. And **>** is for through, as in 1 through 6.
- 3** Now adjust the Intellabeams. Set dimmer to 100% and colour to white.
- 4** Assign to fader 19 using **Assign** and fader 19's **Flash** button.
- 5** Choose a new colour – no need to rechoose the fixtures, there are still attached to the parameter wheels.
- 6** Press **Append** and then touch fader 19's **Flash** button. Append adds a new scene to the end of the stack, as opposed to Assign which replaces a stack's current scene with the new scene. Do steps 5 and 6 over again for as many colours as you want. And – violà! – you've just built a colour chase.



There's nothing stopping you from selecting multiple lights of different types at once. For instance, Pan and tilt can be simultaneously programmed on SuperScans and Intellabeams, etc. Other parameters may be less compatible, depending on the differences among lights.

If You're Bored of Programing...

This section is a quick aside to cover the basics of playback in case you'd like to see what you've programmed.

First press **Clear** to erase anything in the programmer. Because the programmer has priority over the faders, it's best to clear to ensure proper playback. You'll see the programmer display now has **[0]** in it. Don't worry about the other messages, they just display the last actions performed.

To activate the fader, press the **Active** button (the top one with the green LED) above the fader containing your programmed scenes. This sets all the fixtures in that scene into their programmed colour, beam, and focus settings. The green LED lights up solidly to reveal has priority. If the LED is flashing instead – indicating it's being overridden – you forgot to press **Clear**.

Now bring up the intensity using either the fader or the **Flash** button.

Finally, use the **↑** and **↓** arrows to move from one step in a stack to another.

Changing Existing Scenes

Once you have stored a scene, you may need to change it quickly, without having to recreate it in the programmer.

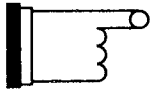
Edit

Edit is the quickest way to modify any aspect of an existing scene. Output control remains attached to the scene master or fader, so make sure it's active if you want to see what's going on.

To edit a scene:

- 1** Press **Edit**.
- 2** Select the fader or scene master to edit. The Edit LED will come on.
- 3** Select the fixtures you want to change.
- 4** Adjust the parameters using the wheels, palettes or presets
- 5** Press **Edit** again when done.

If you change your mind halfway through, press **Clear** to abort the change. As we will see later, **Edit** can also be used to edit position presets, palettes, and global scenes.



We recommend that you edit stacks while in manual playback mode only, otherwise the results may be quite unexpected.

Introducing the Five Programming Keys

Now that you have had an overview of how to select fixtures, adjust their parameters, and store the resulting scene, we will cover what the programmer keys do in total, so you have a picture of how flexible they are. Don't worry if some areas are still unclear: we will be covering them later on in the chapter.

Assign

The **Assign** button is the most important programming key. It is used to set up groups, position presets and palettes. It stores scenes from the programmer into scene masters, fader masters, and global scenes. It can also copy scenes around from a scene master, fader master or global scene to any other scene master, fader master or global scene. It sets up global stacks, and copies a global stack onto a fader master. Finally, you can also use it to copy stacks between pages.

Append

You can only **Append** onto a fader master. Any other destination will have no effect. **Append** creates a new scene and places it at the end of the stack. If you are appending from another fader master or global stack, the entire stack will be appended.

- Insert** The **Insert** button acts in a similar fashion to **Append**, but places the new scene or stack immediately after the current scene of the stack. Insert and Append only work when the destination is a stack.
- Merge** The **Merge** button does not add any new scenes; instead, it merges the new scene onto an existing scene, replacing any old parameter settings with the new values, and adding parameters where they were not there before. **Merge** works with scene masters, fader masters, groups, presets, palettes and global or local scenes. When merging a scene onto a stack, the scene will be merged onto the current step *and all subsequent steps*. Two stacks can also be merged together step by step using merge.
- Delete** The **Delete** button works by *holding down Delete*, and then choosing what you want to delete. **Delete** erases groups, position presets, and palettes. It erases scenes from scene masters and local or global scenes. It deletes steps from stacks on fader masters, and deletes entire stacks when deleting a local or global stack.

Introducing the Other Programing Keys

- Shift ↑** For fixtures with more than 12 parameters, the **↑** button accesses additional parameters on each wheel. Up to four different parameters can be stored on each wheel. The LED lights when shift is used.
- Shift has an additional function useful when working with multiple fixture types. If different fixture types are selected simultaneously, they might have different starting values, (note: the parameter displays only show the settings of the last one selected). When the parameter wheel is moved, each fixture is changed by the same amount, which preserves the relative spacing of settings between each fixture. If you want to grab all fixtures to the same value, hold down the shift key while moving the wheel.
- Masking** Use the **Mask** button to exclude parameters from scenes and stacks. While adjusting a scene's settings in the programer, you can press **Mask** to restore a parameter's original settings, if any. This is useful for correcting errors and making sure scenes and palettes do not contain unwanted parameter types. You don't have to push **Mask** if its parameter LCDs show --?--. Likewise, if, for instance, the focus **Mask** button is pressed while assigning, appending, inserting or merging a scene or stack, the new focus information will not be stored in the destination. The source remains intact.
- Deleting** When using **Edit** or **Merge**, the parameter **Delete** buttons are used to erase fixture parameters from a scene altogether. Note, this is not the same as setting values to 0 or defaults.



Never set a parameter to 0 (or its default) just to get rid of it. The value will still be in the scene, and will force the parameter to 0 (or the default) when played back. Instead, use Delete to make sure that it is not recorded in the scene.

For example:

- 1** Clear the programmer, and select the fixture(s) in the programmer.
- 2** Press the **Delete** buttons for the parameters you want to remove. All four will erase the entire fixture.
- 3** Press **Merge**.
- 4** Select the scene, stack, preset, palette, etc containing the fixtures to be deleted.

Or using **Edit**:

- 1** Press **Edit**.
- 2** Select the scene, stack, preset, palette, etc containing the fixtures to be deleted.
- 3** Select the fixtures in the programmer.
- 4** Press the parameter Delete buttons.
- 5** Press **Edit** again.

Blind

Blind prevents the fixtures being programmed from responding during programming. This feature is particularly important when programming during a show while other scenes are active.

Highlight

Highlight sets a fixture to a full, white beam to aid programming. These settings are only temporary and aren't included in programming. You'll find this button useful for aiming beams at stage positions.



If you are adjusting some parameters in the programmer, and you screw up, you can scrub your current changes by pressing ◀. The parameters will revert to their previous settings.

Also, use ◀ to undo any typing errors while keying in instrument numbers.

Recording Parameter Types Separately

You will have noticed that you can record parameter types separately from other types, just by not moving the other wheels or by using parameter Mask. This allows you to make Palettes that work only on a particular type, and to record scenes and stacks that affect colour or focus, for instance.

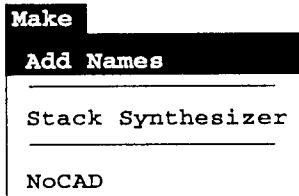
ICF

Intensity, colour and focus types are set up so that whenever you move a wheel of that parameter type, all the parameters of that type are recorded. Therefore you cannot record pan separately from tilt, or dimmer level separate from shutter, for instance.

Beam

Due to the multitude of beam parameters on fixtures, the beam parameter type allows separate recording of parameters. Therefore, to record beam parameters, you must move *all the wheels that you intend to record*, so that the parameter display " () "s surrounding each output value disappear.

Naming Scenes and Stacks

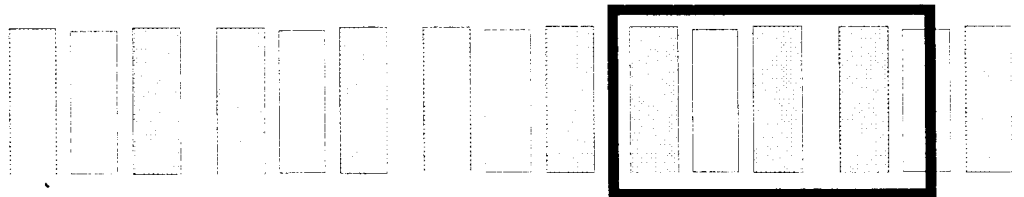


Any scene, step, stack, group, position preset, palette, local or global scene or stack can be named with the **Add Names** window. Type the name into the edit box in the window, press the return key (↵) on the control rack keyboard, and touch the button or fader you want to name. That's all it takes.

In the playback section we'll see that there are three modes in which a stack can be played back: manual, chase, and timed. To name an entire stack as opposed to a scene on a stack, you must be in chase or timed modes. Manual mode is used for naming the steps or scenes within a stack.

Groups

Groups eliminate tiresome, repetitive entering of fixture lists; instead, you can select the desired fixtures with one button press.



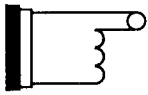
Fixtures can be grouped any way you like—they aren't limited to just one type of light. Likewise, there's no limit to the total number of fixtures that can be grouped.

For instance, one useful group might be "All fixtures" to simultaneously select all of a show's lights for a complete blackout. Others might be "Back truss" or "Blue Par Cans."

Groups are setup and chosen through the groups menu located to the left of the fixture menu LCD. To create a group:

- 1** Select the desired fixtures with the programmer.
- 2** Press **Assign**.
- 3** Touch a button in the group menu.

To use a group, just push the group button.



If you run out of buttons to place a group on, press the up arrow located below the menu to reveal seven empty spaces. This process is called "scrolling the menu." To return to the original menu, press the down arrow. Use the arrow buttons to access all 230 group buttons.

It's worth taking a few minutes before starting programming to setup expected groups. Doing so will save time later on.

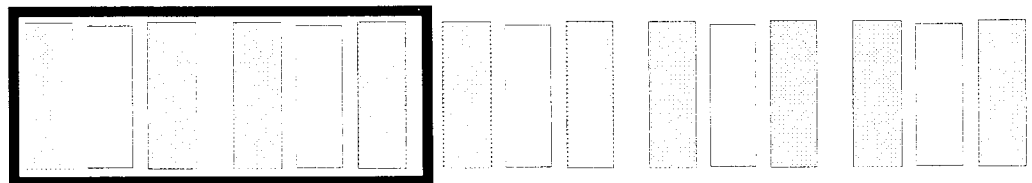
Odd, Swap

The **Odd** button is an automatic group that selects all the odd fixtures of the current fixture type. Use the **Swap** button to swap between two fixture selections: the fixtures currently attached to the parameter wheels, and the fixtures already programmed in the programmer.

Palettes

Groups are a good way to choose fixtures with one button push. Similarly, the palette quickly accesses parameter settings without having to continually dial them up with the parameter wheels.

The palette is especially useful for fixtures with colour mixing systems requiring programming of three separate values to select a colour. Dialing up three values to program a colour shade will quickly become tiresome and may cause mismatched colours. Having a palette button to set the values instantly eliminates this problem.



A palette setting is programmed in three easy steps:

- 1** Select a fixture (for example, Superscan 1).
- 2** Set the parameters (0% Red, 0% Green, 100% Blue).
- 3** **Assign** to a button in the Palette menu.

Now you need only hit that palette button to program Superscans to those settings. Note that although only one Superscan was selected, the palette setting will work for *all* Superscans.

Let's give this palette setting a name. Choose the **Add Names** menu on the control rack screen and type in "Blue." Press return and then the destination palette button.

It's also possible to have different effects for different types of lights on a *single* palette button. For example:

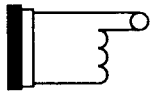
- 1** Choose an Intellabeam.

2 Set the colour wheel to blue.

3 Press **Merge**.

4 Press the **Blue** palette button we created above.

- Now when Superscans and Intellabeams are selected together and the palette button pressed, both fixtures will go to blue. This facility is extremely useful when mixing colour scrollers, moving lights, etc. together in one show.



We recommend that you setup an "open" palette to force every fixture to open shutter, no colour, and clear beam. Make sure that you move all the beam wheels, otherwise some may not get recorded. (This is not the same as Highlight which is only temporary.) Using this palette setting to open shutters and dimmers: a) is quick, b) gives increased programming accuracy, and c) eliminates unwanted settings lingering from a previous scene. Similarly, a "shut" palette which only sets dimmers to 0 or closes shutters is useful for setting up cues that perform a dimmer desk style swap.



Program the palettes using only the parameter types that you intend, and don't let others (like Intensity) slip in by mistake. Use the parameter Mask buttons to remove any unwanted parameters moved before assigning, or parameter Delete and Merge to remove any parameters accidentally assigned.

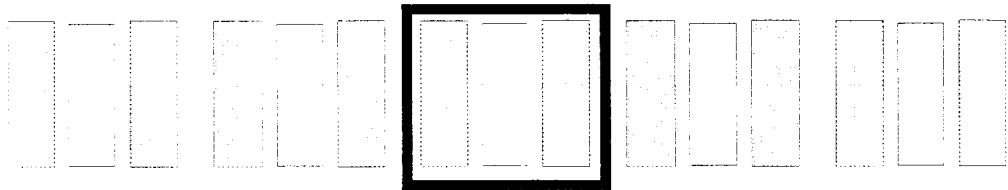
You are not limited to just storing one type of parameter in a palette - you can mix colours, beam effects, intensities and focuses all together. Infact, an entire scene can be stored as a palette.

Palettes don't have to store one look per type of fixture - you can program patterns across fixture types. For example, program Scan 1 with red and Scan 2 with blue and store as a palette. When that palette is across all scans, the odd scans will be red, and the even scans blue.

Palettes can store focus position presets. This allows you to define a geometric look of postions which is built up from a series of position presets. This is better than storing the look as another position preset, since the look will not have to be adjusted when the truss is moved – it will update automatically from the constituent position presets.

Position Presets

Position presets are like palettes in that they give instant access to particular levels. However, position presets only work for focus (pan and tilt) information and don't store other parameter settings even if they are programmed - you do not need to use parameter masks to strip them out. Also, the values stored for a position preset are unique to specific lights. This way you can aim every light at the lead vocal position, store it as a preset, and then recall the unique aiming information for every light at the touch of a button.



The beauty of position presets is that they automatically update throughout programming when the preset is changed, unlike palette settings. So if you program an entire show using position presets, you only have to *merge the new settings into the preset* to update *all* of your programming. This is very useful for touring, where focus positions are usually tweaked at each new venue.

Making a position preset is much like creating a palette setting:

- 1** Select the first fixture, say Superscan 1.
- 2** Turn on **Highlight** (a quick way to turn lights on, but not required).
- 3** Adjust the scan's pan and tilt values to properly focus its beam.
- 4** Hit ↵ to move on to Superscan number 2 and focus its beam
- 5** Continue until all fixtures have been focused.
- 6** Press **Assign**.
- 7** Press a button in the **Position Preset** menu.

Just like with palettes, fixtures of different types can be combined on one position preset.

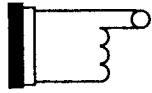
Changing Presets

To alter an existing position preset:

- 1** Press **Edit**.
- 2** Select the position preset.
- 3** Select the fixture(s) to be refocused.
- 4** Adjust the pan and tilt values.
- 5** Press **Edit**.

Or, using **Merge**:

- 1** Select the fixture to be refocused.
- 2** Load its position preset into the programmer.
- 3** Adjust its pan and tilt values.
- 4** Press **Merge**.
- 5** Press the original position preset.



*If you created a focus position in a scene without using a preset, you can still create a preset (or a palette) with that scene's settings. Just touch the fader or scene master, press **Assign**, and press a position preset menu button.*

- If you haven't done so yet, now is a good time to try out what you've been programming. Select a group, a palette setting, and a position preset. Mix and match to see what effects can be achieved.

Working with Existing Scenes and Stacks

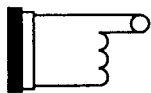
Once you've created and stored scenes on the faders or scene masters, you can copy them to anywhere on the console. The following examples show some of the possibilities:

Copy a scene from one scene master to another...

- 1** Select the scene master to copy.
- 2** Press **Assign**.
- 3** Touch the scene master where a copy is to be placed.

Combine the current step of a stack with a scene located on a scene master...

- 1** Select the fader (by pressing **Flash**) having the scene to be copied.
- 2** Press **Merge**.
- 3** Touch the scene master that the selected step is to be combined with.



*You may have noticed that when you choose a source, the master will be activated or will flash. To prevent this, you can choose a source blind in the following way: for scene masters, press the master while holding down its scene master **Add** or **Swap** button; for faders, press the **Flash** button while holding down **↓**. You do not need to do this while choosing the destination, since the console automatically prevents any output.*

Insert a scene after the current step in a stack...

- 1** Touch the scene to be copied. (It could either be on a fader or scene master).
- 2** Press **Insert**.
- 3** Select the fader having the stack into which the scene is to be inserted. (Make sure that the current step is the one before where you want to insert the scene.)

Add an entire stack to the end of another one...

- 1** Select the fader having the stack to be copied.
- 2** Press **Append**.
- 3** Select the destination fader.

Use **Append** to copy a stack to an empty fader.

We can do the same copy, but modify the stack while copying it...

- 1** Select the fader having the stack to be copied.
- 2** Press **Mask** in the colour parameter section.
- 3** Press **Append**.
- 4** Select the destination fader.

You can tell if your mask has been successful by noting the lack of a **C** (for colour) in the stack's display. Don't forget to turn mask off; otherwise it will continue to mask when you don't want it to.

