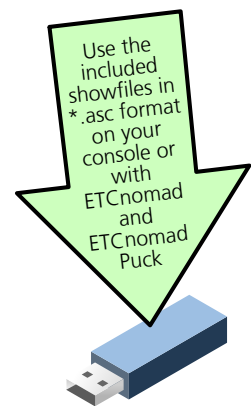


TEA BREAK TUTORIALS

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	2	Patching Conventionals
	3	Channel Control
	4	Channel Check, Rem Dim, Channels on Masters
	5	Groups
	6	Presets
	7	Patching Scrollers & LEDs
	8	Controlling Scrollers & LEDs
	9	Color Palettes
	10	Direct Selects
	11	Patching Moving Lights
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Theatre Section	14	Sequences - Theatre Style
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	16	Automark
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Connect to the included Capture model on your laptop to see the output of your console!



***For use with all Cobalt and Congo consoles
and ETCnomad devices running Cobalt v7.1.1***

COBALTTM Family



WELCOME TO COBALT!

...and welcome to the Tea Break Tutorials. These 30 lessons are designed to take you through the Cobalt software step-by-step, in tea break-sized chunks.

The tutorials are based around ETC's London training rig. A visualised version of this rig is available to download for free from etcconnect.com. This is a standalone Capture Polar file, which can run on a Windows PC attached to your console.

Tutorial Structure

Cobalt can be used in different ways for different applications. Broadly speaking, these can be split up into theatrical-style use (recording a list of cues to be played back on the Go button), and live-events "rock'n'roll" use (placing looks and attributes on multiple faders for busking purposes). For this reason, the tutorials are nominally split into 3 sections:

Core Section (1-13)

Topics relevant to everyone, such as patching, basic channel control, and content creation

Theatre Section (14-20)

Recording presets in a sequence, playback and editing

Busking Section (21-30)

Content on faders, fader settings and quick content creation and editing

You can of course combine both ways of working, and you can work through the tutorials from beginning to end to get the most complete picture of how the console operates.

Conventions and Tips

Each tutorial comes with **its own .asc showfile**, indicated by this symbol:



Remember to load up the correct showfile every time you start a new tutorial, so that you have all the content you need.

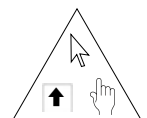
You will often need to **hold one key and then press another**, indicated like this:



In this case, as soon as you hit [Group], the action happens and you can let go of [Record]. You will never need to hold down more than one key, or hold down a number key. The key you hold down tends to be the action (e.g. Record) and the key you press is the target (e.g. a Group).

To start with, individual keypresses are given to guide you through the tutorials. Later on, simple things like selecting channels and setting levels are given as instructions, either in DIY Channel Balloons, or as **bolded text**.

To navigate around pop-up menus and spreadsheets, you can either move between cells with the arrow keys, or tap with your finger if you have a touchscreen. In these situations, the following symbol is used, along with written instructions.

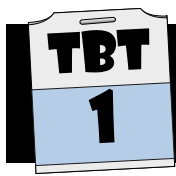


Clock boxes like this are a chance for you to practice the concepts covered in the tutorial, without step-by-step guidance.

FINGER TIP



Finger Tips boxes show helpful hints for Cobalt 20 and Cobalt 10 users, as well as users of Congo consoles with an external touchscreen.



Power-On and Navigation

Let's Begin

When starting up your Cobalt console for the first time, or starting a New Play, you will first be presented with a choice between starting with a 1:1 Patch (Channel 1 controls Dimmer 1 etc), or No Patch. Which you choose depends on your particular needs; for the purposes of these tutorials, No Patch is appropriate.

This is followed by the Let's Begin window, a selection of important settings which should be decided upon before embarking on a New Play. These settings can be changed later, and will be covered in more detail in later tutorials. As you move between the settings, a brief explanation appears in yellow at the bottom of the menu.

Three types of field appear in this menu. Move between fields using the up and down arrows, or tap the desired field with a finger or mouse. Fields such as "Set Times To" include a fixed number of options - in this case A and B - which can be cycled through using the Modify key. Fields like "Default Go Time" expect a numerical entry - type the number on the keypad, then press Modify to enter into the field. Finally, tick boxes can be ticked and cleared using the Modify key, or by tapping/clicking.

When finished, arrow down to the Let's Begin button and press [Modify].

Tabs and Docks

The two main components of screen layouts on Cobalt are Tabs and Docks.

Tabs display the primary show information, and can be laid on top of one another, like in a web browser. They can also be moved between physical monitors as required.

Docks can be created on any of the four sides of a screen, and display various useful functions including Effects, Direct Selects, Device Controls for moving lights. Some docks are more useful on touchscreens, others on laptops running Nomad or the Offline Editor, while others simply display handy information. Docks can be minimised, expanded to the desired size by dragging, and fullscreened (for example to provide a full touchscreen of Direct Selects). Some docks can only be opened on the left and right sides (i.e. vertical), while others can only exist on top and bottom (horizontal).

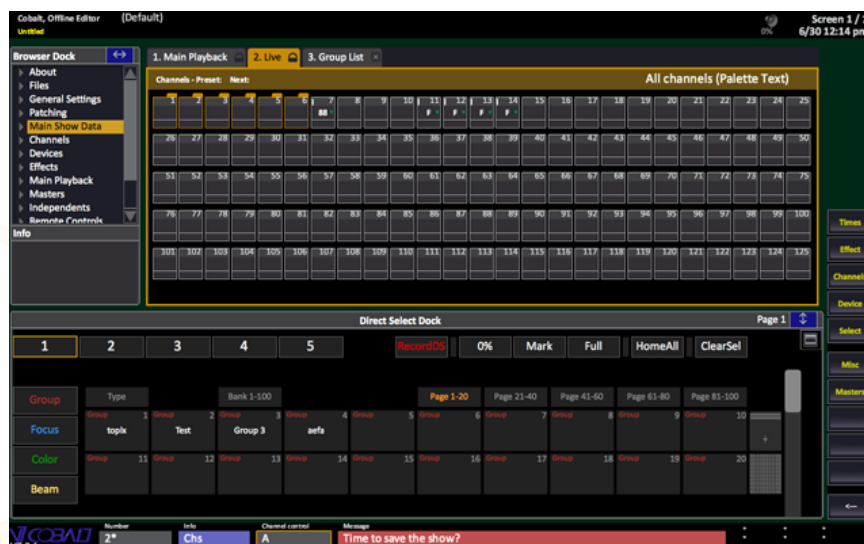
The Browser

The Browser is an important dock, which appears by default on the left-hand side of the primary monitor. It allows access to almost all elements of the console, including Play File management, Settings, and lists of the contents of your Play File (Presets, Groups etc). Many of the windows found in the Browser can also be accessed using key combinations.

Tabs

The Browser

Dock Area



Power On



Power on your console. The console will boot up into the Welcome Screen.



Press Modify on Start Server

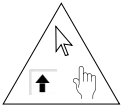


No Patch



Choose No Patch

You are now presented with the Let's Begin Menu.



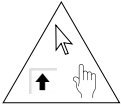
Move to the **Default Out Time** field, either by arrowing down (which takes you back to the top), or by tapping or clicking on it.



The Default Out Time is set to 7 seconds



The field is cleared - on Cobalt, 0 removes information



Go to the **Set Times To** field




The other option, A, is displayed



And back to B

Let's begin!

Tap, or highlight and press Modify on, the Let's Begin button. You are now entering Cobalt.

FINGER TIP  Whether you interact with these menus using the touchscreen or the arrow keys is entirely up to you. Most functions can be accessed by either method. When using Nomad on a laptop, you'll generally use the mouse cursor. Tapping also allows you to tick or untick boxes, and expand and select from drop down menus

Tabs

A New Play starts with two tabs open - Live and Main Playback. These tabs are locked by default, meaning they can't be closed in the normal way.



Pressing the Tab key switches between open Tabs in numerical order



Typing in a number then pressing Tab takes you to that Tab



Focusses on the Live tab



Three new tabs are opened.



The active tab is moved to the next monitor to the right



The active tab is closed



The active tab is split off vertically
This is especially useful when working with fewer monitors



The split is now horizontal



The split is removed



All non-locked tabs are closed

Dock Areas



A pop-up window shows the four dock areas for the active monitor

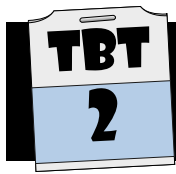


Arrow up to the "Top area" drop down menu, press Modify, and choose Effects Dock. Press Modify to choose, then press Modify on OK

FINGER TIP 

Docks can also be chosen by right clicking on the Dock's title bar, or tapping next to the double arrow on a touchscreen

Drag the double arrow to resize the Dock. Double click or double tap the Dock's title bar to collapse (but not close) the Dock



Opening and Saving

Before diving in to Lesson 2, you need to open the correct Play File. Go to Browser > Files > Open > USB Memory > Cobalt TBT Base files, and choose Cobalt TBT 02 - Patching Conventionals by pressing Modify.

To save this as your own file, go to Browser > Files > Save As > Play Archive, and press Modify. Label the file with your name (e.g. Bob's Cobalt Show.asc).

While working, it is a good idea to save periodically. You can either save from the Browser, or do a quick save - on Cobalt, there is a Save key, and on all consoles you can also save by holding [C/Alt] and hitting [Update]. This doesn't overwrite the existing file, gives it a new extension (Bob's Cobalt Show.001). Up to 9 versions are saved, with .009 being the oldest, and the current files is always .asc

Ways of Patching

Patching allows you to assign your own Channel numbers to Dimmers. A 1-to-1 patch would have Channel 1 control Dimmer 1, Channel 2 control Dimmer 2, and so on. However, you may want to start with a blank patch and choose your own numbering.

Channel	Dimmer
61	16
62	1
63	90
64	161, 162
65	17
66	2

An example of a patch, allowing sensible numbers to be assigned to dimmers (also known as "addresses", and generally on Cobalt as "outputs")

There are several different ways to patch on Cobalt. Which one you use depends on your personal preference, and on the situation.

The **Output Editor** is the most basic patching window, showing a visual representation of a DMX universe, along with level and patch information. Patching by Output (dimmer) can be done quickly in this window.

The **Output List** serves a similar function, but in spreadsheet format. It also has additional options for each Output.

The **Channel List** looks a lot like the Output List, but is ordered by Channel. This would be the best place to work if your patch is listed in channel order.

Finally, the **Patch Wizard** offers an automated way of patching conventionals one by one, or in sequential blocks, as well as the quickest way to patch large numbers moving lights or other devices.

Of course, any changes you make in these windows will be reflected in all the other windows – there's only one Patch, with multiple ways of viewing and editing it. The Output List and Channel List may provide the most familiar way of patching, as they allow you to type in Channel then Dimmer, or vice versa, and see the results in neat columns.

Output Editor

OUTPUT

The Output Editor is opened in a new tab, showing a tile for each output in universe 1

1

OUTPUT

Output 1 is selected in gold

6

MODIFY

A pop-up asks you to confirm the patching of Channel 6 to Output 1

MODIFY

Confirmed

1

7

OUTPUT

1

8

+

1

9

+

Outputs 17, 18 and 19 are selected, in that order

2

2

MODIFY

A pop-up asks whether to patch those three outputs to channel 22, or to three sequential channels

↓

MODIFY

Outputs 17, 18 and 19 are patched to channels 22, 23 and 24

1

OUTPUT

0

MODIFY

MODIFY

Output 1 is unpatched - the number 0 is used to remove information

ESC

Close the Output Editor

Output List

Browser

Patching > Settings and Tools > Output List > Universe 1 (1-512)

MODIFY

The Output List for Universe 1 is opened

7

OUTPUT

The spreadsheet cursor jumps to Output 7

→

You are now working in the Channel column

7

1

MODIFY

Output 7 is patched to Channel 71

6

OUTPUT

The cursor remains in the Channels column, but jumps to the line of Output 6

7

2

MODIFY

Output 6 is patched to Channel 72

This method allows a quick workflow for typing in an Output-ordered patch

ESC

Close the Output List

Channel List

MODIFY

&

CHANNEL

The Channel List is opened

7

3

CHANNEL

The spreadsheet cursor jumps to Channel 73; this window works like the Output List in reverse

→

You are now working in the Dimmer Address (i.e. Output) column

3

MODIFY

Channel 73 is patched to Output 3 - the format 3.1 refers to Output 3 in Universe 1

ESC

Close the Channel List

Patch Wizard

Browser

Patching > Patch Wizard

MODIFY

The Patch Wizard is opened

The "Starting at Desk Channel" field is highlighted by default

7

4

MODIFY

Using the Arrow Keys or touchscreen, and the method above, enter a **DMX Address of 2 in Universe 1**, then arrow down and press **Modify on Execute**

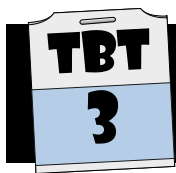
A pop-up confirms the patch operation, and the Patch Wizard remains open, allowing you to continue patching

ESC

✓

Using any or all of the methods above, patch the following Channels to their Outputs. It is a good idea to close Patching tabs when finished with them, so **close the channel list**

Channel	Dimmer	Channel	Dimmer	Channel	Dimmer
1	21	5	23	13	15
2	14	6	26	14	27
3	22	11	16	21	13
4	20	12	28	25	25



Channel Control

Channels can be controlled in various ways. Central to these is the concept of **Selection**. Only selected channels will be affected by levels typed into the keypad, movements of the level wheel and encoder wheels, and (almost always) will be the only channels included in a Record command.