Entire stacks can be merged together step by step (or property by property if desired)...

- 1** Select the fader having the stack to be copied.
- 2** Press **Merge**.
- 3** Select the destination fader.

This combines step 1 of the first stack with the active step of the second stack, step 2 and the next destination step, etc., until the destination's last step is reached. If the active destination step is step number 2, then step 1 will not be affected. If the source is shorter than the destination, the source will repeat itself and merging will continue through the end of the destination.

If you find that your commands aren't working quite as expected, look at the programmer display to see how your actions have been interpreted by the WHOLEHOG. A frequent problem is that people attempt to assign out of the programmer, but have mistakenly set something else up as the source.

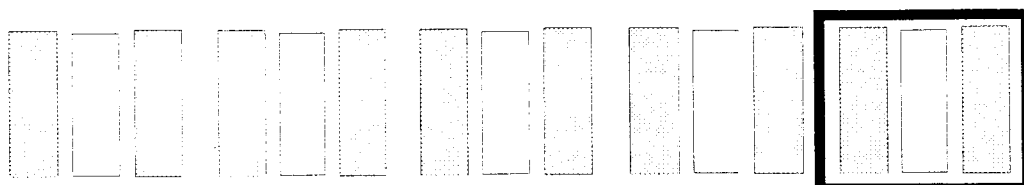
Pages

What happens when you've used up all 20 faders and 28 scene masters with your programming, but you need more room to store scenes?

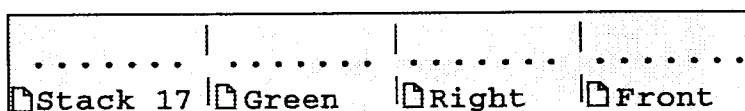
You change page!

A page holds everything stored on the faders and scene masters at one time. By changing page you get another 20 faders and 28 scene buttons to store programming. Pages can be used to organise your programming—by song, act, or any other unit.

Everything we've done so far has been on a single page—"Page 1" if you haven't changed the name. To access a different page use the page menu. You'll need to press **Swap Menus** first to get to this menu. (You're OK once its LED is not lit.) The page menu is second from the right.



In the page menu you'll find a list of available pages. The page with its LED lit is the one you're currently in. To change page, press the page button you desire and its LED will start flashing. Then preview its contents by looking at the fader LCDs:



If you want to move to this page, press the **Change Page** button in the program section. To create a new page, just hit an empty page button in the menu, and a new page will be created. 77 pages are possible per show; use the scroll buttons to access new pages once the first window fills up.

You can name pages just as you'd name anything else on the desk. Type in a name in the **Add Names** window on the control rack screen and then touch the page button.

If for some reason you change your mind while previewing a page and don't want to go to the new one, simply press the original page button and you'll stay there. The displays will return to normal.

If a stack or scene is active when a page is changed, it will remain active. A **P** in the display signifies that a new stack or scene assignment is pending. The old assignment will be held over until the stack or scene is deactivated. Similarly, if an intensity-only scene is about to be loaded onto a stack, a **P** will come up to indicate that you need to pull the fader down to zero.

Copying

If there are some scenes or stacks in one page that you'd like to use in another, it's possible to copy them across with the same five function keys we've been using for other programming. However, you must first preview pages before using them. So to copy a stack from one page to another:

- 1** Press the source page button. (Not necessary if you're already there.)
- 2** Select the source fader.
- 3** Press the destination page button.

4 Press **Assign**.

5 Select the destination fader.

Assign can copy anything between any page; your source or destination needn't be the current page. However, if the destination page is the current page, you can use the other edit keys as well – **Append**, **Insert**, **Merge**. Like **Assign**, **Delete** also works with any page.

You can **Edit** a local scene directly, without having to make its page current.

Use **Delete** on a previewed page to quickly delete an entire stack. Otherwise you'll have to delete it one step at a time. Deleting a stack is done in four steps:

1 Preview a page.

2 Hold down **Delete**.

3 Select the stack to be deleted.

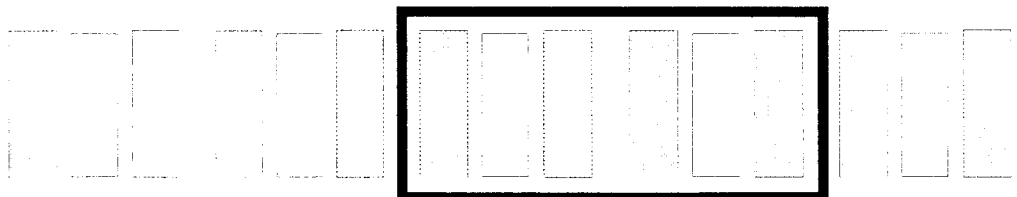
4 Return to the original page.



Only preview a page when necessary. Running a show while a page is previewed will lead to unexpected results, namely inoperable scene masters and flash buttons.

Globals

If you use the same looks, chases or effects throughout a show, then globals will be of great use. Like position presets, globals will update wherever they're used in a show. A global is created just like any other scene, only it's assigned to the global menu rather than a fader or scene master.



Globals use the remaining four menus with two each for global scenes and global stacks. Once a global is created it can always be accessed through the menus.

The globals can be assigned to as many pages as you like, and remain linked to the original global scene or stack in the menu. Any change to the original automatically affects all the others. Note that changes will not take effect until the page is changed.

To create a global scene:

- 1** Choose the source scene from a scene master, stack, or programmer.
- 2** Press **Assign**.
- 3** Press a global scene menu button

This procedure has stored a scene in the global menu. The menus are only storage spaces and cannot be used for playback. The scene that was the source of the global remains unchanged: it is not referenced to the global, and will not change if the global is changed.

To move a global down to a playback master:

- 1** Press the global scene.
- 2** Press **Assign**.
- 3** Press the destination scene master or fader.

You'll notice that an * appears to the left of the scene name to signify a global reference. If this scene is edited or changed in any way, then the reference to the global is lost and the scene will become an ordinary one.

If you need to change a global scene, you can **Edit** it directly, or **Assign** a new scene over the top of the old one.

Global stacks work just the same way. What's more, global stacks can even reference global scenes within them. To change a global stack, you must **Assign** a new stack over the top of the old global stack.

Programing Theatrically with Build

When designing complex stacks consisting of a lot of scenes which follow on from one another, it is useful to build the stacks as an evolving series of changes. Instead of thinking of a scene as a complete set of programmed values, you look at it as introducing a set of changes on the previous scene in the stack.

Such a stack can be built quite easily in one go from the programmer by using **Append**, and making sure you never **Clear**. However, if you need to make changes, things could get very complicated.

Build

This is where **Build** comes in. It switches on a mode whereby **Assign**, **Append**, **Insert**, **Merge** and **Delete** all "preserve tracking." This means that you can program new steps only in terms of the changes you need: parameters you don't change will automatically maintain their settings through the new step, and parameters you do change will maintain their settings through subsequent steps up until another step changes their setting. This is called tracking.

Example

For example, imagine a Scan programmed with the following settings in a series of steps:

1	Bass	Bass	Fl	Open	Blue	Fl	Radial
2	Bass	Bass	Fl	Open	Green	Fl	Radial
3	Wall	Wall	Fl	Open	Green	Fl	Radial

Now, use the programmer to point the Scan at, say, vocals. Don't program anything else. **Insert** it after step 1 with **Build** on. The stack will end up looking like:

1	Bass	Bass	Fl	Open	Blue	Fl	Radial
1a	Vocals	Vocals	Fl	Open	Blue	Fl	Radial
2	Vocals	Vocals	Fl	Open	Green	Fl	Radial
3	Wall	Wall	Fl	Open	Green	Fl	Radial

Note that even though you only inserted focus information, all other characteristics were carried through into the new step. Also, the new focus values were tracked through step 2 until another change was detected in step 3. **Append** will work in a similar fashion to Insert.

Delete

If you deleted step 2 now, you would end up with

1	Bass	Bass	Fl	Open	Blue	Fl	Radial
1a	Vocals	Vocals	Fl	Open	Blue	Fl	Radial
3	Wall	Wall	Fl	Open	Blue	Fl	Radial

since you have deleted the step that made the change to green. Therefore, no change to green will be made, and the light will stay as blue.

Merge

If you need to alter a change without adding a step, then use **Merge**. For instance, set gobo to star in the programmer and **Merge** onto step 1a. That change will then track through from step 1a until it encounters another change in gobo.

Assign

The effect of **Assign** is more complicated: it is equivalent to deleting one set of changes, and replacing them with another, all in one go. Use it with care in **Build** mode.

Edit

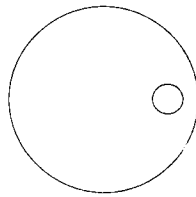
You can still **Edit** scenes of a stack in **Build** mode. Any changes you make to that scene will automatically track through the rest of the stack.

When you turn Build off, any stack you created can then be programmed and changed using the 5 action keys as per normal.

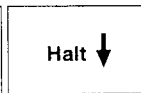
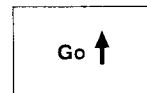
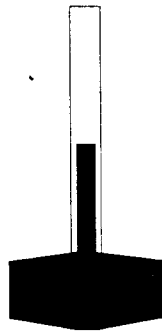
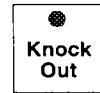
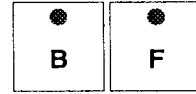
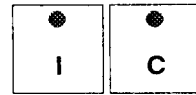
Playback



PLAYBACK



Sample



GRAND MASTER



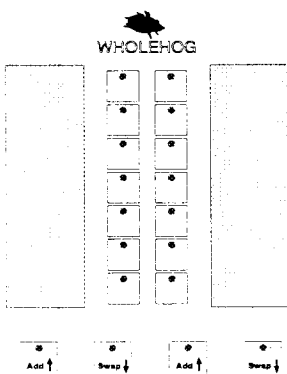
The WHOLEHOG is designed for maximum playback flexibility:

- It gives immediate access to many looks and effects. These can be combined manually to create a complex show "live."
- At the same time it provides powerful timed playback to allow preprogramed shows with a minimum of operator button-pressing.

This is all achieved from the following playback features:

- 28 scene masters giving one-touch access to favourite scenes, or individual parameters for colour / beam / focus overrides.
- 20 fader masters containing stacks of up to 65,000 scenes each.
- Three playback modes for fader masters: manual, chase or timed. All three modes can be used at the same time on different fader masters. All 20 fader masters can run chases or timed stacks simultaneously.
- Fully dipless crossfading at all times.
- An intelligent priority system (LTP+) which takes care of activating scenes when required, and gives the option of deactivating them to return to the previous look.

Scene Masters



Scene masters are the simplest form of playback control; they act as On/Off buttons for the scenes residing on them.

The WHOLEHOG has 28 scene masters per page located in the four left-most playback menus (make sure that the **Swap Menus** LED is off). Once a scene has been assigned to a scene master, you can activate it by holding down its button. When you release the button, the fixtures return to their previous settings, or to their default settings if nothing else is active.

If you aren't getting the expected response, make sure that you've cleared the program, because otherwise the program will override the scene master.

Add

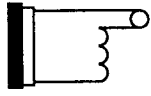
If you press **Add** beneath the scene master menu, the scene master will now "latch"; once pressed, the scene will remain active until the button is pressed again.

Swap

Swap also latches the scene masters; however, pushing one scene master automatically switches off the others in its set of 7 masters.

Timing

Add and **Swap** also tell the desk to crossfade using programmed times. The default on and off (or In and Out) times are 1.0 second. We will see how to change the times using the Playback Controller in the next section.



Scene masters are very useful for shows where a lot of manual operation is expected: use them to store favourite looks or transition looks for quick access; or program them to act as colour, beam or even focus overrides.

Remember that when you turn scene masters off, the console returns to the previous look. This gives you the ability to "bump" a scene or colour etc temporarily, and then to continue where you left off.

One way to use a bank of scene masters is to imitate "flash button" control of par cans with an automatic intensity swap. This is programmed using the following steps:

- 1** Clear programmer.
- 2** Select **All** group (a group containing every fixture in the show.)
- 3** Select **Shut** palette setting (a palette with intensity of 0.)
- 4** Assign to Scene Master 1
Assign to Scene Master 2
etc.

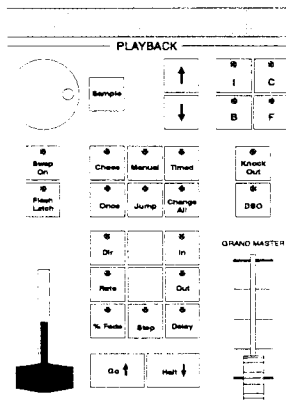
This makes sure that the intensities of all lights are off whenever a scene master is pressed. Now, we need to add to each scene master the lights which will be left on:

- 1** Clear Programmer.
- 2** Select Par Can 1.
- 3** Select **Open** Palette (Intensity on, gobos clear, shutter open.)
- 4** Merge with Scene Master 1.
- 5** Repeat from step 1 for remaining masters and par cans.

This has created a series of scenes with all values set to off, except for particular par cans – namely, swap mode.

Another example for using scene masters is as focus overrides. This is particularly useful in television work, allowing the operator to grab a group of lights and immediately swing them into camera view. Using up a bank of masters should cater for a range of camera angles.

Playback Controller



The playback section is located below the programmer. It controls all playback settings for scene masters and faders. The panel has many stack-oriented buttons which we will cover later on. For the time being, we will look at programming a scene master's In and Out times.

The Playback Controller can only adjust one scene master or one stack at a time. It also needs to know which master you want to adjust. This is done by linking the Playback Controller to the master using **Sample**:

- 1 Press **Sample**.
- 2 Press the scene master button.

Once done, the Playback Controller display will change to show:

Scene 1	:	In:	Out:	Delay:
		[1.0]	1.0	Halt

The timing parameters of the scene master can now be altered directly by pressing the either the **In**, **Out** or **Delay** button and using the playback wheel.

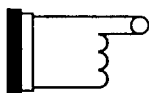
In The In time is the amount of time between pressing the button and the scene becoming 100% active. To program the In time, press **In**. Its green LED will light to confirm that the playback wheel is now linked to the display.

Out Pressing **Out** swaps you over to programming the Out time.

Delay You can also program the Delay time – the time a scene remains at full – although this has no effect on the scene master. However, since scenes on scene masters can be copied onto stacks, the delay times could have an effect if copied.

You may have noticed that there is an upper limit to the Out time. In fact, the Out time must be less than the total of the In and Delay times. This is necessary to prevent more than one crossfade occurring on a stack at once.

In and Delay times have no such limits. Their maximum and minimum values are 0.1 second to 68.3 minutes. Increase the Delay time, or set it to **Halt**, to obtain an Out time greater than the In time.



Note that timing information is not stored until a new scene master (or fader) is sampled. So get into the habit of sampling an empty fader or scene button whenever you're done with the playback controller. If you follow this advice you'll avoid accidental changes and lost programming.

Faders



Faders offer much more power and flexibility than scene masters. They can contain a whole series of scenes – or just one – all on a fader and be played back in one of three modes: manual, chase, and timed.

But you don't have to stick to a mode. Different stacks can be run in different modes. Likewise, it's possible to jump anywhere in a stack and skip unwanted scenes. In addition, different properties – like intensity – can be controlled separately from other properties.

This separation is possible because when we refer to the "faders," we actually mean the fader plus the adjoining buttons. A combination of faders, dedicated fader buttons, and the playback controller work together to give you this level of control.

The best way to understand fader control is to understand each of the playback modes.

Manual Mode

Manual mode is where you automatically end up while programming. Stacks are created in manual mode because editing is easiest there.



We recommend that all editing of levels and manipulation of scenes be done in manual mode. Otherwise, results may be unpredictable.

Active

Once a scene or stack is assigned to a fader, the dedicated fader buttons can be used. The **Active** button is the overall "on" button for a fader. If a fader is not active, it will not affect output. Press **Active** to activate a scene. This sets fixtures to their programmed colour, beam, and focus (CBF) values. Intensity is controlled separately by the fader or the **Flash** button.

Deactivate

Generally, you will never have to deactivate any master. To move to a new scene, just activate the new master and it will override the old one. When you do need to deactivate a fader however, push **Active** while holding down the ↓ button.

Intensity-Only

Normally, you cannot bring up intensity with the fader or **Flash** button until **Active** has been pressed. This is to stop you from knocking up intensity by mistake. However, in the special case of scenes which are programmed with only intensity parameters, you do not have to press **Active** first. They can be faded and flashed immediately.

Selecting Scenes

To select a different scene in the stack, use the ↑ and ↓ buttons to move up and down to reach the scene you want.

If this is done while the fader is active, the values will change from scene to scene as you hit the button. To change more subtly, you could either fade intensity to 0% and then change scenes, or deactivate the fader altogether and move to your scene before reactivating and fading in.

Crossfading

If you want to fade in or out an entire scene, CBF values as well as intensity, move the fader while holding down the ↓ button.

Whether performing a manual fade or a timed one, using intensity or CBF, the WHOLEHOG will always automatically crossfade from the previous values to the new ones. When fading up intensity manually for instance, 50% of the crossfade from the previous intensities to the new ones occurs when the fader is halfway up. Once the fader is all the way up, the programmed intensity of the new scene will be reached. If you pull the fader down again, the WHOLEHOG will crossfade back to the previous intensities. In this way, *fully dipless crossfades* occur on all faders at all times.