Cobalt does not have a command line, or an Enter key; instead, all actions are carried out immediately. These actions frequently centre around the Number Field, which sits at the bottom left of each monitor; numbers are typed in using the keypad, and then terminated using the relevant key, which also identifies what sort of thing that number was.

For example, to select Channel 12, type in

[1] [2] [CHANNEL]

The numbers wait in the Number Field to be terminated – pressing [CHANNEL] identifies them as a Channel number, and the channel is selected.

To select another channel as well, you would type in

[1] [3] [+]

This identifies the number 13 as a Plus command, so channel 13 is also selected.

To set these two selected channels to a level, the same syntax applies.

[5] [0] [@LEVEL]

The number 50 is typed in, then identified as a Level, and therefore applied to the selected channels.

This results in a Yoda-like syntax (known as Reverse Polish Notation, or RPN) which may seem unfamiliar at first:

[1] [2] [CHANNEL] [1] [3] [+] [5] [0] [@LEVEL]

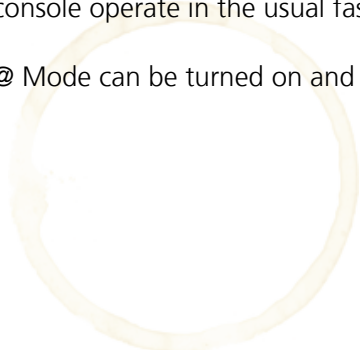
Selected Channels can also be controlled using the Level Wheel.

@ Mode

While RPN is the native language of Cobalt, and a very quick way of working, there are situations where a more traditional channel control approach is needed. For example, working in a theatrical environment, with a lighting designer asking for "Channel 6 at 20, channels 12 thru 14 at 40", calling up the channels in this way may be preferable to translating into "6 Channel 20 at, 12 channel 14 thru 40 at" in your head.

@ Mode allows **Channel and Group control only** to be entered in forwards-style language. All other aspects of the console operate in the usual fashion - for example the Output Editor from Tutorial 2 remains in RPN only.

@ Mode can be turned on and off from the browser at any point.



Basic Channel Control

1 **CHANNEL** Channel 1 is selected **7** **5** **@ LEVEL** and set to 75%

2 **CHANNEL** **3** **+** Channels 2 and 3 are selected **@ LEVEL** and set to the Step Level, which by default is 70% **@ LEVEL** **@ LEVEL** A double hit sends them to Full

4 **CHANNEL** **6** **THRU** **5** **@ LEVEL** Channels 4 thru 6 go to 5%


ALL The All key selects all channels with a non-zero level **+%** The selected channels are raised by 5%, the default +% step value

SETUP **&** **@ LEVEL** A pop-up allows you to choose the Step Level **↑** **7** **5** **MODIFY** **↓** **MODIFY** A new level of 75% is set

Note that even after opening and closing a pop-up window, the channel selection is maintained.

C/ALT **C/ALT** The channel selection is cleared

C/ALT **&** **CHANNEL** The channel selection and levels from the AB Playback (including manually set levels) are cleared - a blackout in this case **C/ALT** **&** **CHANNEL** **CHANNEL** Additionally, the purple "changed" flags are cleared

1  Moving the level wheel after typing in a number grabs that channel immediately, with no need to press Channel first.



Change the +% step value to 10% using the same method as above, [SETUP] & [%]

Set Channel 11 to 50%, Channel 12 to 60%, Channel 13 to 70% and Channel 14 to 80%. Select all four channels, and wheel them up to full, and down to zero. Note how the channels behave relative to each other as they reach Full and 0%.

Do a [C/ALT] & [CHANNEL] [CHANNEL] to go to black on stage

@ Mode

Browser



General Settings > Console Settings



Tick the box for "At Mode" and close the Console Settings pop-up

You are now in @ Mode, as indicated at the bottom right of each monitor. Channel and Group control are now the other way around

CHANNEL **1** **.** **.** As there is no "Enter" key, simple channel selections must be terminated with a double decimal point

@ LEVEL **7** **5** Channel 1 is set to 75%. As levels can only be 2-digit numbers, this instruction is self-terminating **@ LEVEL** **0** **5** Channel 1 is set to 5%

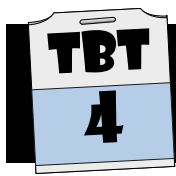
CHANNEL **1** **THRU** **6** **-** **5** **@ LEVEL** **6** **0** Channels 1 thru 6 except 5 are set to 60

@ LEVEL **@ LEVEL** This still sets the channels to full, but a single press no longer sets the Step Level



Try setting channel levels in @ Mode, noting the differences between @ Mode and RPN

When finished, TURN OFF @ MODE for the remainder of the Tutorials



Channel Check and Dimmer Check

Channel Check is a quick way of flashing through channels in Live, for example to ensure they are working. Cobalt 20 and Cobalt 10 consoles have dedicated Check+ and Check- keys to move through channels at a given level; on Congo consoles, this function uses [C/ALT] & [+] or [-]

Dimmer Check is used in the Output Editor, to flash through Outputs (dimmers).

Rem Dim

The Rem Dim key turns off all channels except the selected ones, so long as their levels are coming from the AB playback (including manual channels) - levels from masters and independents are not affected. This is commonly used in theatrical plotting to go down to a small number of channels on their own.

Standard Rem Dim behaviour is equivalent to manually setting the non-selected channels to zero - there is no easy way to bring them back if you just wanted to look at one channel in isolation for a moment. This role is filled by the **Balance** function, which is available as a softkey. The Rem Dim key can also be used as Balance - when pressed a second time, the extinguished channels come back. However, it is not possible to record while in Balance mode.

Channels on Masters

Virtually every type of content can be loaded onto a Master, including Presets, Groups, Palettes, Attributes, and individual Channels. Channels brought up on Masters will behave slightly differently from those brought up manually on the Level Wheel - a good example of the separation of the Master side of the console from the AB Playback side.

Channels whose levels are coming from the AB Playback (recorded in the main Sequence, or brought up manually) are shown in white, while channels coming from masters (either an individual channel, or from within a Group or Preset) are shown in yellow.

Additionally, selected channels have a small tab at the top of their tombstone, showing the source of their level. In the example below, channel 8 has been put at full by the AB playback, and channel 1 has been put at full by Master 7.



If a channel is being given instructions from multiple sources, for example the AB Playback and a Master, the highest intensity level always wins - this is known as Highest Takes Precedence (HTP).

Channel Check

1 **CHANNEL** **@ LEVEL** **@ LEVEL** Channel 1 goes to full

CHECK + **CHECK +** ... The following channels are individually set to the same level,

C ALT **C ALT** The temporary Channel Check state is ended, and any channels involved are turned off. Channels not involved in the Channel Check process are not affected

CONGO / JR / KID

C ALT & **+**

Dimmer Check

OUTPUT The Output Editor opens

2 **OUTPUT** **2** **5** **5** **@ LEVEL** Output 2 is set to Full, a DMX value of 255. The level is displayed between the output number and the channel number (if any)

+ **+** ... The following outputs are individually set to Full, whether or not they are patched.

C ALT **C ALT** The Dimmer Check state is ended. Closing the Output Editor tab will also end Dimmer Check and kill any output levels

ESC

Rem Dim

1 **CHANNEL** **6** **THRU** **7** **5** **@ LEVEL**

1 **1** **CHANNEL** **1** **4** **THRU** **@ LEVEL** **@ LEVEL** The beginnings of a beautiful lighting state appear on stage

1 **1** **CHANNEL** **1** **3** **THRU** **REM DIM** All channels except 11 thru 13 are set to zero

REM DIM Pressing Rem Dim again does nothing

SETUP & **REM DIM** A pop-up allows you to set Rem Dim as Balance

Tick the box and close the pop-up

1 **1** **CHANNEL** **REM DIM** As before, all channels except 11 go out, and a small balloon at the top of each monitor says "Balance" - this area can display various balloons to warn that an active mode may affect the behaviour of the console

REM DIM Channels 12 and 13 are restored, and Balance mode is turned off

Channels on Masters

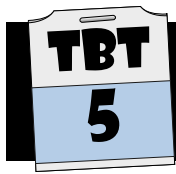
1 **CHANNEL** & **1** Channel 1 is loaded onto Master 1

(This is the Master button for Master 1 - the bottom 20 Masters have both Master buttons and Flash buttons, the top 20 have only Master buttons.)

This method is used for loading every kind of content onto Masters - enter a number, hold the type of content and press the destination Master button

C ALT & **1** Master 1 is cleared - note that the content is not deleted, just removed from the Master

1 **CHANNEL** **6** **THRU** **CHANNEL** & **1** The selected channels are loaded onto consecutive Masters



Groups

Groups are a way of collecting useful sets of channels together, for quick access when you need them.

Groups on Cobalt are a **set of Channels** recorded in a **specific order** with **associated Intensities**. Here are some examples of Groups from our show rig:

Group 1:	Toplights	1 thru 6
Group 2:	Breakup	11 thru 14
Group 3:	Scrollers	21 thru 25
Group 4:	Specials	71 thru 74
Group 5:	Toplights L-R	1, 3, 5, 2, 4, 6

Groups 1 and 5 contain the same channels, and when used as a simple selection tool ("Toplights at 50% please") work in exactly the same way. The channel order comes in when working with effects, or when sub-selecting within the Group to flash out or focus lights.

Groups can also contain intensities – for example, all the channels in the group can be at full, or balanced to match each other if some of your units are a bit dimmer than others. Note that groups aren't referenced, so if you change their members, orders or intensities later, these changes won't propagate into Presets you've recorded – Groups are only relevant at the point of use.

Groups on Masters

Like all other types of Record Target, Groups can be placed on Masters, to create a simple control fader for multiple channel intensities.

By default, a Master button is set to select the channels on that Master, providing a quick way to select a group's channels.

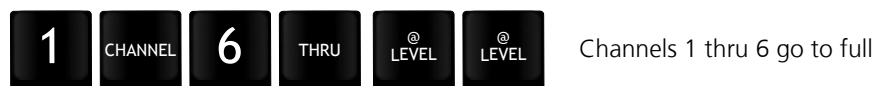
The Group List

All types of content on Cobalt have an associated list, a type of blind editor. The Group List, for example, allows you to:

- Create new Groups in blind
- Edit existing Groups
- Delete Groups
- View a list of all the Groups recorded in Live
- Add or edit Groups' labels



Recording Groups



Toplights

Label the group, and **press Modify on Record**



Specials

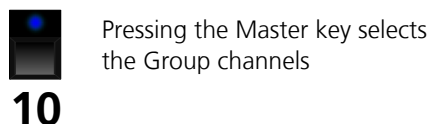
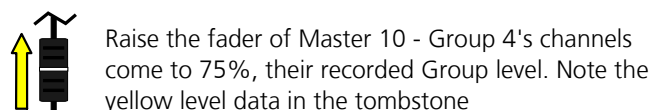
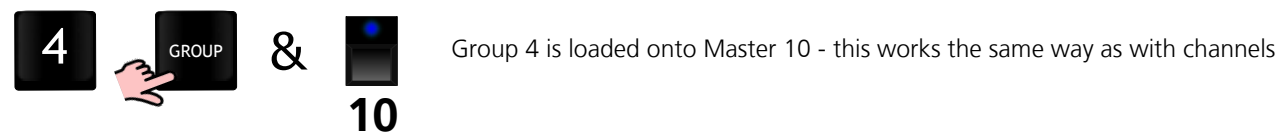
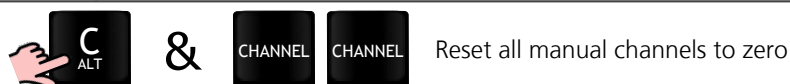
Label the group

Because the specials were the only selected channels, only they were recorded into Group 3



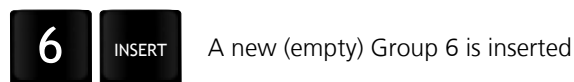
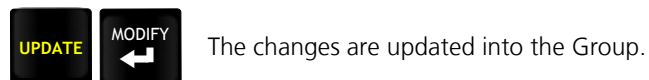
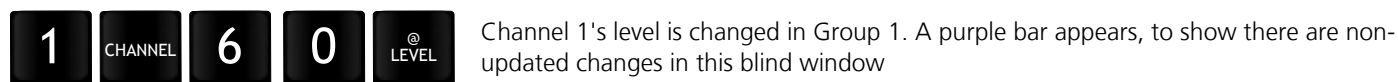
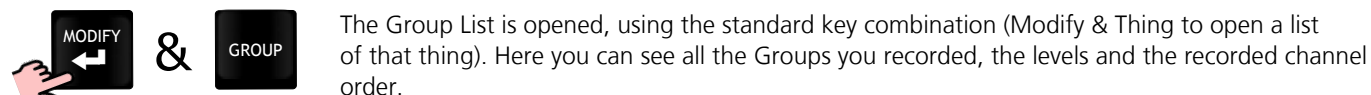
Record the other groups listed on the opposite page. To record Group 5, select the channels in that order, then record as usual

Groups on Masters



Wheel the selected channels up. Note that nothing happens until the wheeled level surpasses the level from the Master, at which point the level data turns white, and the wheel takes over - HTP!