This is different to what many operators will be used to with intensity sub-masters on traditional desks. However, it gives much more flexibility in playback, allowing, for example, swap effects or being able to fade in shutter chases "diplessly".

Flash LEDs

Notice that the red and green LEDs change whenever you activate a scene. They give you information about whether a fader is controlling levels or not, or whether it has been overridden.

The green **Active** LED tells you about the CBF levels programmed on the fader. The red **Flash** LED tells you about intensity levels.

If an LED is on solidly, this means that it is controlling output. If you move the fader while the red LED is on, or deactivate the fader while the green LED is on, there will be a direct effect on what you see on stage.

If an LED is flashing, this means either

- a) the fader has been activated, but there are no programmed levels in the current scene. You can move the fader / deactivate the scene without any effect on stage. If you press ↑ or ↓ you may reach a scene that is programmed, and then levels will be output.
- b) Or, all the parameters that the fader was controlling have been overridden by another master or the programmer. You can move the fader / deactivate the scene without any effect on stage. If, however, the overriding master is deactivated, control will return to this fader.

An LED will stay on solidly until all its parameters have been overridden. In the case of partial overrides, just press the **Active** button again to reactivate the whole scene.

Jump to Step

To jump to a scene a long way away from the current one without toggling through all the scenes in between, use the playback jump feature. To do this you'll first have to link the Playback Controller to the fader:

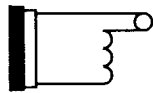
- 1** Press **Sample**.
- 2** Press the stack's **Flash** button.
- 3** Press the **Step** button in the playback section. (Only required if you're in chase mode, or you've just been changing some other setting.)
- 4** Dial up the step you want to go to with the playback wheel, or by using the playback controller **↑** and **↓** buttons. The **Step** LED will start to flash.
- 6** Press **↑** on the fader when you want to jump. If you want to cancel the jump, just press **Step** again.

This feature also works in chase and timed modes.

Quadrant Fader

To crossfade manually between steps, use the quadrant fader (the large T-bar). First sample the fader to be controlled. Then move the quadrant fader to crossfade between steps. When the top or bottom is reached, the red **Manual** button LED will light solidly, indicating that the crossfade is complete. It blinks while crossfading.

If you like, you can return to the previous scene by moving the quadrant fader back in the other direction. Note that the quadrant fader only works in manual mode.



The quadrant fader can be used to track a performer as he or she moves across the stage. Set up two focus positions to both sides of the performer's expected path and use the fader to follow them around.

Masking

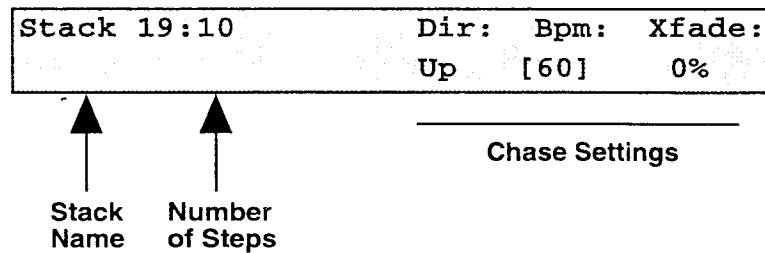
If you need to temporarily knock out a property from a fader during playback, use the **I**, **C**, **B**, and **F** buttons. When switched on, the parameters of that type will revert to their prior (or default) levels. When mask is switched off, they will return to the active levels. This also works in Chase and Timed mode.

Chase Mode

Manual mode is quick and easy to use, but has the disadvantage of only recalling one scene at a time without any crossfading. Chase mode overcomes these problems. Use the Playback Controller to enter chase mode:

- 1** Press **Sample**.
- 2** Press the **Flash** button of the desired stack.
- 3** Press **Chase** on the Playback Controller to select chase mode.

The Playback Controller display will now show:



Also the stack display now shows the stack name on the bottom line. To change stack names, you must first have them in Chase or Timed mode.

Running a Chase

↑ and ↓ now control chase activity. The red ↓ LED will be on indicating a stopped chase. Pressing ↑ will start the chase running, and the green ↑ LED comes on – the **Active** button does not have to be pressed beforehand.

Once a chase is running, pressing ↑ again will make it go back to the first step in the chase.

Use the ↓ button to stop a running chase. The current crossfade will be completed and the chase will stop with the current step active. The red ↓ LED will come on to indicate a stopped chase.

Alternatively, the chase could be stopped by deactivating the fader: press **Active** while holding down ↓. The current step will not be active.

When a chase is stopped, pressing ↓ will step down the stack manually. If you hold down ↓ and press ↑, you can step upwards manually.

Chase Options

Now use the Playback Controller chase buttons (along with the playback wheel or the playback ↑ and ↓ buttons) to set the chase options. Remember to **Sample** the fader first if you haven't already.

Dir sets the chase direction:

- Up: the chase runs from the first to the last scene.
- Down: the chase runs from the last to the first scene.
- Random: the chase randomly picks the next scene.
- Bounce: the chase runs from the first to the last scene and then back to the first scene, etc.

Rate controls the rate at which a chase moves from one scene to another and is expressed in beats per minute.

% Fade controls the proportion of crossfading from step to step. 0% results in no crossfading while 100% yields a full crossfade.

Once runs through a chase one time only; restart with ↑.

Chase mode could be used for the following types of effects:

- Shutter chases or parcan chases.
- Colour cycling on colour wheels or scrollers, or Gobo chases.
- Movement chases, such as can-cans or from position to position.
- One shot chases for complex transitions from one look to another, as in staggered movement, or for one time effects which then drop out, as in an audience-blinding movement. Append a blank step to cause automatic dropout.

Use chase for any effect requiring a regular and even transition from step to step. For more complex timing, use timed mode.

Quick Sample

You can avoid having to press **Sample** whenever you need to change a fader's or a scene master's settings:

- Hold down the fader's **↓**, and press the **Flash** button.
- For scene masters, hold down the master's **Add** or **Swap** button and press the master.

You can directly access a fader's settings by holding down **↓** and using any Playback Controller function. This speeds up playback processes enormously. For example:

- Changing a bank of faders to a particular mode – hold down each **↓** in turn, and press **Chase**, **Manual**, **Timed** as required.
- Altering chase rates: hold down **↓** and move the playback wheel.
- Skipping steps in Timed stacks: hold down **↓** and choose the new step using either the playback wheel, or the playback **↑** and **↓** buttons.



All these methods are exactly the same as if you had pressed Sample and chosen a fader or scene master. The playback controller will remain linked to the last fader or scene master you adjusted. You do not have to repeat the quick sample action to continue to adjust the same fader or scene master.

Timed Mode

Timed mode allows you to individually program each scene in a stack with its own crossfading times. The control of faders in Timed mode works just like Chase mode; also, the programming of times uses the Playback Controller like Chase mode.

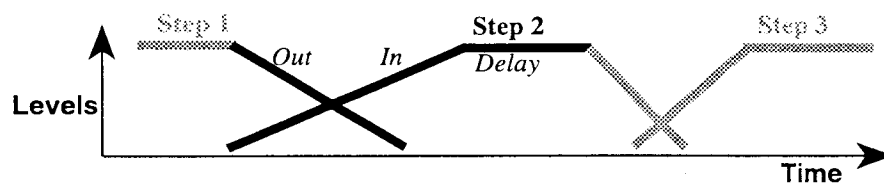
To change to Timed mode, **Sample** the fader and press **Timed**. The Playback Controller display will change to:

Stack 19:10	In:	Out:	Delay:
Step 1	1.0	[1.0]	Halt

The settings in the display show the timing information for one step in the stack. It's important to understand that the In time is the time taken for the step to fade in; the Out time is the time taken for:

- Any Intensity parameters which are *at a higher level in the previous step compared to the new step* to fade to their new settings;
- Any other parameters *which are programmed in the previous step but not in the new step* to return to their prior settings, or defaults.

The following diagram helps visualise this:



To look at timing information for other steps, press **Step** and then dial the playback wheel or press the playback **↑** and **↓** until the scene name appears in the bottom left of the display.

To program the crossfade times:

- 1** Choose **Step**.
- 2** Adjust the playback wheel or use the playback **↑** and **↓** until the step number appears in the Playback Controller display.
- 3** Press **In**.
- 4** Adjust the In time.
- 5** Press **Out**.
- 6** Adjust the Out time.
- 7** Press **Delay**.
- 8** Adjust the Delay time. If you move to below 0.0 secs, you will obtain **Halt**. This will make the stack stop automatically when this step is reached.

You'll notice that the Out time cannot be greater than the In time and Delay time. This is to prevent crossfades from overlapping on the same stack.

Using a Timed Stack A timed stack is controlled similarly to a chase:

↑ and ↓ control activity. The red ↓ LED will be on indicating a stationary stack. Pressing ↑ will start the stack, and the green ↑ LED comes on – the **Active** button does not have to be pressed beforehand.

Once a timed stack is running, pressing ↑ again will make it skip a step. (This is different to chases).

A timed stack will continue to run until it encounters a Delay value of Halt, or until you use the fader's ↓ button. The current crossfade will be completed and the chase will stop with the current scene active. The red ↓ LED will come on to indicate a stopped chase.

Alternatively, the timed stack could be stopped by deactivating the fader: press **Active** while holding down ↓. The current scene will not be active.

As in Chase mode, when a timed stack is stopped, pressing ↓ will step down the stack manually. If you hold down ↓ and press ↑, you can step upwards manually.

Change All

If you want to set the same In, Out, or Delay times for all of a stack's steps, use **Change All**. While the **Change All** LED is lit, any values changed will be stored in all the steps.

Programing Times with the Stack Screen Display

A much quicker way to set the In, Out, and Delay times for a stack is to use the **Stack** screen display. Access it under the **Look** menu, or by pressing F2.

```

Display: Sampled Fader 20/XL Test
Escape      Sampled      Last
No Steps:  11  Chase  Normal  Bnce  30bpm  0%
No  ICBF Name      In      Out      Delay  Loop  Count  Comment
1   IC-- White      1.0s    1.0s    Halt
2   IC-- Amber      1.0s    1.0s    Halt
3   IC-- Orange     1.0s    1.0s    Halt
4   IC-- Red        1.0s    1.0s    0.0s
5   IC-- Pink       1.0s    1.0s    0.0s
6   IC-- Magenta    1.0s    1.0s    0.0s
7   IC-- Lavender   1.0s    1.0s    0.0s
8   IC-- Blue       1.0s    1.0s    0.0s    4    Till Go Loop ends
9   IC-- Blu/Grn   1.0s    1.0s    Halt
10  IC-- Green      1.0s    1.0s    Halt
11  IC-- Congo      1.0s    1.0s    Halt

All      Seconds      1.0    1.0    0.0    4    -1    Loop ends
  
```

The screen shows the current mode of the stack (Manual, Chase, or Timed). You must use the Playback Controller to change this mode, however.

Beneath the mode, information about each step is displayed. The blue step bar will point to the current step of the stack, unless you have selected another step using the mouse in order to adjust times.

Thick grey boxes appear when you are selecting a step to jump to with the Playback Controller.

To leave the Stack screen display and return to the normal menu screen, click on **Escape** or press escape on the control rack keyboard.

Sampled / Last

This screen will either display the last stack you activated, or the stack that is currently attached (sampled) to the Playback Controller. You swap between the two modes by clicking on the **Sampled** or **Last** buttons, or by pressing **L** (for Last) or **S** (for Sampled).

Times

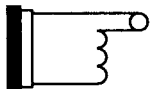
To change the timing information of the stack you've displayed:

1 Make sure that that the stack is not running.

2 Use the mouse to choose one or more steps by clicking and dragging. To select all steps, click on **All**. If you can't see the steps you want, use the control rack keyboard **↑**, **↓**, **PgUp**, or **PgDn** buttons.

3 Use the keyboard to type in a number to set the In time. To set the Out or Delay times, you will have to select the entry boxes under the Out and Delay columns.

4 Press **Return**, or choose another step to change.



Your timing changes can be used immediately, but make sure that you have selected Timed mode for the stack with the Playback Controller.

Seconds

If you want to enter times in minutes instead of seconds, click on **Seconds**. The button will change to **Minutes**, and times you enter will be treated as minute times. Click on **Minutes** to revert to seconds.

Loop / Count

The **Loop** and **Count** columns and entry boxes are for programming loops within stacks. See the next section.

Comment

You can add a comment to each step for your convenience, or as notes. Choose the step(s), choose the comment box, and type in a 15 character comment.



All changes will take effect immediately. However, just to make sure that they are permanently stored before you turn off the console, choose another stack or press Escape to close the Stack screen display.

Programing Loops within a Stack

Some programing (especially movements) call for repetitive actions to be programed within a series of other cues.

You can achieve this on the WHOLEHOG by using the Loop facility within Timed stacks. To program a loop:

- 1** Use the Playback Controller to switch the stack to Timed mode.
- 2** Use the **Stack** screen display to show the stack.
- 3** Using the mouse, choose the step at the end of your loop
- 4** Choose the **Loop** entry box (at the bottom of the **Loop** column), and type in the number of the step you want to loop back to.
- 5** If you want a specific number of loops, use the **Count** box to type in the number of loops. The standard value is -1, meaning loop indefinitely until **↑** (go) is pressed.

You cannot have a loop within a loop. If you attempt to program one, the **Stack** screen will automatically chop the outside loop off at the end of the inner loop.

Using Loops

Loops will loop back indefinitely unless a count other than -1 is specified. If you want to exit the loop, press the fader **↑**. The step following the loop will be executed immediately.

You could instead hold down **↓** and press **↑**. In this case, the loop will continue until it reaches its last step, and then it will continue without looping back.

Overall Playback Features

There are a number of playback features which control the operation of the whole console, not just one stack.

Flash Latch

With **Flash Latch** on, pressing a fader's **Flash** button will also activate it at the same time. This is useful for bumping between different looks.

Swap

The **Swap** feature only applies to the right 12 faders. It is similar to the swap button used on the scene masters. When **Swap** is on, activating one of the 12 faders deactivates the other 11.

Grand Master

Adjusts the intensity levels for all fixtures; keep it at full under normal circumstances.

DBO

Instantly brings all intensity levels to 0.

Knock Out

If a fixture has been knocked or has gone haywire, you can instantly suspend it from DMX output by using the following method:

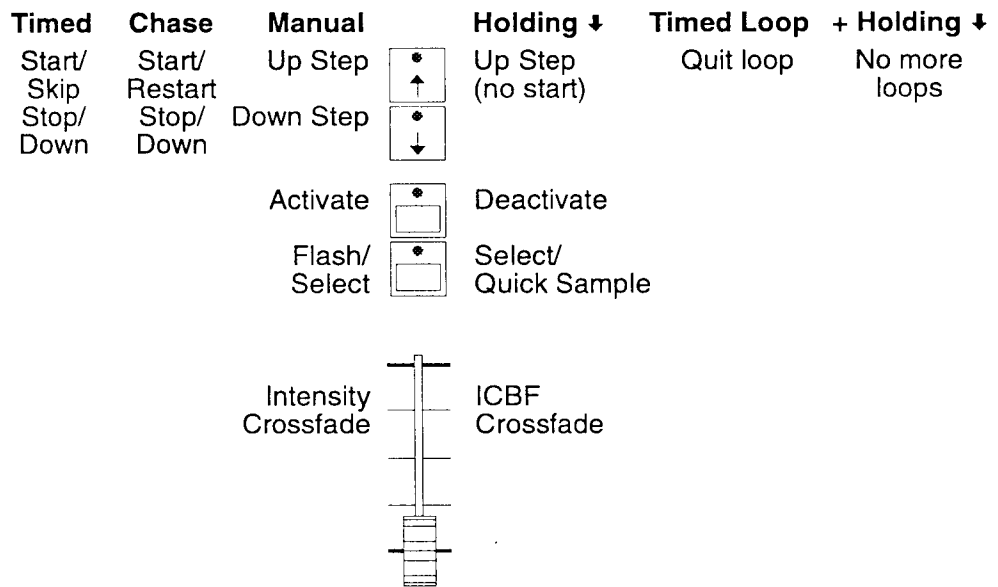
1 Press **Knockout**.

2 Using the Programmer, select Superscans 1 and 2, for example.

3 Press **Knockout**.

This procedure eliminates Superscans 1 and 2 from desk output. Provided that the fixtures are still listening to DMX they will go to the full off position. To restore knocked out fixtures hit the **Knockout** button twice to reconnect them. Note that the effects of knockout are temporary, and the next time the desk is turned on, the fixtures will return to normal operation.

Summary



This chapter gives some overall tips for creating a show on the WHOLEHOG.

Creating a Show

This chapter is for operators who feel confident with all the programming and playback features and who now want to learn more effective ways of organising their programming. A little advance planning will save time at the venue, and lead to much more effective performances.

Overview

The WHOLEHOG makes programming and controlling moving lights almost as quick and easy as programming dimmers. However, with moving lights, many more looks and effects can be achieved; to realise the full potential, it will take longer to design and program a moving light show than a traditional dimmer-only show. So it's worth planning in advance to avoid wasted time and effort.