The Group List



Add some channels to Group 6. See what happens when you try to Escape the Group List without updating.

Delete Group 6 using the Delete key.

Restore Group 1 to the way it was, and leave the Group List

Presets

By this point, you may have noticed that Cobalt doesn't have a key labeled "Cue". The building block of your show is known as the Preset, a recorded "look" including Channel intensities and attributes.

There is only one kind of Preset, and they live centrally in the Preset List. However, they are most commonly created by recording them either straight onto Masters, or straight into the **Sequence on the Main Playback** for playback on the Go button. It is also possible to simply create Presets without putting them anywhere, and to grab existing Presets and place them on Masters or into a Sequence.



Presets on Masters

Presets are one of the most powerful things you can put on a Master. As a Preset is a whole recorded "look", including intensities, moving light attributes and even Effects, you can record several Presets onto Masters and bring them up alone or in multi-layered combinations. As always, intensities will interact on an HTP basis (the highest value wins), and attributes will interact LTP (the most recent instruction wins).

This allows you to create a very powerful busking surface on the Masters, especially in combination with the settings available for each individual fader (see Tutorial 22)

The Reusable Preset

A consequence of this central pool, the Preset List, is that each Preset can be re-used over and over again* - both in a Sequence and on Masters. For example:

- There's a recurring state in a cued show which needs to look the same each time. Using the same Preset each time means that updating the look once will update every instance in the show.
- You want to put a look from the Main Playback onto a fader. Simply load that Preset straight on to Master of your choice.
- You want to use the same look on the Masters, but in different ways. Load the same Preset onto two separate Masters, and change each Master's settings individually (e.g. Additive vs Inhibitive, or a normal vs a latching flash button)

* This will be very useful after the Lighting Apocalypse when Presets are a scarce resource

Recording Presets onto Masters

Group 1 @ 75, Group 4 @ Full

Building a state for our first preset



A pop-up indicates you're recording Preset 801 to Master 1. Presets recorded straight to Masters start at 801 by default, to keep well out of the way of Presets in the Main Playback, which normally start at 1.

DIY CHANNEL
BALLOON - PRACTICE
SETTING LEVELS
WITHOUT STEP-BY-
STEP KEY PRESSES!

Note that the ALL key was vital, otherwise only Group 4 would have been recorded into the Preset

Enter a Text of **Opening** and press **RECORD** to confirm



Record 6 more Presets straight onto Masters 2 thru 7, and test them out. Don't forget to select the right channels!

Preset 802:	11 thru 14 @ 80	Breakups	Preset 805:	71 thru 74 @ 90	Specials
Preset 803:	1, 3, 5, 11 thru 14 @ 60	Scene 1	Preset 806:	1 thru 6 @ Full	Toplight
Preset 804:	21 thru 25 @ 40	Backlight	Preset 807:	21 @ 20	???

Recording Presets into the Preset List



This command creates a blackout by losing channels from both AB Playback and Masters - a more powerful version of [C/Alt] & [Channel]

Group 2 @ 90, 71 + 72 @ 80



A pop-up appears to record Preset 809

Note the useful tips in brackets - that this Preset will end up only in the Preset List, and include only the selected channels

P-Text: **Scene 2** **RECORD** The Preset is recorded... **8 0 9** **PRESET** & **9** ...and manually loaded onto a Master



Preset 809 is removed from Master 9 - but not deleted

The Preset List



The Preset List is opened, containing all the Presets you've recorded so far. In the spreadsheet section, the first Preset, 801, is selected, and its contents shown in the channel section.

Group 4 @ 50

Preset 801 is modified. As with Groups, a purple bar appears, indicating that changes need to be updated



A new Preset is inserted



Add Channel 71 @ Full to your new Preset 808. Because you created the Preset while looking at another, you'll need to use the Rem Dim key to lose the other Channels. Text the Preset as "Nessie", and load it onto Master 8

Delete Preset 807 by pressing Delete

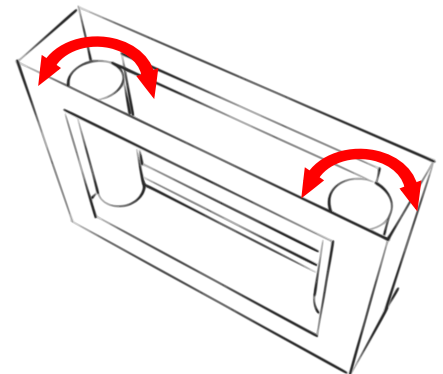
Close the Preset List

All about Scrollers

Scrollers, though increasingly being replaced in certain situations by LEDs, are still in common use, and serve as a useful introduction to the world of Devices - Channels that aren't just plain old dimmers.

All scrollers work in the same way - 2 spindles control a sting of gels taped together, moving it back and forward in front of a light to change its colour. As such, it generally doesn't matter which manufacturer's scroller we have - it just gets patched as a generic scroller.

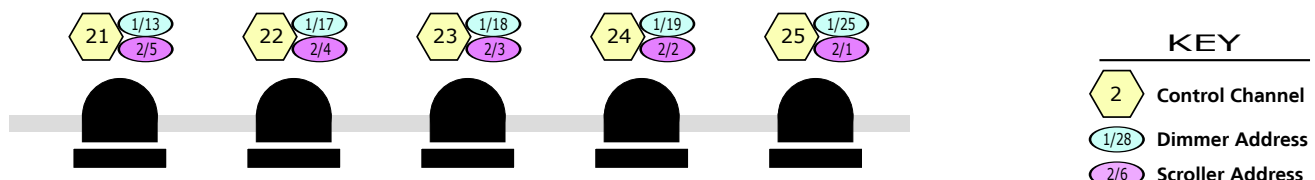
Below is the gel string for our training rig - 10 frames in a pleasant rainbow of colours. Knowing how many frames there are, and what colour they are, will be very useful when it comes to controlling the scrollers.



F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
O/W	R336	R27	R19	R312	R79	R85	R64	R46	R93
Leader									Trailer

The channel now consists of both a dimmer address (for the luminaire) and a scroller address. These are both shown in the Channel List, under the columns Dimmer Address and Device Address.

This will normally be indicated on your rig plot:

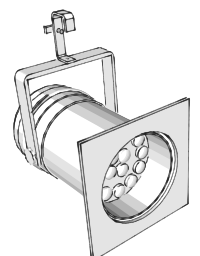


All about LEDs

The other common colour-changing device in today's lighting world is the LED unit. These come in many shapes, sizes, complexities and price brackets. The simplest kind tends to be roughly Parcan shaped, and contain Red, Green and Blue LED emitters. These are generally patched as Generic RGB fixtures.

On the other hand, many more complex devices exist, such as ETC's own Source 4 LED and Desire fixtures, which have 7 different colours of emitter, and can be set up in over a dozen different modes. These would have to be patched as the correct Device type, in the correct mode, otherwise control would be unpredictable or even impossible.

Many LED fixtures do not natively understand the concept of overall Intensity - they expect to receive level values for R, G and B only. Cobalt invents a virtual intensity attribute for these fixtures, so that you can mix up the perfect colour, and then drop the intensity to 50%, without having to manually dial down the R, G and B parameters in proportion to each other - that would just be silly.



Patching Scrollers

Browser



Patching > Patch Wizard



Back in the Patch Wizard



Arrow across to the Patch Device tab

Scroller



Drop down the Type of Device menu - the only options are Scroller and Scroller Speed & Fan. More on this below, but for now select Scroller

The rest of the Patch Wizard is then filled in methodically, as per your patch sheet or lighting plan:

Number of Devices: 5 (as we have 5 scrollers)

Starting at Desk Channel: 21

DMX Address: 1

DMX Universe: 2

Output Offset: 1 (the gap between each Device Address - in this case they are sequential)

Untick "Replace Existing Dimmers", as we have already patched the dimmers for Channels 21 thru 25

The appropriate Scroller Roll doesn't exist yet (we'll make it next), so leave this as **"No Scroller Roll"**

All done, press **Modify on Execute**, and close the Patch Wizard

Browser



Devices > Settings and Tools > Scroller Rolls



In the list of Scroller Rolls, insert a new Roll, number 10, and Modify it



A Scroller Item Wizard asks how many frames we have - enter 10 and press Modify. The Wizard automatically splits up the DMX values for you. Label the frames with the colour numbers on the opposite page (O/W, R336 etc). Escape this window, label your new Roll as "TBT Scroll", and escape the Scroller Rolls list too.

Now you need to assign this Roll to the 5 scrollers. In the Browser, go to Patching > Device List. In the Scroller Roll column, press the Column key to select the entire column, then press Modify and choose TBT Scroll.

Lastly, our friendly production electrician has addressed the scrollers backwards (Channel 21 on Address 5 etc). In this window, clear the address column, and re-enter the correct data (5.2, 4.2 etc)

Patching LEDs

The LEDs in the rig are ETC Desire fixtures, D40s and D60s, of various physical types and in different modes. To patch them, first we need to import them with the **Import Template Wizard**.

Browser



Patching > Import Template Wizard



In the Filter field, type **D40** to do a text search for the D40 fixtures



The entire Fixture area acts like a giant field, which can be entered and exited using Modify. This allows you to find a fixture, then hop out and down to "Import Selected Template"



Import the following templates, using the Import Selected Templates button each time. The top headings are the physical fixtures, with modes underneath. When finished, Escape from this window

D40 Lustr+ Direct Strobe
D40 Vivid Direct Strobe
D40 Fire Direct Strobe
D40 Ice Direct Strobe

D60 Fire Direct Strobe
D60 Ice Direct Strobe
S4 LED Lustr+ Direct Strobe
S4 LED Series 2 HSIC Str +7

Browser



Patching > Patch Wizard



The "Type of Device" drop-down is now much busier than before. Patch the following Devices. Remember to use the Output Offset function.

61 - 64 **D40 Lustr+** 471.2 Offset 10
65, 66 **D40 Vivid** 11.2, 21.2
67, 68 **D40 Vivid** 301.1, 311.1
81, 82 **D40 Fire** 81.1, 131.1

83, 84 **D40 Ice** 91.1, 121.1
85 **D60 Fire** 101.1
86 **D60 Ice** 111.1
87 - 90 **S4 LED Lustr +** 301.2 Offset 10

Controlling Devices

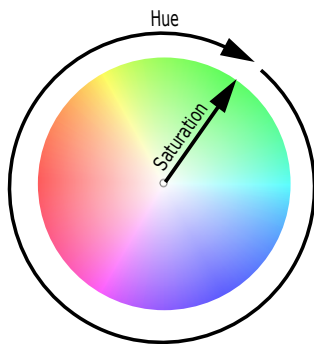
Fixtures with more parameters than just intensity are known as Devices. As we saw in the previous tutorial, all patched Devices are shown in the Device List, but they also show up in the Channel List, as every fixture on Cobalt is a Channel - there is no separate concept of "Fixture" or "Device" for control purposes.

There are several ways to control Devices on Cobalt Family consoles. The most obvious is the set of 4 encoder wheels on the console face panel. On Cobalt 20, 10 and Congo Sr, these are silver vertical wheels very similar to the level wheel. On Congo Jr and Congo Kid, they are blue rotary encoders. Each vertical wheel has a key directly above it - these are the encoder keys. On Congo Jr and Congo Kid, this action is performed by pressing down on the encoder itself.

Devices can also be controlled from the Device Control Dock, which lays out the available parameters of the selected channel in the standard categories (Focus, Color, Beam), as well as additional fancy touchscreen (or mouse-based) features like a Color Picker.

Hue and Saturation

Controlling the scrollers is very straightforward - tell the scroller which frame to be in, and it will go there. Our LED fixtures are a bit more complicated. As they are in direct mode, the console is sending 7 different pieces of colour information (Red, Amber, Green ...) to the device. Very few people are able to say how to set these 7 colours to achieve the desired mix, so Cobalt gives you 2 virtual parameters - Hue and Saturation.



Hue is the shade of colour, measured in 360 degrees around the colour wheel. Saturation is how deep the colour is, from 0% to 100%. At zero Saturation, Hue makes no difference. This is a much easier way to control your LEDs - pick a Hue and Saturation, tweak away, and Cobalt does the maths. Of course, you can still tweak individual parameters if you need to ("Hmmm, needs a bit more Indigo")

Hue and Saturation also act as a translator between different types of colour mixing. If you grab a D60 LED unit and a CMY moving light, Hue and Saturation allow you to mix up a nice red colour on both of them, even though they achieve this in very different ways.