Here are our suggestions and recommendations for going about putting together a show. They are guidelines only, and experienced operators will no doubt have tricks and techniques for using the console which are superior to ours.

Organising your Programming

Setting Up

Before you start creating any looks with the programmer, invest some time setting up your groups, palettes and position presets. They don't take long to do, and they speed up programming enormously.

Groups

The groups will depend on the design of the show. However, a useful group normally is "All" for selecting every dimmable fixture at once.

Try and organise dimmer groups in a way that reflects your design: for example, you could split different rig sections between the three group displays, and then use one display of 7 buttons for groups consisting of one colour or of one focus positions. Scrolling would then swap between colours or focus positions.

Test that your groups access the correct fixtures using the rig schematic.

Palettes

Three generic palettes worth having are:

"Open": all fixtures (including dimmers) full intensity, open, white, clear beam. Remember to move all the beam wheels.

"On": all fixtures full intensity, open only

"Off": all fixtures 0% intensity, but open shutter.

"Focus": all fixtures open, white, narrow iris for focusing with

Otherwise, palettes should be programmed for single properties: aim to set up plain colour palettes across different types of instrument, so that, for example, “Blue” selects blue on Intellabeams, SuperScans, and Scrollers. Similarly for gobos. Finally, set up alternating palettes to store favorite colour mixtures or gobo mixtures.

Position Presets

Setup the home positions for every moving light first. As a visual reminder, use the two sides of the menu for left and right stage positions.

Then build up geometric stage looks using the preset positions. You can store these either as a new position preset or as a palette. Finally, create stage and audience washes.

Some position presets will only be appropriate for some fixtures. This is not a problem, but it is useful to create a corresponding group so that the desired fixtures can be accessed immediately.

Testing

Now that all your palettes and presets are setup, test them. Check that the palettes are only programmed for the properties you intended, and that Intensity hasn't slipped in by mistake. Check that the position presets are properly defined for all the fixtures you intended.

Organising the Playback

This is the hardest part to give recommendations about, since it is so specific to shows and operators. We've separated our descriptions into two types of show: a fully choreographed show, like a theatrical presentation or audiovisual presentation; and a more traditional live stage show.

A Choreographed Show

For a fully choreographed show, you would know in advance what looks you need to achieve, when they have to be achieved, and how to transition between them. There would be no surprises, and no need to cater for impromptu events.

Console organisation The whole show could be played back from one fader running one stack in timed mode: all parameters for all fixtures would be fully programmed in each step of the stack.

You might consider using more stacks, one for each functional group of fixtures, if you want to retain independent manual dimming capability for different areas.

Using Build

To program such a stack, we recommend that you use the **Build** feature, since it looks after “tracking” for you. Tracking means that parameters maintain the last value that they were set at for all subsequent steps, until they are changed again.

When using **Build**, first plan all your looks step by step before starting to program. Some transitions will take more than one step to achieve: for instance, fading up a group of fixtures on a position and in a particular colour will require you to move the fixtures and change their colour in blackout on the first step (setup), and then fade up intensity on the next (action). Use two steps to do this, and label them as setup and action.

Also, there is no need to tag the setup step onto a previous action step just to save steps. In fact, keeping them separated makes things easier to edit later on. You can use 0.0 delay time between the previous action step and your new setup step, so that you don't need to worry about triggering it.

When it's time to create the stack, set the programmer to **Build** mode. For each step, setup in the programmer *only the parameters which need changing*, and then **Append** to your growing stack. Although it doesn't make any difference, it is probably worth using **Clear** between programming each step. To correct mistakes, you can **Edit** or **Merge** the new settings. To add additional steps, use **Insert**.

Once you've checked the stack in manual mode, swap over to timed mode and attach the timings to each step. Use the **Stack** display window as a visual reference.

A Live Show

A live show needs to be able playback prepared looks, but maintain the flexibility to meet the requirements of what is occurring on stage.

Lighting such a show places more demands on the operator during playback than during programming. Therefore, more thought has to be placed into how looks are going to be distributed, in order to get them to playback easily. Careful planning here will avoid screw ups during playback.

Console organisation We recommend that you distinguish between two objectives: lighting the stage, and specials. Split your console masters up into a section for controlling entire stage looks, and a section for controlling specials such as colour chases, shutter chases, flyways, etc.

In this way, you can randomly select your base look, and then overlay the specials at any moment. When the specials are deactivated, the stage will return to the prior look.

Stage Looks

Plan and program your stage looks in a fashion similar to a fully choreographed show. Make sure to program all properties of the fixtures that you are using. Distribute the looks across several stacks, so that you can activate the look you want manually at the touch of a button.

Operate the console either: with swap mode on – so activating one fader automatically swaps out the others for the right 12 faders; or with swap mode off – where parameters override each other. In the later case, you only need to have one fader up controlling intensity if all the scenes have the same fixtures at the same intensities.

Specials

These will mainly consist of chases, often in one shot mode. Only program the property that you wish to affect, so that it can mix in with any base looks you already have active. When you program one shot chases, place a blank step at the end if you want the effect to “drop out” at the end; if you leave a step, it will stay on at the end.

Useful types of specials would be dimmer chases / shutter chases, colour and gobo chases. Also, the stack synthesizer can very quickly create chases like circles, spirals, etc. One effect worth using is the “Stagger To” chase with a “Stagger From” chase appended after it. This creates a chase that achieves a look in a staggered fashion, and then returns to the previous look.

Add / Swap Chases

You can program two styles of chases which allow you to achieve different effects. In general, a chase works across a group of lights; it turns on a look for a subset of that group step by step. So:

- An Add chase contains in each step the look for one subset of the group, and *no other information*. The next step would contain the next subset, and so on. For example:

	Dimmer 1	Dimmer 2	Dimmer 2
Step 1	100		
Step 2		100	
Step 3			100

When an Add chase is played back, it will only override previous looks a subset at a time. For example, if the previous look set the 3 dimmers to 75%, when the chase runs, you will see levels moving from 75% to 100% and back again.

- A Swap chase always programs information for the whole group in each step. Only the values vary step by step. For example:

	Dimmer 1	Dimmer 2	Dimmer 2
Step 1	100	0	0
Step 2	0	100	0
Step 3	0	0	100

When an Swap chase is played back, it fully overrides any previous looks. For example, if the previous look set the 3 dimmers to 75%, when the chase runs, you will see levels moving from 0% to 100% and back again.

Add and Swap chases can be programmed for any parameter type, not just intensity.

Static Specials

Some specials are useful to have available at the touch of a button: for instance, a mirror ball look, changeover lights, or a special on a performer. These specials are best stored and played back from the scene masters.

Finally, the scene masters are useful for instant parameter override: a series of colour washes, or gobos, etc., can be stored on the buttons. When played back, they will immediately override whatever is being output at the moment.

A Word of Warning

Separating fixtures or parameters between faders or scene masters allows you to mix and match all your looks to create a lot of variety with little programming. However, it also makes it much easier to make mistakes, like having colours overridden when you don't want it, etc. We recommend that you program your looks in their entirety (all fixtures / all parameters) as much as possible, and only use stacks containing separated parameters and special chases in a careful manner.

More Hints

The tidier you are when you program, the better:

- When you are programming a group of fixtures across a number of faders, make sure that the whole group is programmed in each of the faders. Check them *as you make them* using the **Output Levels** screen in preview mode.
- Don't split up a set of fixtures into too many different groups controlled by different faders. You will lose track of what goes where.
- If you do have to split a set of fixtures into different groups controlled by different faders, don't have fixtures in more than one group.
- Consider where you want intensity control. For a group of fixtures, if you program intensity into each fader, then make sure that all faders have intensity, and that you bring up each fader whenever you activate it.

If you program the group's intensity onto one fader only (acting as a master intensity control), then do not program other parameter types into that fader, and do not program intensity anywhere else. Place all your "intensity masters" for different groups side by side.

Control rack screen displays
designed to help programing.

Screen Displays and Tools

Screen Displays

Being able to see actual output or preview scenes before output is an important part of programming. To aid the operator, the WHOLEHOG has three different display screens which present information in different formats.

- The **Output Level** window shows the current setting of every parameter on the console. You can also use it to preview scenes.
- The **Stack window** shows the structure and timing information of the stack that is currently sampled.
- The **Rig Schematic** window is a schematic that can be arranged to show the positions of all fixtures. It can show which fixtures are active in a scene, and the values of particular parameters can be examined.

All these displays are available under the **Look** screen menu, or they can be accessed immediately using the following control rack keyboard function keys:

- F1 Output Levels**
- F2 Stack**
- F3 Rig Schematic**

Output Levels

Look
Output Levels
Stack
Rig Schematic

This display shows the actual output levels for all fixtures. The fixtures appear in the order of the fixture menu. The parameters appear in the order of the parameter wheels, so that focus is first, then intensity, etc.

If you cannot see a fixture, it may be off the screen: use the keyboard **↑**, **↓**, **PgUp** or **PgDn** keys to move around the screen.

Display:	Fader 12	Escape	Actual	Preview
Dimmer				
1	.	.	.	.
21	.	.	.	.
41	.	.	.	.
Intellabeam				
1	DOWN	DOWN	.	Shut Pink Fl Clear Fast
2	DOWN	DOWN	.	Shut Pink Fl Clear Fast
3	DOWN	DOWN	.	Shut Pink Fl Clear Fast
4	DOWN	DOWN	.	Shut Pink Fl Clear Fast
5	DOWN	DOWN	.	Shut Pink Fl Clear Fast
6	DOWN	DOWN	.	Shut Pink Fl Clear Fast

Preview

To preview a scene, click on **Preview** or type **P** on the keyboard, then set the scene you want to preview as the "source". This is done in exactly the same as in programming: hit the scene master button, or press the **Flash** button, etc. You can preview other masters just by choosing them - no need to click on preview again.

The previewed settings in the scene will show up with a grey background. If you are previewing the program, the parameters which are currently selected for adjustment will have a dark blue background, while any other parameters already set appear grey.

Blind

You can select a scene "blind" in the following way:

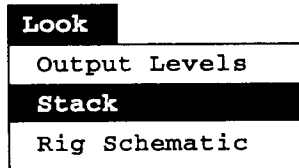
- Fader masters: press **Flash** while holding down **↓**.
- Scene masters: press the master while holding down any of the scene master **Add** or **Swap** buttons.

To return to actual output, click on **Actual** or type **A**.

Escape

To return to normal menus, click on **Escape** or press **Esc**, or choose another function key.

Stack



The Stack screen window displays information about the stack that you have sampled using the Playback Controller. Refer to the *Playback* chapter for a full description.

```
Display: Sampled Fader 20/XL Test           Escape   Sampled   Last
No Steps: 11  Chase Normal Bnce  30bpm  0%

No  ICBF Name      In      Out      Delay  Loop  Count  Comment
1   IC-- White     1.0s   1.0s   Halt
2   IC-- Amber     1.0s   1.0s   Halt
3   IC-- Orange    1.0s   1.0s   Halt
4   IC-- Red       1.0s   1.0s   0.0s
5   IC-- Pink      1.0s   1.0s   0.0s
6   IC-- Magenta   1.0s   1.0s   0.0s
7   IC-- Lavender  1.0s   1.0s   0.0s
8   IC-- Blue      1.0s   1.0s   0.0s   4      Till Go Loop ends
9   IC-- Blu/Grn  1.0s   1.0s   Halt
10  IC-- Green     1.0s   1.0s   Halt
11  IC-- Congo     1.0s   1.0s   Halt

All      Seconds      1.0      1.0      0.0      4      -1      Loop ends
```

Rig Schematic

Look

Output Levels

Stack

Rig Schematic

The rig schematic lets you create a custom layout of your fixture arrangement: fixtures can be placed anywhere on or off the screen.

When the screen first appears, you'll find each fixture in the show represented by a square. The four letters of the fixture name appear on the top line and the fixture number appears on the bottom line.

Fader 13 Unit # Esc Split Reset # ICBF Shift

Inte 1	Inte 2	Inte 3	Inte 4
Inte 5			Inte 6
Inte 7	Inte 8	Inte 9	Inte 10

You can move the fixtures around one at a time to make them resemble your plot:

- 1 Move the mouse over the fixture box
- 2 Click and hold the mouse button down
- 3 Drag the box to a new location
- 4 Let go of the mouse button.

Scrolling

If you get to the edge of the screen and need to go off the end, just keep on dragging the box – the screen will scroll automatically. To return to where you were:

- Hold down the mouse button and drag it against the edge of the screen.
- Or, use the **↑**, **↓**, **PgUp** or **PgDn** keys to move the screen up or down.

Preview

The **Rig Schematic** window previews scenes in the same way as the **Output Levels** screen: to preview a scene, set it as the "source". Boxes that turn light blue indicate that one or more of that fixture's parameters are programmed in the scene. Fixtures in dark blue indicate fixtures which are currently selected for adjustment by the programmer.

By clicking on **ICBF** or typing **I**, you can examine what type of parameters are programmed in the scene for each fixture.

By typing in the parameter wheel number using the keyboard (wheel 1: **1**, wheel 10: **0**, wheel 11: **-**, wheel 12: **=**), you can examine the setting of each parameter. Once you are examining parameters in this way, the display will follow any parameter wheels that you move.

Some parameters are only accessible via shifting the parameter wheels. To examine these, you must also shift the display by clicking on **Shift** or typing **S**.

If you have forgotten what parameter corresponds to which wheel for a fixture, type **L** to call up the parameter names for the wheel. Type **L** again to return to the settings.

To return to the fixture names and numbers, click on **#** or type **#**.

Split

For very complex rigs, the screen can get quite busy, and it may help to split the schematic into two or more screenfuls. To split a type of fixture out:

1 Choose the fixture type by clicking on a box of that type.

2 Click on **split**.

3 Click **Ok** to the **Are you sure?** query.

All the fixtures of that type will have been moved one page down the screen. To look at them, type **PgDn** on the keyboard.

Reset

The rig layout is stored as part of your show. If for some reason, you want to start again with a new layout, click on **Reset** to rearrange all fixtures back into lines.

Escape

To return to normal menus, click on **Escape**, or press **Esc**, or choose another function key.

Screen Tools

Hog

About
Tools
Lock

Miscellaneous screen activities are all lumped together under the Hog screen menu.

These windows give access to status information, diagnostic tests and console locking facilities. The **Tools** window is also used to upload new software.

About

The **About** screen window gives you information about your WHOLEHOG and the version of software that it is running.

```
WholeHog Console
-----
Version 1.09:           Jun  2 1993
Back Compatible with: v0.10
Channels:              6000
Steps:                65000
Parameters:           48
Menu Scroll:          11
Preset Scroll:        5

Status:
-----
Online Memory:         3814kb
Memory free %:        98%
Core Left:             2843kb

Current Drive -
Space Remaining:      59912kb
```

Use this window to check that you have sufficient memory to hold your page (indicated by **Memory free %**), and that your hard drive has plenty of capacity (indicated by **Space remaining %**).

If you have run out of memory, you will have to split your programming out onto one or more separate pages. If your hard drive is full, you will have to **Archive** and then **Delete** some shows (see *Naming and Changing Shows* under the *Setup* chapter)

Tools

The **Tools** screen window allows you to change the WHOLEHOG's software, and to run some simple diagnostics on the console hardware.

```
Load New Software:      Load
-----
Console Tests:          Serial Status:
-----
DMX: Mk1                Toggle  IER 00
                        MCR 00
Leds:                   Off      LSR 60
                        On       MSR 00
Event Display:          Off      PIC a8
                        On       Input on

QFADER_MOVED  20      155
QFADER_MOVED  20      156
QFADER_MOVED  20      157
QFADER_MOVED  20      158
QFADER_MOVED  20      159
```

Clicking on **Load** starts the software update process. Make sure that you have the new software disks on hand, and then follow the screen instructions. Once the process is complete, make sure that you reset the console and control rack, otherwise the new software will not take effect. We recommend that you always keep two versions of software on floppy disk:

the current version, and the previous version. This is so that you can revert to the previous version of software if some horrendous, show-stopping bug shows up.

Mk1 DMX Cards

Clicking on **Toggle** turns the DMX output off. Clicking again turns it back on. This otherwise redundant feature is provided for two reasons:

- Some fixtures like Intellabeams need resetting to restrike their lamps - turning off the DMX for 10 seconds is a handy way of doing this.
- The WHOLEHOG has a benign hardware bug: some disk operations such as **Archive** and **Restore** using the **Change Shows** screen window can occasionally turn the DMX card off. Hit **Toggle** afterwards to turn DMX back on again.

Mk2 DMX Cards

The new Mk2 DMX cards have fixed the hardware bug, and no longer have a toggle capability. Instead, they have a built-in frame store that will hold all levels after a reset until you have had a chance to choose a page and activate the correct masters. Once this is done, you then click on **Resume** to turn the frame store off. You will be alerted at reset when the frame store is on.

You can test a large part of console hardware by turning on the **Leds** test. This will switch on all LEDs on the console. If you move a fader, the fader and scene master LEDs may switch off. Do not worry about this.

The **Event Display** test outputs the raw events as transmitted from the console. Use this test to check that all buttons are functioning, that all faders are outputting their correct range, and that all parameter wheels are functioning.

Lock

The Lock screen window gives password protection to the **Setup** screen windows, and to all programming functions.