Encoder Control



As usual, select the channels and put them at full



The Color Key maps all the colour parameters of the selected channels to the Encoder Wheels - in this case, just the scroller, helpfully called "Color" on the first encoder



Wheel the first Encoder Wheel up. The scroller scrolls through its frames



JR / KID

This is fine for continuous parameters, but Scrollers have discrete frames



(That's the Encoder Key for Encoder 1) This jumps straight to Frame 5



JR / KID



Double hitting the Home Attribute key send all parameters home for the selected channels. In this case, that's Frame 1 (O/W)



Now working with Channel 61, an LED fixture, the Encoders remap to show the first 4 color parameters



Hue and Saturation are shown on page 3

Hue and Saturation are easier to use when you can see what you're doing. Luckily there's a color wheel in the Device Controls Dock.

The Device Controls Dock

On Cobalt 20 and Cobalt 10, this opens by default at the bottom of the right-hand touch screen. To open it:



and choose Device Controls Dock for the bottom area.

In the Device Controls Dock, choose **Color Mixer**. You now have a view of what's happening with color.



Practice mixing colors using Hue and Saturation. Mix up a nice deep red, a soft blue, and a light ambery yellow. You can also click in the color wheel with your finger or the mouse to choose a color.

GelPicker

Choose the Gel Picker page in the dock



As with all things, type in a number first, then what it is - in this case, a Rosco gel number

The Gel Picker uses stored Hue and Saturation values for each gel. It won't always be a perfect match, but it's a good starting point. Let's compare it to the scrollers.

Group 3 @Full

Working with the Scrollers again

Color

Tap or click on the Color page in the dock

Tap or Click the **Color** tile - all the frames we labelled earlier are laid out in a row.



Select Frame 3



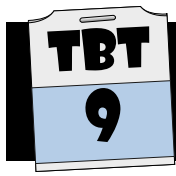
Tweak your LED channels to better match the R27 in the scrollers, using Hue and Saturation.

Change encoder page by pressing Color, and tweak using 7-color mixing as well (e.g. a bit less Red, a bit more Amber)



Choose the Colour tab on the Device Control Dock. Press down on the Indigo tile, and drag your finger upwards on the touchscreen.

This works on all parameter tiles, and allows you to adjust Devices using just the touchscreen.



An Introduction to Palettes

Now that we've set our color-changing devices into some lovely shades, we need to store the results somewhere. Color Palettes are the answer. Palettes on Cobalt serve two purposes:

- A place to store useful things, for example a position (Focus) or a Color mix, for recall at a later time
- A reference for use in Presets. Rather than having its own color information, a Preset can reference a Color Palette. This means that if you update a Palette, all Presets referencing that Palette will change too, which is very useful in a touring show (e.g. for Focus Palettes in each venue), or if a fixture needs to be replaced, and its color is a bit off.

Recording by Device Type

When recording a Palette, you have the option to record for Each (selected) Device, or Each Device Type. The latter records the Palette for all devices of the same type, so if you go out and buy 10 more D60 Lustr+ fixtures, and patch them in, they will be able to reference Color Palettes recorded earlier. This makes sense for Color and Beam Palettes, but is rarely used for Focus Palettes, as the same Pan & Tilt values for different lights result in different focuses.

To reflect this, Color and Beam Palettes default to Each Device Type, while Focus and All Palettes (which can include Focus) default to Each Device, i.e. only the individual selected channels.



Palettes on Masters



Like every other record target, Palettes can be placed on Masters. This allows you to gently fade the selected channels into a Palette, and to lay out your most-used Palettes in a custom order.



Recording Color Palettes



          Put the Scrollers at Full and send them Home

    The selected channels are recorded as Color Palette 1. Name it **O/W** and **press Modify on Modify**

Scrollers to Frame 2    The next free Color Palette, 2, is recorded. Name it **Pink**


 Record the other 8 scroller frames as Color Palettes 3 thru 10. Name them:

3 Red	6 Brt Blue	9 Magenta
4 Fire	7 Deep Blue	10 Blue Green
5 Yellow	8 Steel Blue	

  The selected channels are put in Color Palette 2







Instead of absolute data, the Channel Tombstone shows the reference label at the bottom


 Record Channels 61 thru 68 as Group 6, and label it "LEDs"

Group 6 @ Full Rem Dim Now to add the LEDs to those same Color Palettes



Set the LEDs to an open white color

    As we are adding new channels, we use Record rather than Update. The Name is already filled in. An additional drop-down asks whether to merge with the existing channels, or replace them. Leave Merge selected, and press Modify

 Add the LEDs to all the existing Color Palettes. You can use the Gel Picker to get an approximation based on Gel number, then adjust if necessary with the Encoders.

Color Palettes on Masters

    Color Palette 5 is placed on Master 10



Raise the fader slowly. Color Palette 5 is faded in on the selected Channels.



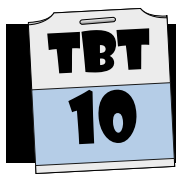
Lower the fader. Nothing happens, as under LTP rules, going to Color Palette 5 was the last instruction the Channels received - there's no such thing as "going away from a Color Palette"



The Channel selection is cleared.



Raising the fader now does nothing, as Color Palettes only affect selected Channels



Introduction to Direct Selects

So far we have been selecting Groups and calling up Color Palettes by typing their numbers manually into the keypad, for example [3] [Group] [5] [Color]. Groups and Palettes can also be laid out on Direct Selects, a set of one-touch buttons that allow very quick, visual access to your content. With four taps, looking only at the labels, you could grab some moving lights, point them downstage, put them in blue and make their gobos spin.

You can also record straight to Direct Selects, as a shortcut to typing in a number. Direct Selects work in the same way on all consoles running Cobalt, but they vary physically between those consoles.

Cobalt 20 and Cobalt 10

On Cobalt 20 and Cobalt 10, Direct Selects appear in a Dock Area - when starting a new play, a Direct Select Dock is opened by default on the bottom of the left-hand touchscreen.

This dock contains 4 banks of Direct Selects, each of which can be a different type, for example Groups or Color Palettes. Each bank can be expanded to show up to 100 items. There are 5 pages, each of which can have its own set of 4 Banks.

The Dock contains a RecordDS button, which is used instead of the Record hard key when recording to Direct Selects. There are also some handy level keys, so basic Channel control can be achieved using only the touchscreen. The Dock can also be fullscreened. The Direct Select Dock is available on all consoles running Cobalt, as well as on ETCnomad. On consoles without built-in touchscreens, it can either be used on an external touchscreen, or with the mouse.

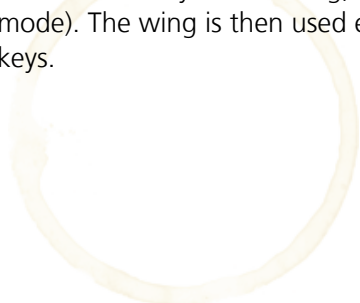
Congo Jr and Congo Kid

Both Congo Jr and Congo Kid give access to the Direct Selects via the LCD display on the face panel. The Direct Select key puts the LCD in Direct Select mode, and the three keys below this choose which strip of 10 Direct Selects is displayed.