Setup:	Open Closed	Change Key
Programming:	Open Closed	Change Key
Macros:	Open Closed	Change Key

Locking 'Programming' also locks 'Setup'

To lock all setup, click on **Closed**, and type in the password. The password for all new machines is FPS. To unlock, click on **Open** and type in the password. The same process applies for the Programming lock. When all programming is locked, a red **LOCKED** symbol will appear at the top right of the screen, and none of the five programming keys, nor **Edit**, will work.

The Macros lock has a different default password which we do not issue until you have had training on using macros. Macros are a very powerful feature of the console – without proper training, you could easily eradicate entire shows by mistake in one go!

If you want to change either of the passwords (they do not have to be the same), click on the corresponding **Change Key**, type in the old password, then type in a new one.

If the console is locked, and you are unable to unlock it, contact Flying Pig Systems for further instructions.

Stack Synthesizer

Warning: If you don't yet feel 100% comfortable with the WHOLEHOG, then skip this chapter for now and come back to it later. The stack synthesizer is a complicated feature designed for advanced users only.

While the stack synthesizer may be complex, the powerful effects that it generates quickly more than make up for this inconvenience. Many chase effects like circular movements, spirals, fly always, can-cans, etc., take a lot of programming to set up, especially when using many fixtures.

These repetitive effects can be easily generated by letting simple mathematical formulae do most of the programming for you. In only a few steps you can generate a complicated chase progression of hundreds – or thousands – of steps. This is the concept behind the stack synthesizer.

Parameter Modifier	Fixture Propagator	Canned:	Using:
1/0 Focus	Direction: Up Down Rand	Circle Star Spiral	Fetch
Amplitude: 0 % Start At: 0 Stp	Delay: 1 Stp Skip: 0 Fxt Block: 1 Fxt		Fixtures:
Curve: Ramp Sin Tan SinMod	Start: Hold Float		Parameters:
Length 12 Attack 0 Hold 0 Decay 0	End: Hold Float		Type:
Shift	FX Length: 1 Stp No. Steps: 1 Stp	Load Store	

Canned Effects

To make life easy, there are several preprogrammed, or "canned," effects already available for use. Begin by experimenting with them and gradually move into the more complicated programming. Let's program a stack using a canned effect:

- 1 Open the **Stack Synth** window, and click on **Circle**.
- 2 Click on **Load**. This recalls the settings for generating a circle.
- 3 **Clear** programmer.
- 4 Select GoldenScan 1 or similar
- 5 Select Open shutter.
- 6 Select a position preset or set a starting point manually. You can set additional parameters if you desire.
- 7 Click on the **Fetch** button in the **Stack Synth** screen.

This has now loaded the synthesizer with the fixture and the starting position you want to operate with. To create the stack, just make sure the programmer LCD has **Synth** showing as the source; if not, click on **Fetch** again.

- 8 Now press **Assign**.
- 9 Select the fader to put this stack on.

The stack is ready for playback. You can link it to the playback controller to set chase or timed settings just like any other stack.

Stacks can also be quickly generated using any of the other canned effects. Alternatively, more complicated custom stacks can be built by using a canned effect and editing it to suit your needs.

Making Add and Swap Chases

Add Chase

Add chases are described in the chapter *Creating a Show*. To make an Add chase automatically:

- 1 Clear the programmer.
- 2 Select the group of fixtures.
- 3 Set them all to the value each fixture goes to step by step. For example, for a dimmer chase, set the whole dimmer group to 100%.
- 4 Open the **Stack Synth** window, and load the **Add Chase** effect.
- 5 Click on **Fetch**.
- 6 Press **Assign**, and choose a fader.

Swap Chase

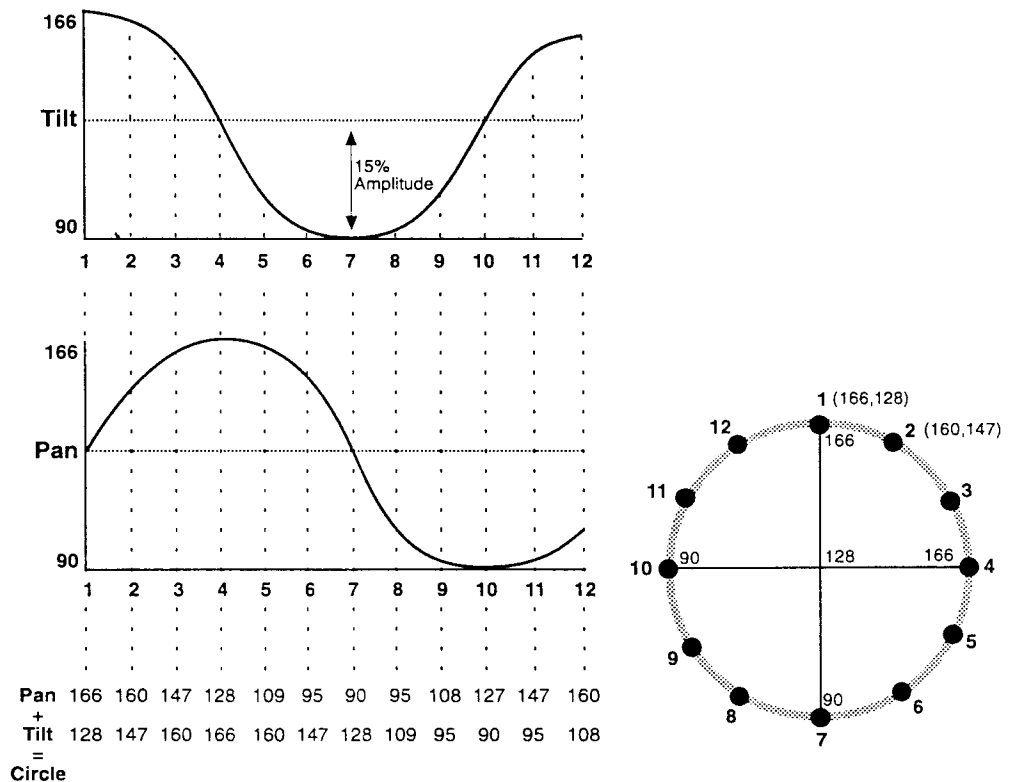
Swap chases are also described in the chapter *Creating a Show*. A Swap chase can be made automatically by combining the **Add Chase** and **Swap Base** canned effects:

- 1 Clear the programmer.
- 2 Select the group of fixtures.
- 3 Set them all to the value each fixture *returns to* step by step. For example, for a dimmer chase, set the whole dimmer group to 0%.
- 4 Open the **Stack Synth** window, and load the **Swap base** effect.
- 5 Click on **Fetch**.

- 6 Press **Assign**, and choose a fader.
- 7 Now use the programmer to set the group to the value each fixture *goes* to step by step. For example, for a dimmer chase, set the whole dimmer group to 100%.
- 8 Load the **Add Chase** effect in the **Stack Synth** window.
- 9 Click on **Fetch**.
- 10 Press **Merge**, and choose the same fader.

Making your Own Effects

Let's take a closer look at how the circle canned effect was created. The best way to do this is to look at the mathematical parameter settings graphically. In the graphs below, see how the stack synthesizer uses wave forms to create a 12 step circle by combining pan and tilt values with starting points of 128 for each.

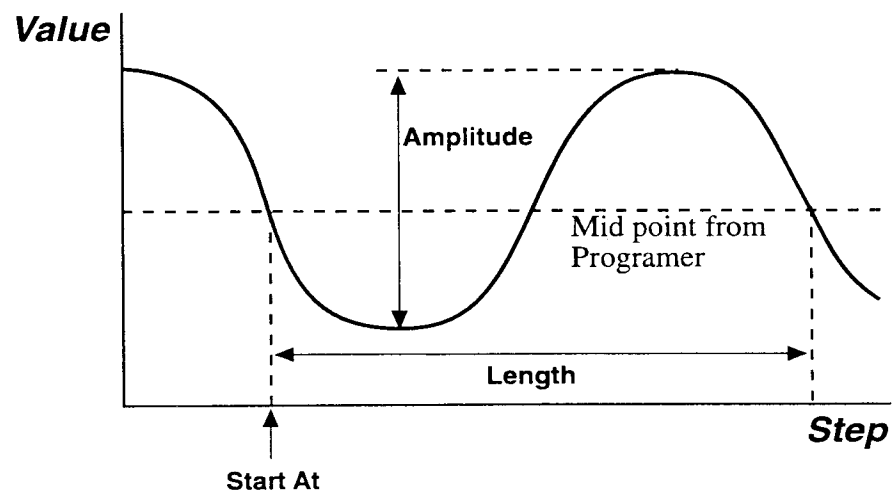


This circle was generated using an amplitude of 15% and by starting the tilt at step four.

Parameter Modifier The first stage in the process is to figure out how each parameter on a fixture is going to change from step to step in the stack. This is where the mathematical formulae come in.

- They are setup in the left box called **Parameter Modifier**. One series of settings is needed for each parameter, so you will need to swap from parameter to parameter using the scroll bar and shift button at the bottom of the box. This lets you have each parameter on a fixture changing in a different way from step to step.

As the diagram shows, 4 or more bits of information may be needed to specify the motion, depending on the type of curve you've selected.



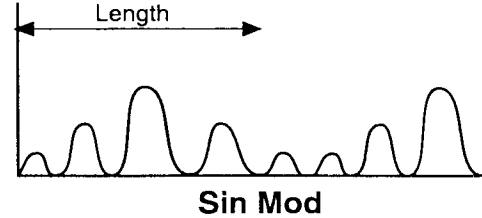
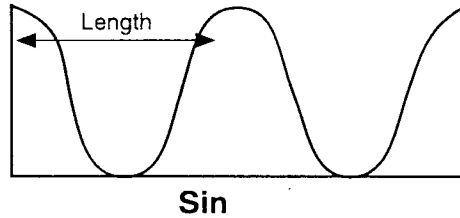
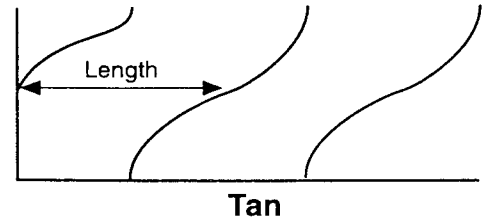
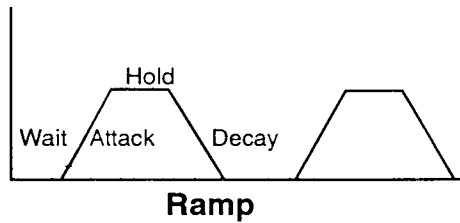
The items common to all curves are:

Amplitude is how much movement will occur about a starting point. It is expressed in percent, so that 0% will cause no change. 50% will move from max to min if the starting point is at the middle of the range; 100% will move from min to max if the starting point is at one or other of the end points. You can use a negative amplitude. If you don't want a parameter to be affected at all, set its amplitude to 0.

Length is the total number of steps a shape contains.

Start At sets which point along the curve you want to start at. Totally different effects can be created just by varying the starting points between parameters.

Curve specifies what shape will be used:



Fixture Propagator

Once the parameter modifier has been altered, the second stage is to tell the synthesizer when you want the effect to take place on each fixture, and on which fixtures out of a group of fixtures.

Direction specifies whether to start at the bottom of a group and move up, or start at the top and move down etc.

Delay specifies the number of steps in between starting one set of fixtures and the next set.

Skip specifies how many fixtures in the group to skip over when selecting the next set to start.

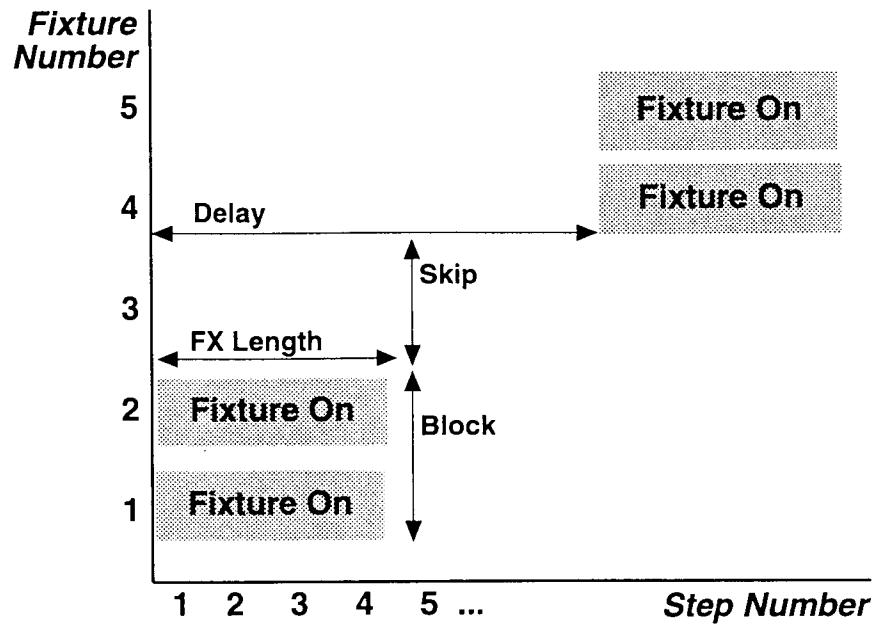
Block specifies how many fixtures to start at a time.

Start Hold/Float specifies whether to force values to the starting point even before the effect has 'reached' the fixture, or to let them float at their prior level.

End Hold/Float does the same, except for the ending values.

FX length sets how many steps of the Parameter Modifier effect to use before stopping. This is calculated automatically when you click on **Fetch**. You can edit it if you want.

Duration set the number of steps for the stack in total. This is calculated automatically when you click on **Fetch**. You can edit it if you want.



These two programming stages set up the synthesizer. You store your own programming as a 'canned' effect by clicking on **Store** and typing in a name in the box above. This effect will be specific to your show.

There is nothing stopping you from loading a canned effect, and then editing it to suit your own needs.

A brief reference
for Macro users

Macros

Macros are a very powerful feature of the WHOLEHOG, used for automating non-standard programming and playback procedures.

To use them, you have to be very familiar with the console and the way that it works. Any mistakes that you make could cause a colossal amount of damage to the programming in your show.

For this reason, Macros are password protected, and we only give out the password after you have been trained fully.

This chapter is intended to serve as a reference for Macro users

Macro Editor Screen

The screen is divided into two parts: the Macro Catalogue looks after all the Macros stored on your console, and lets you load them, store them, etc.; the Macro Edit box displays Macros, and lets you add to them and edit them.

Macro Catalogue

All the Macros stored on the console are listed in the box on the left of the screen. Use the scroll bar to access them all.

Macros with a number of 900 or more are system macros, and cannot be replaced or deleted.

The screen buttons in the centre are for handling macros:

Load loads the macro selected in the catalogue box, and puts it into the edit box.

Replace replaces the macro selected in the catalogue box with whatever is in the edit box.

New makes a new macro in the catalogue. It does not clear the edit box.

Delete removes a macro from the catalogue

Read In adds the macro selected in the catalogue to the macro in the edit box.

Edit Box

The **Name** box is for changing the macro's name. Remember to **Replace** afterwards if you want the new name to be stored permanently.

Copy, **Paste**, and **Delete** operate on events that you have selected in the Edit box by clicking and dragging the mouse. **Paste** adds macro events at the line you've selected, using the events you previously copied using **Copy**.

Record turns on Macro recording. Click anywhere else on the screen to turn it off again.

The console will follow most actions as you record them. However, any edit functions like **Assign**, **Append**, **Insert**, **Merge** and **Delete** will not be preformed as you record.

Insert allows you to toggle between **Insert** and **Over /W**(Overwrite). When inserting, new events that you **Record** or **Paste** or **Read In** will be inserted into the macro. When overwriting, they will replace events that are already there.

Add Wait adds an event that will cause the macro to wait a specified number of seconds before proceeding. Enter the time (to 1/10th sec) in the box below the **Add Wait** button. Note that the delay period will be displayed in 256ths of a second in the macro event.

Menu >_ adds an event that resets all menus to their bottom scroll point. You need to use this command in any macro to make sure that you always get the same menu choices whenever you run the macro. If you want a macro that will give different actions depending on what scroll level the menus are on when you run them, then do not use this event.

Macro Events

The way macro events are displayed can be somewhat cryptic. They correspond to the specific events that have been recorded.

Menus

Menu choices will appear like

```
MENU_B_OFF      1      *0
```

The first number corresponds to the each bank of seven buttons. The 5th bank from the left is bank 1. The second number specifies which button. The top one is 0. The asterisk reminds you that this is scroll dependent.

The first four menu button banks will be recorded as

```
MASTER_B_ON     12     21
MASTER_B_OFF     12     21
```

The 12 will not change. The second number records the button number in the four banks as a whole. You therefore get button numbers from 0 to 27.

Page Menu

The Page menu is recorded in a special way to let you perform operations that are relative to the current page. The second number will show this offset:

```
MENU_B_OFF      4      ±1
```

Swap Menus

Rather than recording a specific button push when you press **Swap Menus**, the macro will record which set of menus you have chosen. When you replay the macro, the same set will be accessed. To make sure your macro always uses the correct set of menus, use **Swap Menus** at the top of any macro that uses menus.

Parameter Wheels These are recorded as you move them. The first number represents the wheel number (from 0 to 12; 12 is the Playback Controller wheel). The second number represents the movement from -128 to 127. If you move over this amount, a second line will be produced.

Due to the way parameter wheels have built in acceleration depending on how fast you move them, macros will rarely replay the way that you recorded them. It is better to experiment and find a numeric value that performs what you want it to do, and then record wheel movements to this number.

Faders Movements of the faders and quadrant fader cannot be recorded.

Running Macros

In the Programmer, type in the macro number (as shown in the catalogue box), and press **Macro**. The **Macro** button LED will stay lit until the macro is complete.

You can perform console operations while a macro is running, although we do not recommend it – it may cause a macro malfunction.

Answers to some of the most
common questions and problems.

Questions and Answers

This chapter is a list of common problems faced by users. Refer to the appropriate sections for a problem resembling the one you're having.

Using the Screen Windows

The drop down menu won't go away.

Use the right mouse button to cancel it. This button always acts as a cancel.

Typing in an instrument schedule number, fixture name, value or number etc, has no effect.

This probably means that you haven't selected the screen entry box before you started typing. Select it by clicking on it with the left mouse button. It will turn dark blue and the cursor will flash to indicate you can now start your entry.

I can't see all the options in a list, or all the values in a display.

Use the light blue scroll bars at the side of the list to "scroll" through the list. The scroll bar indicates where in the list you want to look. Click (and keep holding the button) and drag the bar's button to change the view. Or you can click above or below to flip through a page at a time. Or, you can click on the arrows to move a line at a time.

Using the Patch Window

There are more than 100 dimmer channels, but only 1 to 100 show up in the fixture box.

Because the WHOLEHOG only stores 100 fixtures in each fixture window you must click on **Next** to access the next 100.

The patch window shows a whole series of patches with ?s next to them.

This means that you have recently changed your configuration of numbers and types of fixture, without changing show. For instance, if you had 10 SuperScans, and now have 10 Intellabeams, the old SuperScan patch will still show up, but with ?s. If you reinstated the SuperScans, they would reappear in their old patch positions. You can either **Unplug**, or patch over with Intellabeams.

I've split my Intensity and Other parameters while patching a fixture, but now it doesn't show up in the location box at bottom left

The locator box cannot find split fixtures correctly.

Using the Programmer

There are no fixtures in the fixture menu, or typing in an instrument number after pressing return doesn't call up the instrument on the parameter wheel displays

This means that you haven't correctly set up the **Instrument Schedule**. Select it from the **Setup** menu, and make sure that the numbers against each type of instrument are correct.

The parameter names do not appear on some of the wheels

Most fixtures will not use all the wheels. However, if you know that names are missing, check that the parameter display is not "shifted"; i.e., that the LED above ↑ is not lit. If it is lit, press ↑ until it isn't lit.

The parameter value does not alter when the wheel is moved.

Either you have **HighLight** on (it only lets the Focus wheels be moved), or the fixture library is incorrectly setup.

The parameter value on a stepped parameter like Gobo loops on itself continuously – it never reaches an end.

The fixture library entry for this fixture is incorrect. When setting a stepped display for a parameter, the last selectable step must equal the maximum parameter value.

The fixtures do not respond to control.

Check that you have closed the patch window after patching, since any changes will not take effect while it is open. Also, check that you have the correct addresses and DMX output numbers. If it all appears OK, then as a last resort, open the tools menu and click on DMX toggle. (This should only be necessary if the software has been stopped and restarted somehow without using reset. Also, sometimes Archive, Restore Shows and Load new Software can turn DMX off - this bug is present in some older DMX cards).

The fixtures don't come on when the intensity parameter is increased, although other parameters are affected.

Check that the Grand Master is up, and that DBO is off

The parameter labels do not correspond to what is actually occurring.

Either the fixture is out of calibration, or it is has been modified for a particular event. Reset the fixture, or open the fixture library and edit the lables.

Assigning out of the programmer and choosing a destination does nothing.

Check that the programmer is the current "source"; i.e., its symbol shows up topline right in the programmer display. If it isn't, move a wheel or select fixtures until it is the source. Also, check that you are using the correct key (the flash button) for choosing the destination, and that the Assign LED is lit up immediately after you pressed the **Assign** button.

Some of the parameter types (ICBF) get lost after an assign, namely they do not show up on the stack step.

You may have inadvertently masked or deleted some of them. Check that all the **Mask** and **Delete** LEDs are off. Or, you may have selected a different source by mistake.

When editing a step or a scene, nothing happens to the fixtures.

Changes made in edit mode will only be visible during editing if the fader or scene master that you are editing from is active. The edits are still under the "control" of the master, not the programmer.

Using Palettes and Presets

Although a scene, step, or palette was set up for color only, other parameter types showed up.

When you stored the scene, step or palette, you inadvertently knocked another wheel. Try deleting the parameters you don't require before storing.

A beam palette didn't store all the beam parameters.

When recording any beam look, make sure that you have moved all the beam wheels – only the wheels you move get recorded.

Trying to use a palette or position preset that has already been set up does nothing.

Make sure that you have selected fixtures to program BEFORE choosing the palette or preset.

After changing a position preset, the change did not take effect immediately.

If a scene is already active, it will not reflect the change in the preset position until it is deactivated and then activated again.

After deleting a position preset, steps and scenes still contained the preset programming.

Just deleting a position preset from the menu will not eradicate that preset from all your programming. The reference to the preset will remain, but the values output will be default values. If a new preset is assigned over the top of the deleted preset, then all your programming will use the new preset instead.

Using Existing Scenes and Stacks

The stack name disappears as soon as a different step is selected.

This means that you have not named the stack, but have named the step instead. You need to switch the stack into chase or timed mode to name the stack.

When one stack is assigned to another fader master, only the first step gets copied.

Assign will only work on individual steps or scenes for stacks in the current page. To copy a whole stack across, use **Append** or **Insert**.

After merging a scene onto a step in a stack, all the subsequent steps were changed as well.

This is normal. Merging a scene onto a stack will change the current step and all the subsequent steps – but not the ones before. Use **Edit** to update only one step

After merging a scene onto a step in a stack, the subsequent steps were NOT changed as well.

This is may be because you were merging while editing another scene. Due to a console quirk, **Merge** will only change one step on a stack while **Edit** is on. -

A fixture has been inadvertently programmed in all the steps of a stack. Editing each step would take too long. Is there any other way to get rid of it?

Yes. Clear the programmer, choose the fixture, select **Delete** for all the parameter types, then **Merge** into the stack from step 1.

Steps and scenes have been programmed. Then, after changing the instrument schedule, some scenes or steps now appear empty.

This is because scene and step programming is particular to the actual fixtures you are using. If you program SuperScans, then go to the schedule and knock them out, the scene or step will still be there, but the SuperScan information will be ignored. Hence, an empty scene or step will arise. If you reinstate the SuperScans without changing the scenes or steps, the SuperScan information will be recalled.

Using Globals

After naming a stack, and then assigning it into another page or into the global stack menu, the name gets lost.

Make sure that you have actually named the stack, and not one of the steps of the stack.

When assigning stacks into the global menu, nothing happens.

Check that you have correctly selected the stack, and that you chose the global stack menu as a destination.

After assigning a global stack down into a page, the name was lost and the global indicator (*) did not show up.

The stack name and indicator will not show up if the stack is in manual mode. Instead, you will be looking at the details of the current step, which itself might be a global reference. Also, if you assign, insert or append global scenes onto faders in build mode, the global reference will be lost.

The name of a global stack was changed in the global menu, but this was not reflected in any of the pages that used it.

That is correct. Pages cannot keep track of changes in a global stack's name after it has been assigned onto a page.

After editing a stack which was setup in a page from a global menu, the global indicator was lost.

Any edits made to any stacks or scenes set up from a global will cause the stack or scene to lose its reference to the global.

After modifying the playback timing of a stack which was set up from a global, the changes were lost when the page was changed.

This is normal. Changing the playback characteristics of a global stack in a page will not cause it to lose its reference to the global (unlike the situation above). This means that the next time the stack is loaded in with a page change, it will revert to its normal, global settings.

Using Pages

Pressing Change Page does nothing.

Make sure that you have used **Swap Menus** so that you can see the Page menu, and select the page you want to change to first, then press **Change Page**. **Change Page** on its own will do nothing.

When a Page is being previewed, the flash buttons don't work.

This is normal. The **Flash** button action is turned off while a page is being previewed to allow you to select any stacks or scenes you want to copy from the page.

Pressing Delete and a Page does nothing.

You cannot delete a page.

Using Stacks and Timing

A whole series of timing information was programmed into a stack, but it got lost when the console was turned off.

The console only stores changes made by the Playback Controller when you sample something else. Get into the habit of sampling another fader before turning the console off. Similarly, the **Stack** screen display only stores its information when it is closed or you choose another stack to display. Close this window before you turn off.

Basic computer techniques for
those unfamiliar with them.

Computer Techniques

The WHOLEHOG uses a lot of standard computer equipment to make programming shows easier. Anyone who has used an IBM PC or an Apple Mac will find the keyboard, mouse and control screen quite familiar. For those who haven't, this chapter introduces the standard techniques of using the control rack screen.

The Menu Bar

All control rack functions are organised into screen "windows". To access a function, you must open its "window" using the Menu bar.

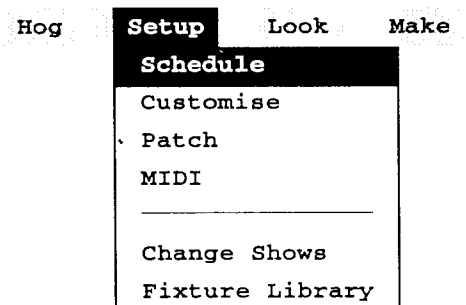
You will find the Menu bar at the top of the screen.



Hog Setup Look Make

This bar gives access to all the screen windows. To access a window:

- 1 Move the mouse pointer until it is over one of the menu words, for example **Setup**.
- 2 Push and release the left mouse button. This is called "clicking". You have just "clicked" on **Setup**, and you should now see the options that are available under **Setup**. This is called a drop-down menu.



Hog **Setup** Look Make

Schedule
Customise
Patch
MIDI

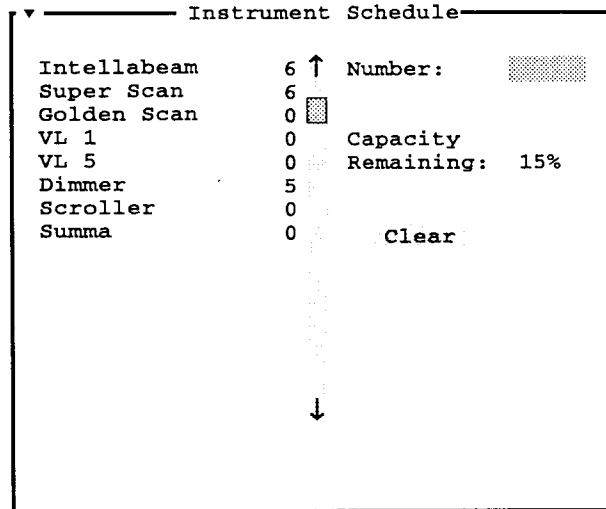
Change Shows
Fixture Library

- 3 Now move the mouse pointer over to **Schedule**, and click on it.
- 4 You should now see the **Schedule** window.
- 5 If you want to get rid of a drop-down menu without choosing a window, click anywhere else on the screen, or click the righthand mouse button.

A Screen Window

A screen window will contain graphical objects to allow you to see information, enter your choices, and make other decisions.

For example, open the **Instrument Schedule** window:



Window Border

Screen windows generally have a border. Some borders have an upside-down triangle in the top lefthand corner. This is the close button - click on it to close the window when you are done.

List Box

This window contains a list box with all the types of fixtures. You can choose a type of fixture by moving to the fixture name, and clicking on it. You can choose several at once by moving to a name, holding the left mouse button down, dragging over all the types you want to select, and then releasing. You can do the same by clicking on one end type, moving to the other end, and clicking while holding down the keyboard **Shift** button. You can select several unconnected types by clicking on them while holding down the **control** key.

Scroll Bar

Generally there will be too many fixtures to fit in the box, so a scroll bar is provided to allow you to move the list up or down to reveal more types. The scroll bar is meant to represent the whole list of types; it has a small slider knob which shows which part of the list you are looking at.

To use the scroll bar, you can either click on the **↑** or **↓** symbols to move the list up and down one line; or you can move to the scroll bar slider knob, hold the left mouse button down, and "drag" the slider knob to a new position; or you can click above or below the knob to move up and down a box worth of lines in one go.

Entry Box

When you need to type in a number or a name, an entry box will be provided. To use one:

- 1** Make sure that it is "selected", since it may be one of several. A "selected" entry box is dark blue. If it is not dark blue, click on it until it is.
- 2** Type in your name or number. You can use the keyboard cursor keys, end and home to move about. You can use the delete keys to remove errors.
- 3** Type ↵ or click somewhere else when you are done. If you want to cancel your entry, type **Esc** or press the righthand mouse button.

Buttons

Some screen functions are presented in the form of a bright blue button. To use a button, just click on it.

Care for Mouse

You may occasionally find that the mouse does not respond to movement as well as it should. If so, twist the ring on the bottom of the mouse to release the ball from its pouch. Clean the ball and the hole of any debris and make sure the three rollers don't have any black gunk on them.

Floppy Disks

All console programming is stored on an internal hard drive which you will rarely need to think about.

If you want to store a show for safekeeping, or to transfer it to another console, you will need floppy disks. The correct type of floppy disk is a 3.5inch High Density (HD) floppy disk. They do not need to be formatted. Refer to the *Setup* chapter for more information on storing shows.

A floppy disk can be locked to prevent information from being accidentally erased. Just slide the small black tab located in the corner of the disk so that a hole appears. To unlock it, slide the tab back to where it was.

Treat your floppy disks with care :

- Keep them away from magnets.
- Don't expose them to unusual temperatures or humidity.
- Don't slide open the metal shutter and touch the disk inside.

Highlights the changes
made in the latest versions
of WHOLEHOG software

1.04
1.05
1.07
1.08
1.09

What's New

Improvements are being made to the WHOLEHOG software continuously. Read this chapter for all the latest operational details - it gathers together all the changes that have been made with different releases of software, so that operators who are coming back to the WHOLEHOG after a period of time, can read this chapter and quickly absorb what changes have occurred since they last used the WHOLEHOG.

Release 1.09 – Macros

Macros

The ability to record macros, edit them, and then play them back has been added.

A macro is a set of console operations that can be recalled at any time. For instance, the keystrokes for setting up a page from the global stack menu, or for setting up palettes, or for doing multi-part cues can all be recorded in a macro. When you play back the macro, it is as though you were redoing the operations yourself, but much quicker.

Macros are recorded and edited using the **Macro** window under the **Make** menu. They are played back by typing in the macro number using the programmer keypad and pressing **Macro**.



Macros are an advanced topic, and we do not recommend that you use them without thorough training and experimentation beforehand. For this reason, the Macro window is password protected. Contact Flying Pig Systems for training and the password.

Loop Back

Due to operator comments, the key action on Loop Backs has been changed: **↑** now exits the loop immediately; holding down **↓** and pressing **↑** will perform a graceful exit at the end of the loop.

Release 1.08 – Loop Back, Playback Improvements

Loop Back

A loop back feature has been added to stacks in timed mode: a stack can be programmed to loop back to a previous step continuously (until **↑** is pressed again), or for a set number of times. This is very useful for embedding chases such as circle movements within a whole series of other programmed moves. Loop back is programmed using the all new **Stack Display** window.

The format of shows has been changed to incorporate the new features. An automatic conversion will occur the first time you load your old show with 1.08 software. Make a backup of your show before you instal 1.08 in case something goes wrong.

- Stack Display** This window has been made much more useful - it now allows direct programming of In, Out and Delay times, as well as the programming of loop back features. The window shows the current step of the stack and, if you are about to do a jump, the step you will jump to. A space is provided for any notes or comments you might want to keep.
- Playback Controller** This has been made quicker to use by automating the **Sample** button. If a fader's **↓** is held down while hitting a key or moving the wheel in the playback section, the fader will be instantly sampled for you and then the corresponding action performed. It is as though you pressed **Sample Flash** yourself. Alternatively, you can hold down **↓** and press the **Flash** button to sample as well.
- ↑** and **↓** keys have been added for easier selection of playback options. They work the same way as the playback wheel, but it is easier to choose steps etc, using them.
- The **Step** button for cueing jumps has been removed. Instead, whenever you choose a step from the **Jump** option, the **Jump** Led will start to flash. This means that when you next push the fader's **↑**, a jump will occur. Push **Jump** to cancel a pending jump.
- Programmer** Programming has been made faster with palettes automatically picking an appropriate name when you first **Assign** them. Also, the **Even** button has been replaced by a **Swap** button which allows you to swap between your current Programmer selection, and the rest of the scene in the Programmer.
- Beam Parameters** Beam type parameters can now be recorded in palettes and scenes separately from each other. This means that you can run separate iris and gobo chases, for instance. When you adjust beam parameters for a fixture, the wheel you moved will change its display from **---?---** to a value as before. The other displays will show values surrounded by brackets. This is to indicate that the value is being output by the programmer, but will NOT be recorded in any edit action until you touch those wheels as well. Take care when you are making "Open White" palettes and the like, that you have moved all the beam type parameter wheels.
- The numerical keypad has been reorganised after much jostling from various users. Also, all menus scroll upwards instead of downwards
- Pan and Tilt** The trackball / mouse can be used as a pan/tilt control when the keyboard F7 is hit. Hit F7 again to turn it off.
- Emergency Disk** The console can now be run off floppy disk in the event of a catastrophic hard drive failure. However, this requires a Boot disk and a special Show disk (not your archived show). These can be made automatically for a selected show using the **SOS** screen button under the **Change Shows** window.

Stack Synth

This has been made easier to use - the complicated **FX Length** and **Num Steps** boxes now calculate appropriate values automatically whenever a scene is **Fetch**ed. Also, you have the option of selecting negative amplitudes to increase the range of possible effects.

DMX Card

Consoles number #0008 onwards have been shipped with a MK2 dmx card which has a built in Frame Store on board. In the event of a console failure, the console can be reset, and the show resumed from where it left off seamlessly.

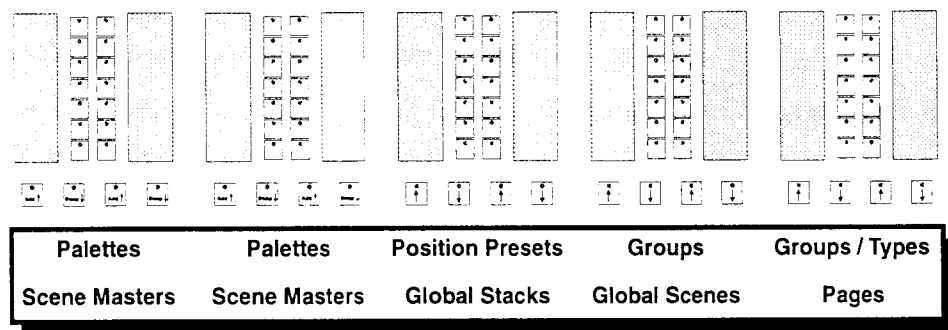
Patch

The **Patch** screen window now has a **Cancel** button for aborting any changes without saving. Also, the **Undo** button gives you the option of clearing either one output, or all 12.

Release 1.07 – More menus, Hi Res Intellabeam support

Menus

The number of group, page and palette menus has been increased to give you even more direct button access as you program. The new layout is as follows:



Note that you will have to have **Swap Menus** off in order to reach the scene masters. This is an inconvenience, but well worth it in exchange for double the number of palettes and groups.

Most menu displays scroll all their individual LCD panels as a group. However, now the palette menu scroll in two separate panels, and the groups as three individual menus.

Hi Res Intellabeam

Lightwave Research released in early February 1993 a version of Intellabeam software that gave access to all the features of the full Intellabeam protocol, but using DMX. This allows the **WHOLEHOG** to run Intellabeams with full 16 bit pan and tilt channels, with all the colour and gobo

rotation and crossfading options, and with a fixture fire/dowse control channel. It also adds the option of running Intellabeams with a checksum to clean up any communication glitches.

To use the new Intellabeams, make sure that you select the Ibeam HiRes fixture in the schedule, rather than the traditional Intellabeam. Set the personality of the Intellabeams to 3,5,6,7,8 on to use the 12 DMX channel with checksum mode. We recommend that you still run the DMX refresh rate at 30Hz. The fire/dowse control is accessible by shifting the intensity parameter wheels once.

Note that using checksums puts a large processing overhead onto the WHOLEHOG. This means that it will not be able to cope with as many fixtures as before. Between 300 - 400 checksummed intellabeams is about the top limit, depending on the nature of the show. If you need to run more, turn off personality switch 8 and run the intellabeams in 11 DMX channel no checksum mode. You will have to turn off the checksum in the fixture library and repatch.

Fixture Library

The 1.07 release is shipped with a revamped fixture library. This includes the HiRes Intellabeam as well as other new fixtures. In addition, the GoldenScans and SuperScans have been redone in order to add split colour features, and to clean up the way the wheels work.

The **Fixture Library** screen window now includes an option for adding start or end checksums to fixtures that use them. These are currently 8 bit checksums only, although they do work with 16 bit parameters (see HiRes Intellabeam). If you make any changes to the checksum options of a fixture, you will have to repatch before the changes take affect.

The way **Step** type displays work has been improved: there are more steps, and step values no longer have to be in ascending order. However, make sure that the last step you want displayed has a value equal to the maximum parameter value. Also, for intensity type parameters like shutters, place the value that will be output while **Highlight** is on in step 48.

Delete button

Many users commented that it was too easy to delete programming by mistake. To correct this, the **Delete** button now has to be held down when you choose what you want to delete. If you let go of the button before choosing anything, the delete operation will be cancelled.

In and Out times

In timed stack crossfades, any intensity parameter that is going down will use the Out time, any going up will use the In time. This is now like theatre controllers. All other types of parameter work as before.

The Out time can now be longer than the In time in the special case of when the Delay time is **halt**.

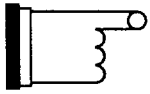
Fader Displays

The console fader displays have been changed in Chase and Timed mode so that the current step always shows up on the top line. The bottom line now displays the stack name.

How to load new software
onto the WHOLEHOG.

Changing Software

From time to time, Flying Pig Systems will release a new version of software for you to load onto your WHOLEHOG. Often this will just involve loading new software onto the control rack hard drive, but occasionally you may need to change EPROMs in the console itself. This appendix covers all you need to know to fit the new software to your WHOLEHOG.



Do you actually want to upgrade now? This is a valid question to ask in the situation where the desk is out on a long tour, and the operator has programmed the show on the old software - loading on new software might change the programming and the playback away from what the operator is used to. Contact Flying Pig technical help for advice in these circumstances.



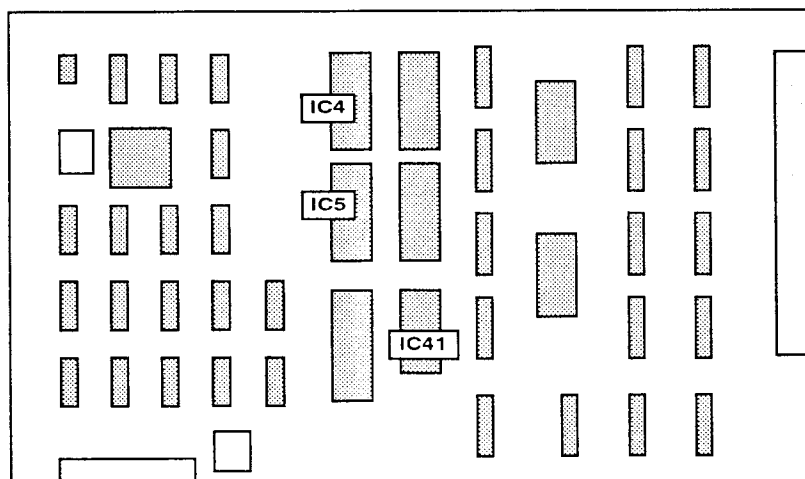
Before you start loading the new software, make a full backup of any important shows just in case the loading process goes wrong. Also, once the new software is fully loaded, check that all your show programming is behaving as expected.

If the new release of software contains EPROMs and a disk, it is generally better to fit the EPROMs first, then power up the console and load the new software.

Fitting New EPROMs

You will need to remove the menu fader panel second from the left by unscrewing the four corner fixing screws. Unplug the desklight power, turn the panel over and rest it upside down on the panel to the right. There should be no need to undo any other connectors.

This exposes the console processor board:



There are actually two sets of EPROMs in the console: IC 4 and IC 5 are one set for the 186 processor, and IC 41 is another for the MCS51 microcontroller. These numbers are stenciled onto the printed circuit board.

You may only need change one of these sets - check the labels on the EPROMs that you have been sent. Those labelled "IC 4" and "IC 5" are for the IC 4 and IC 5 slots, those labelled "IC 41" are for IC 41.

Remove the old EPROMs from their sockets carefully, using a flat head screwdriver. Take one of the new EPROMs and check its label to make sure you are placing in the right socket. Orientate the EPROM so that the nick in its casing points to the back of the console.



EPROMs must be inserted the correct way around. The slot in the EPROM casing must always point to the back of the console. If you are at all unsure, call FPS technical help.

Once you have placed the EPROM in the correct socket the right way around, make sure all the legs are correctly seated, then push down firmly until the EPROM is flush against its socket.

Repeat the process for the other EPROMs.

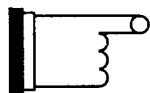
When you are done, reconnect the desklight and replace the menu fader panel. Power up the console and control rack, and check the Focus parameter display for a software version message to make sure that the EPROMs have been inserted correctly.

Place the old EPROMs in the EPROM packaging and return to FPS.

Loading New Software from Disk

Turn on the console, and select the **Tools** screen window under the **Hog** menu. Click on **Load** next to the **Load New Software** title. This starts the loading process - follow the screen instructions stage by stage.

Once the process is complete, you must reset the console before the new software takes effect. After resetting, you can check that the loading has worked by using the **About** window and checking the software version number.



When you have finished changing software and EPROMs, please gather up all the old disks and EPROMs and return them to FPS at 53, Northfield Road, London W13 9SY, UK. or at 21114 Las Flores Mesa Drive, Malibu CA 90265, USA. This allows us to make sure that all desks are upgraded, and that no old software releases remain to cause problems.

What to do if your
WHOLEHOG appears to
be misbehaving

Troubleshooting

A series of diagnostic tests are run every time that you turn on the WHOLE-HOG. If an error is detected, an error message will come up on the screen or on the console LCDs. The diagnostics will not spot all errors, so the console may appear to start normally even though part of the hardware is not functioning.

This chapter lists out problems in order of occurrence. Once you have found a description that matches your symptoms, follow the instructions to try and correct the problem.

This chapter also includes:

- *Resetting System Data.* How to restart the console when system data has been lost.
- *Maintaining Your Hard Drive.* How to look after your hard drive, and how to find and fix hard drive problems.
- *Software Problems.* What to do in the event of finding a software error or bug.

Startup Problems

Monitor screen is blank.

Check that the monitor has power, is switched on at the front, and the video lead is connected to the video output at the back of the control rack. In addition, the monitor control knobs may have been knocked in transit, and will need readjusting.

A message such as

"CMOS battery state low"

"CMOS checksum failure"

"CMOS system options not set"

"CMOS display type mismatch"

"CMOS memory size mismatch"

"C: drive error"

"CMOS time and date not set" comes up on the screen.

The onboard battery system has discharged since its last use, or the battery (located in the control rack) may have become loose and temporarily disconnected. The system configuration data needs resetting. Refer to the section *Resetting System Data* to reset.

The message "Keyboard error - hit F1 to resume" comes up on the screen.

The keyboard is not working or is not connected. Check the connector, and hit the function key F1 located at the top right of the keyboard.

- A message such as

"FDD controller failure"

"HDD controller failure"

"HDD failure - insert disk in drive A:" comes up on the screen.

The floppy/hard drive controller card has worked loose, or the ribbon connectors to the floppy and hard drive are loose, or the power connectors to the floppy and hard drives are loose. Reseat the card and push all connectors in firmly.

Control rack powers up, but the video display never reaches the WHOLEHOG screen menu system.

Possible causes for this could be missing software, incorrect controller setup files or a disk problem. If the console has reached the point where it says "C:\>", you could try reinstalling the software manually: insert an up-to-date software diskette, and type "\dos\restore a: c:*.* /s" followed by return, then follow the screen instructions. Press Reset after the installation is finished to restart the console. If this does not work, or the display shows an error message, contact Flying Pig technical support.

The screen shows the WHOLEHOG screen menu opening screen with the message "No console connection" and then stops.

Check that the console itself has power, and that the data cable between the control rack and the console is correctly connected. Also check that the serial card in the control rack is correctly seated, and that the controller motherboard power connectors are properly inserted. Correct and restart.

The screen shows the WHOLEHOG screen menu opening screen with the message "Console standing by" and then stops.

This means that the control rack has detected the console, but has not been able to communicate with it. This indicates an electronics problem. If you are qualified, try pushing in the serial comms card inside the control rack, and check all the chips on the console processor board are correctly seated, especially the RS232 driver chips. Otherwise contact Flying Pig technical support.

The screen shows the WHOLEHOG screen menu opening screen with the message "Console hardware error [3] 1" and then attempts to continue, but the console displays will not be working.

This indicates that the display driver section of the console processor board is not well. This could be caused by a number of electronic faults, so contact Flying Pig technical support.

The top programmer display on the console displays an error message.

This indicates that the display driver section of the console processor board is not well. This could be caused by a number of electronic faults, so contact Flying Pig technical support.

The bottom parameter wheel display on the console shows the message "LCDs failed:" followed on the bottom line by a list of numbers.

If there are no numbers, then all is OK. If there are, the numbers indicate which LCDs are not working and need replacing. Refer to the Address Maps in the Schematics chapter to find out which LCDs these correspond to. With the power off, open the console and check power and data connectors to the offending panel. Reassemble and restart. If not corrected, contact Flying Pig technical support to have them replaced. Note that the remainder of the console will work fine despite this.

The control rack appears to load the show okay, but then no longer responds to anything. Pushing buttons on the console causes nothing to occur.

If possible, try selecting the tools option from the Hog menu, and switching on the event display. If button pushes and slider movements are not showing up, then this indicates that the input driver section of the console processor board is not well. This could be caused by a number of electronic faults, so contact Flying Pig technical support.

The mouse does not work.

Check that the mouse is plugged into the correct socket on the back panel of the control rack, then reset. Also, check that the switch on the bottom of the mouse is set to 2. Correct and restart. If it still does not work, then your mouse needs replacing, or the serial comms card and leads inside the control rack are loose. Contact Flying Pig technical support.

A DMX data tester reports "No DMX".

Check the red LED on the back panel of the control rack. If it's off, the independent DMX driver power supply has failed. First check the fuse on the backpanel PCB and replace it if necessary (2 AMP fast). Check that 12 volts is present at the power input of the backpanel PCB. If 12 volts not present, contact Flying Pig technical support.

If it's on, use a DMX data tester to see if DMX is present on any output. You may find that one output group has failed: DMX groups are outputs (1, 2, 11, 12) / (3, 4, 9, 10) / (5, 6, 7, 8). This means that one of the 3 DMX driver chips has blown. Repatch around the failed group, and contact Flying Pig Technical support.

If no outputs are ok, open the tools menu and click on DMX toggle (Mk1 cards only - this should only be necessary if the software has been stopped and restarted somehow without using reset. Also, sometimes Archive, Restore Shows and Load new Software can turn DMX off - this is a known hardware bug). Also check that the DMX card is correctly seated in the control rack. Correct and restart.

There is DMX, but the fixtures cannot be controlled.

Check that you have closed the patch window after patching, since any changes will not take effect while it is open. Also, check that you have the correct addresses and DMX output numbers.

Fixtures twitch, or generally behave strangely.

Check that the starting addresses on the patch window match the starting addresses of your fixtures. Then try setting the refresh switch on the backpanel of the control rack to 30Hz. This will solve problems with fixtures with slow DMX inputs (like Varilite VL1's and old Intellabeams). If that hasn't solved the problem, then there is a DMX integrity problem on the rig itself. Check all DMX lines, buffer boxes, and fan-outs. Do not use any unbuffered splits. Try running the console of the same power as the rig. Check that DMX lines are correctly terminated.

The parameters wheels appear to change values, even when they are not being touched.

The instrument numbers disappear from the Programmer display.

This is a known hardware bug caused by the parameter wheels counting on their own. It should occur only very rarely, and can be stopped by clearing the programmer and twirling all the wheels about vigorously.

The quadrant fader does not move from step to step correctly during manual crossfading.

The quadrant fader works by changing steps whenever it reaches its endstops, so this problem means that it is not reaching its endstops correctly. To check this, select Tools under the Hog menu, and switch event displays on. Now move the T bar. You will see a series of messages like "QFADER_MOVED 21 230". As you move from bottom to top, check that the last number changes in value from 0 to 255. If it is not reaching 255, then you need to adjust the programmer/playback sections trim pot. It is located on the panel's circuit board, at the right hand edge near the Grand

Master. Set it up so that both the T bar and the Grand Master reach 255 a few mm before their top range. Remember to switch off the event display when you're done.

If they are not reaching 0, then there is an internal console earthing problem. Contact Flying Pig technical support.

The DBO led always flashes, even when the Grand Master is at full

Same problem as above.

An LED does not appear to be functioning as expected.

You can test all the LEDs on the console using the Tools window found under the Hog menu. Switch the LED test to ON. All the LEDs will come on. If one or more do not work, the LEDs may be dead or have a dry solder joint – contact Flying Pig technical support for replacement instructions. If an entire panel is not working, there is a problem with that panel. Remove power, open the console and check data and power connections to the panel. Reassemble and restart. If the same LED on several panels is not working, a console bus problem should be suspected – contact Flying Pig technical support.

Note that the scene master LEDs and the fader LEDs may reset themselves to off during the test. This is normal, and is caused by moving a fader etc.

A button does not appear to be functioning.

You can test all the buttons on the console using the Tools window found under the Hog menu. Switch the event display to ON, and test the button. If it does not generate a cryptic event message, then the button has failed. Correct as with LEDs above – or contact Flying Pig technical support.

Backlighting fails.

If some are working then one of the inverters has failed, or a connector has worked loose. If all have failed, check and replace the fuse (1 amp fast) on the console distribution board labelled EL fuse. Proceed with caution, since the fuse may well have blown for a good reason. Contact Flying Pig Technical help. Best access is via menu/fader panel 4th from left.

Desklights fail.

These will all fail together. Try replacing fuse (2 amp fast) on the console distribution board labelled DESKLIGHTS fuse. Best access is via menu/fader panel 4th from left.

Resetting System Data

Before Starting

You will need to look on the back of your control rack to establish your WHOLEHOG serial number, speed, and hard drive size.

To reset the data, restart the console. When you see the message "Hit DEL, if you want to run SETUP" or "Hit EC, if you want to run SETUP", hit **Delete** or **Esc** until you see a menu screen as below:

```
BIOS SETUP PROGRAM - AMI BIOS SETUP UTILITIES
(C)1990 American Megatrends Inc., All Rights Reserves

STANDARD CMOS SETUP
ADVANCED CMOS SETUP
ADVANCED CHIPSET SETUP
AUTO CONFIGURATION WITH BIOS DEFAULTS
AUTO CONFIGURATION WITH POWER-ON DEFAULTS
CHANGE PASSWORD
HARD DISK UTILITY
WRITE TO CMOS AND EXIT
DO NOT WRITE TO CMOS AND EXIT

Standard CMOS Setup for Changing Time, Date, Hard Disk Type, etc.
```

Choose the option "STANDARD CMOS SETUP" using the cursor keys and **Return**. Hit **Return** again to go through a warning screen, and you should see a screen similar to below. Make sure that the screen options are as below. Follow the screen instructions and use the keyboard and **PgUp / PgDn** keys to make any changes that are necessary, and then **Escape** to return to the main menu. The hard disk settings depend on your hard drive type.

```
BIOS SETUP PROGRAM - AMI BIOS SETUP UTILITIES
(C)1990 American Megatrends Inc., All Rights Reserves

Date (mn/date/year): Tue, Oct 20 1992           Base memory : 640 KB
Time (hour/min/ sec): 16 : 53 : 06             Ext. memory : 7168 KB
Daylight saving : Disabled
Hard disk C: type : 47 = USER TYPE             Cyl'n Head WPccr LZone Sect Si:
Hard disk D: type : Not Installed
Floppy drive A: : 1.44 MB, 3 1/2"
Floppy drive B: : Not Installed
Primary display : VGA/PGA/EGA
Keyboard : Installed

981 10 0 981 17 81
Hard Drive 80Mb

936 16 0 936 17 124
Hard Drive 120Mb
```

New WHOLEHOGs For WHOLEHOG #0007, and #0009 and above, repeat for menu option "ADVANCED CMOS SETUP".

BIOS SETUP PROGRAM - AMI BIOS SETUP UTILITIES (C)1992 American Megatrends Inc., All Rights Reserves	
Typematic Rate Programming: Disabled	Adaptor ROM Shadow E800,32K: Disabled
Typematic Rate Delay (msec): 250	Auto Config Function : Disabled
Typematic Rate (Chars/Sec): 10	DRAM Speed Option : Faster
Memory Test Tick Sound : Disabled	DRAM Write CAS Pulse : 1T Speed
Memory Parity Error Check : Enabled	Cache Write Cycle Option : 2T 33MHz
Hard Disk Type 47 RAM Area: 0:300	Cache Read Cycle Option : 2T
Wait for (F1) If Any Error: Enabled	Bus Clock Frequency Select : 1/8 CLK
Numeric Processor Test : Disabled	Video Cacheable Option : Disabled
Weitek Processor : Absent	
System Boot Up Sequence : A:, C:	
External Cache Memory : Enabled	2T Speed
Internal Cache Memory : Disabled	3T 40MHz
Password Checking Option : Setup	2T
Video ROM Shadow C000,32K Enabled	1/10 CLK
Adaptor ROM Shadow C800,32K Disabled	Disabled
Adaptor ROM Shadow D000,32K Disabled	
Adaptor ROM Shadow D800,32K Disabled	
Adaptor ROW Shadow E000,32K Disabled	

Old WHOLEHOGs For WHOLEHOG #0008, and #0006 and below, two screens need to be set: the "ADVANCED CMOS SETUP" and "ADVANCED CHIPSET SETUP" menu choices.

BIOS SETUP PROGRAM - AMI BIOS SETUP UTILITIES (C)1990 American Megatrends Inc., All Rights Reserves	
Typematic Rate Programming: Disabled	Video ROM Shadow C000,16K: Enabled
Typematic Rate Delay (msec): 250	Video ROM Shadow C400,16K: Enabled
Typematic Rate (Chars/Sec): 10	Adaptor ROM Shadow C800,16K: Disabled
Above 1 MB Memory Test : Disabled	Adaptor ROM Shadow CC00,16K: Disabled
Memory Test Tick Sound : Disabled	Adaptor ROM Shadow D000,16K: Disabled
Memory Parity Error Check : Enabled	Adaptor ROM Shadow D400,16K: Disabled
Hit Message Display : Enabled	Adaptor ROM Shadow D800,16K: Disabled
Hard Disk Type 47 RAM Area: 0:300	Adaptor ROM Shadow DC00,16K: Disabled
Wait for (F1) If Any Error: Enabled	Adaptor ROW Shadow E000,16K: Disabled
System Boot Up Num Lock : On	Adaptor ROM Shadow E400,16K: Disabled
Numeric Processor Test : Disabled	Adaptor ROM Shadow E800,16K: Disabled
Weitek Processor : Absent	Adaptor ROM Shadow EC00,16K: Disabled
Floppy Drive Seek At Boot : Enabled	Adaptor ROM Shadow F000,16K: Enabled
System Boot Up Sequence : A:, C:	
System Boot Up Speed : High	
Cache Memory : Enabled	
Fast Gate A20 Option : Enabled	
Password Checking Option : Disabled	

Also, older WHOLEHOGs will need to have the "ADVANCED CHIPSET SETUP" set:

BIOS SETUP PROGRAM - AMI BIOS SETUP UTILITIES (C)1990 American Megatrends Inc., All Rights Reserves		
BUS Clock Selection	: CLKIN/4	Non-Cacheable Block-2 Size : 64 Mb
Extended I/O Decode	: Disabled	Non-Cacheable Block-3 Base : 0 KB
Concurrant Refresh	: Enabled	Non-Cacheable Block-3 Size : Disabled
Relocated 256 KB Cacheable:	No	
256 KB Memory Relocation	: Disabled	
DRAM Write Wait State	: 1 W/S	
DRAM Read Wait State	: 3 W/S	
RAS* Timeout Counter	: Disabled	
Page Mode	: Enabled	
DRAM State Machine Select	: Cache	
CAS Pulse Width	: 3 CLK2	
RAS Precharge Time	: 6 CLK2	
RAS to CAS Delay	: 2 SYCLK	
Non-Cacheable Block-0 Base:	768 KB	
Non-Cacheable Block-0 Size:	32 Kb	
Non-Cacheable Block-1 Base:	960 KB	
Non-Cacheable Block-1 Size:	64 Kb	
Non-Cacheable Block-2 Base:	16384 KB	

To Exit

Finally, select the "WRITE TO CMOS AND EXIT" option and press Y. The system should now start as normal. If the battery has become low, then it is worth leaving the console on for a while to allow it to charge again.

Maintaining Your Hard Drive

Regular maintenance and house keeping of your hard drive will help to prevent disk problems from arising: delete old shows that you don't need anymore; from time to time (once a month), you should check your disk:

- 1** Drop to DOS by holding **control** and pressing **pause**.
- 2** At the DOS prompt ("C:\>"), type "chkdsk c:". This will perform a quick test of the integrity of your hard drive. It will produce a report such as:

```
Volume Serial Number is B1AF-AFBE

72214528 bytes total disk space
 723728 bytes in 3 hidden files
 30720 bytes in 12 directories
11493376 bytes in 386 user files
 61440 bytes in bad sectors
60555264 bytes available on disk

    2048 bytes in each allocation unit
 35261 total allocation units on disk
29568 available allocation units on disk

655360 total bytes memory
493456 bytes free
```

Fixing Errors

If the chkdsk procedure shows a message such as

```
61 lost allocation units found in 6 chains
```

you can correct this: make sure that you have archived critical shows, then rerun with "chkdsk c: /f". The console will ask:

```
Convert lost chains to files?
```

Answer "Y".

Bad Errors

Not all problems can be fixed that easily. If the chkdsk procedure shows errors such as

```
Invalid subdirectory entry P82  
Myfile1 crosslinked to Another2
```

then the hard drive will need to be reformatted completely.

Reformatting

This is a drastic step to take. All shows that have not been archived will be lost. Take great care to make sure that critical shows have been properly archived.

To reformat:

- 1** Archive all critical shows.
- 2** Make sure that you have the 3 DOS installation disks and an up-to-date software disk.
- 3** Drop to DOS from the WHOLEHOG screen by holding **control** and pressing **pause**.
- 4** At the DOS prompt ("C:\>"), type "format c: /u", and follow instructions. This will completely clean your hard drive.
- 5** Insert DOS installation disk 1 (Setup) and reset the console.
- 6** The DOS setup program will run. Follow the screen instructions. During setup, you will be given the following choices:

```
Exit Setup  
Continue Setup and replace your current version of DOS
```

Choose "Continue Setup"

```
Country:                United States  
Keyboard Layout:       United States
```

Change "Country" to "United Kingdom". Change "Keyboard Layout" to "United Kingdom" if you are using a UK keyboard (usually those without a built in trackball).

For all other choices, choose the one that the Setup program offers.

As the Setup program runs, it will ask you to swap disks. The procedure takes about 10 minutes.

7 Once Setup is done, type "C:" followed by return.

8 Insert the WHOLEHOG software disk into the floppy drive.

9 At the prompt "C:>" type "dos\restore a: c:*.* /s", and follow the instructions.

10 Reset the console, and restore any archived shows.

If you are at all unsure about the above procedure, contact Flying Pig technical help.

Software Messages

No piece of software as large and as complex as your WHOLEHOG control software will ever be 100% free from software bugs. In the rare event that you should come across one, the screen will alert you to why it has gone wrong.

These messages appear in a red box on the screen, under the heading "A serious inconvenience has occurred:". They indicate that an unexpected and unrecoverable software condition has been detected. Some may be caused by rare combination of events leading to a software bug, and the console can be reset and will run without problems. Others are more serious and may indicate hardware problems. In all circumstances, contact Flying Pig technical support so that we can prevent these bugs from recurring.

Message:

Async mark failed

Attempted to load preset into non F type

Boris crashed

Can't allocate unaligned object in heap

Cannot delete SEQ while steps loaded

Cannot find stack header data

Cannot open debug frame file

Cannot read step data

CatNumEntries disc operation failed

Channel doesn't work on cues

Action:

Caused by bug. Try resetting.

Caused by bug or old programming data. Try resetting.

Serial comms has failed. Check connections and hardware.

Caused by bug. Try resetting.

Caused by bug. Try resetting.

Caused by bug or by disk problem. Try resetting.

Using wrong software. Try reloading software.

Caused by bug or by disk problem. Try resetting.

Try resetting.

Caused by bug. Try resetting.

Channel missing valid instrument refs	Caused by bug or by corrupted disk data. Try resetting and reloading software.
Command aborted - root directory at risk	Caused by bug. Try resetting and avoid using show delete.
Console received bad instruction	Indicates hardware failure. Check connections and hardware.
Couldn't change directory	Indicates disk problem. Check software correctly loaded.
Couldn't read in patch file	Indicates disk problem.
Couldn't write frame data	Using wrong software. Try reloading software.
CrossFade overlap occurred	Using wrong software. Try reloading software.
Cue end pointer deleted	Caused by bug. Try resetting.
Delete catalogue entry failed	Caused by bug or by disk problem. Try resetting.
Delete number too large	Caused by bug. Try resetting.
Delete pointer out of range	Caused by bug. Try resetting.
Detected step residing below seq in heap	Caused by bug. Try resetting.
DISCSLIDER::Assign disc operation failed	Indicates disk problem.
DISCSLIDER::HeaderInfo disc operation failed	Indicates disk problem.
DISCSLIDER::Load disc operation failed	Indicates disk problem.
DisplayCat disc operation failed	Indicates disk problem.
faderOrder block corrupted	Caused by bug. Try resetting.
Failed to close Setup file	Indicates disk problem.
Failed to map in the device	Caused by bug. Try resetting.
Failed to open setup file	Indicates disk problem.
Failed to write to setup file	Indicates disk problem.
File error storing rig schematic	Indicates disk problem.
Flush current catalogues failed	Indicates disk problem.
Group page not open	Indicates disk problem.
HEADERINFO::Store disc operation failed	Indicates disk problem.
Index catalogue disc operation failed	Indicates disk problem.
Insert pointer out of range	Caused by bug. Try resetting.
Insufficient memory	Caused by bug. Try resetting.
INTENSITY: unable to setup list	Caused by bug. Try resetting.
Library is incompatible with software	You have just uploaded new software, without changing the current Fixture Library. Try reloading all the software.
LOCATION::Decode Unknown menu number	Caused by bug. Try resetting.
NUMLIST::Read disc operation failed	Indicates disk problem.
NUMLIST::Store disc operation failed	Indicates disk problem.
OBJSTACK overflow	Caused by bug. Try resetting.

Out of memory at xxxx	Record the number that follows and notify FPS, then try resetting.
Overrun MAXLIST in CUE+NUMLIST	Caused by bug. Try resetting.
Overrun temp.endList+1 in NUMLIST+NUMLIST	Caused by bug. Try resetting.
Parameter number incorrect	Caused by bug. Try resetting.
Parameter number not set	Caused by bug. Try resetting.
Patch offsets incorrect	Caused by bug. Try resetting.
Path name too long	Caused by bug. Try resetting.
Pointer Deleted	Caused by bug. Try resetting.
Preset not cleared in synth	Caused by bug. Try resetting.
ReadCat disc operation failed	Indicates disk problem.
Schedule catalogue numbers out of date	Caused by bug. Try resetting.
Seq Clear ran out of memory	Caused by bug. Try resetting.
SEQ constructor 1st step add out of mem	Caused by bug. Try resetting.
SEQ+i failed to create new STEP	Caused by bug. Try resetting.
SEQ::Store disc operation failed	Indicates disk problem.
Sequence insert step crash	Caused by bug. Try resetting.
Sequence step pointer deleted	Caused by bug. Try resetting.
SetActive catalogue entry failed	Indicates disk problem.
SpreadPrms overrun	Caused by bug. Try resetting and avoid programing palettes
Stack list size corrupted	Caused by bug. Try resetting.
Stack read out of step	Caused by bug. Try resetting.
Timer changed to stopped state	Caused by bug. Try resetting.
Timer initialised in stopped state	Caused by bug. Try resetting.
Tried to update header for stack not on disc	Indicates disk problem.
Unable to close catalogue file	Indicates disk problem.
Unable to complete disc operation	Indicates disk problem.
Unable to create current page	Indicates disk problem.
Unable to create sub_directory	Indicates disk problem.
Unable to locate starting step for store	Indicates disk problem.
Unable to open catalogue file	Indicates disk problem.
Unable to open event debug file	Indicates disk problem.
Unable to open OBJSTACK	Caused by bug. Try resetting.
Unable to read in cue data	Indicates disk problem.
Unable to read in patch data	Indicates disk problem.
Unable to read in the schedule	Indicates disk problem.
Unable to read library file	Indicates disk problem.
Unable to read library fixture entry	Indicates disk problem.

Unable to read old irq10 vectors	Caused by bug. Try resetting.
Unable to read old serial vectors	Caused by bug. Try resetting.
Unable to read old time vectors	Caused by bug. Try resetting.
Unable to read parameter entry	Caused by bug. Try resetting.
Unable to restore directory	Indicates disk problem.
Unable to restore old irq10 vectors	Caused by bug. Try resetting.
Unable to restore old serial vectors	Caused by bug. Try resetting.
Unable to restore old time vectors	Caused by bug. Try resetting.
Unable to store cue data	Indicates disk problem.
Unable to store library file	Indicates disk problem.
Unable to store library fixture entry	Indicates disk problem.
Unable to store parameter entry	Indicates disk problem.
Unable to store patch data	Indicates disk problem.
Unable to store the schedule	Indicates disk problem.
Unexpected timer irq	Caused by bug. Try resetting.
Unknown adjustment sign	Caused by bug. Try resetting.
WLIST copy constructor called	Caused by bug. Try resetting.
WriteCat disc operation failed	Indicates disk problem.

Other Messages

Some software problems will cause an immediate crash, with a message on the screen like **ILLEGAL INTERRUPT #06** or **GENERAL PROTECTION FAULT** followed by a whole series of numbers. Record the following:

- What you were doing before you had the crash.
- The crash message such as **Illegal Address**.
- The number next to the **eip** entry.

Then try resetting. Also, contact Flying Pig technical support.