Congo Sr and Master Playback Wing

Direct Selects on Congo Sr are the original inspiration behind the current Direct Select Dock. 4 strips of 10 keys are located in the dark grey area at the top left on the console. By holding down the Type key, a type of content can be chosen for each of the 4 strips (Groups, Color Palettes etc). Holding down the Bank key allows you to choose which block of 10 items (1-10, 11-20 etc) is shown. This means that items numbered higher than 100 cannot be accessed through the Direct Selects on Congo Sr. Like in the Dock, there are five independent pages, accessed through silver keys 1-5.

The optional Master Playback Wing, most commonly used with Congo Jr, works in a very similar way. By pressing the Direct Select key on the wing, the 40 Master keys switch over to being Direct Selects (the faders do nothing in this mode). The wing is then used exactly like the Direct Selects on Congo Sr, with Type and Bank Buttons, and 5 paging keys.



The Direct Select Dock


If you don't already have a Direct Select Dock open, open one now. Make sure your active Tab is on the monitor where you'd like the dock to Open. **Hold [Setup] and press [Browser], and choose Direct Select Dock for the Bottom Area.**

If working on Cobalt 20 or Cobalt 10 consoles, move the Main Playback tab to an external monitor, then fullscreen the Dock by pressing 

Each page of Direct Selects has Groups, Focus Palettes, Color Palettes and Beam Palettes assigned to the four sets by default. The Groups and Color Palettes you've already recorded are there already.

As we only have color devices at this point, let's move things around to make them more helpful.

On the second set, currently assigned to Focus, press  and choose **Color**

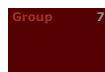
On the third set, press  and choose **Gels**. This works in the same way as the Gel Picker in the Device Control Dock.
:

Channels 87 thru 90 @ Full

Put these Channels at Full using the keypad in the usual way.



The Direct Selects are put in Record Mode.



Press the Group 7 tile - the usual Record Group pop-up appears. Label the Group **S4 LEDs** and press Modify.

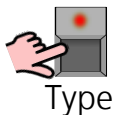
FINGER TIP



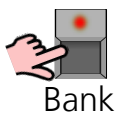
Press down on a Group Direct Select tile, and move your finger upwards. The Group's Channels are selected, and the intensity is raised.

Physical Direct Selects (Congo and Master Playback Wing)

On Congo consoles (including those with Master Playback wings), the Direct Selects are not populated by default - you need to choose the content for each strip of 10 Direct Selects. Master Playback Wing users, **press Direct Select on your Wing now.**



Hold down the Type key. Each strip of 10 Direct Selects shows the various content options.
Choose Group on the top left, Color Palettes on the top right and Gels on the bottom left



Hold down Bank. You can now choose which bank of 10 items is shown on each strip.
For Groups, choose 11-20

This Bank is empty, as you haven't recorded those Groups yet. As with the dock, you can record straight to these Direct Selects.

Channels 31 thru 40 @ Full



&



A Record Group pop-up for Group 11 appears. Label the Group **Cyc** and press Modify

Physical Direct Selects (Congo Jr and Congo Kid)



These 4 keys (this one and the 3 below it) put the main LCD of the console in direct select mode, and each contain a strip of content, like on Congo Sr or the Playback Wing. This is equivalent to the Type key



&



This chooses Groups on the Direct Selects



&



This chooses Bank 1-10

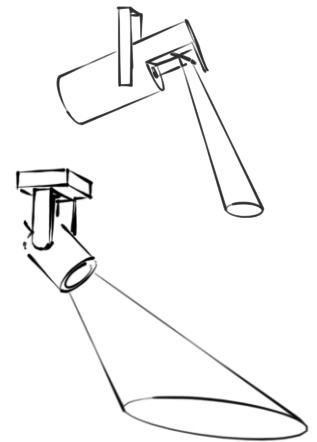


Repeat this for the next 2 keys down, choosing Color and Gels. When done, press the Direct Select key twice to set the LCD back to normal

Moving Lights

Moving lights are generally any fixture on which the Focus (Pan & Tilt) moves, though every type of fixture that has non-intensity parameters is treated and patched in much the same way on Cobalt. Examples of actual "moving" lights include moving mirror fixtures, also known as scanners, and moving head fixtures.

Other types of light, for example strobes, or generic fixtures with a motorised iris, also come under the broad heading of Moving Lights, and are therefore treated as Devices on Cobalt.



Non-Intensity Parameters

Any parameter of a fixture that isn't its Intensity (whether a dimmer or a mechanical dimming shutter) is called a Non-Intensity Parameter. These are split into 3 categories: Focus, Color and Beam.

Focus

Pan
Tilt

Color

Scroller
CMY Mixing Flags
RGB Mixing LEDs
Color Wheel

Beam

Iris
Frost
Framing Shutters
Zoom
Gobos
and on and on and on...

Most moving lights have a selection of these paramters. Some have only a few, while the bigger (and more expensive) ones might have dozens.

Templates

Each parameter is controlled by one (sometimes two) DMX output(s). How these are ordered is defined by the manufacturer. This information is then collected together to form a Template (sometimes called a DMX personality), which tells the console how to communicate with the fixture. Here are some made-up examples:

Superspot 250

DMX	Function
1*	Pan
3*	Tilt
5	Intensity
6	Zoom
7	Gobo Select
8*	Gobo Angle/Speed
10	Function

Wonderbeam 700

DMX	Function
1	Intensity
2*	Tilt
4*	Pan
6	Animation
7	Macro
8*	Gobo Angle/Speed
10	Gobo Select

Rather than expecting us to remember this, or type them in every time we patch, the console has a Fixture Library, containing the Templates for the most common (and many not so common) Moving Lights.

Importing Templates

Browser

Patching > Import Template Wizard

MODIFY

Return of the Import Template Wizard*

In the Filter field, type **Mac 250** to do a text search for the Martin's Mac 250 series fixtures

MODIFY

Remember to toggle into the box to search for fixtures

Import templates for the following moving heads

Mac 250 Wash - Standard Mode

Mac 250 Entour - Standard Mode

VL1000 TS

Escape the Import Template Wizard

Patching Moving Lights

Browser

Patching > Patch Wizard

MODIFY

Hop back into the Patch Wizard and arrow across to the Patch Device tab - this works much the same as with Scrollers and LEDs.

Type of Device: Mac 250 Wash

Number of Devices: 5

Starting at Desk Channel: 101

DMX Address: 101

DMX Universe: 2

Output Offset: 20 (even though each Mac 250 only takes up 13 outputs, we've set start addresses with gaps of 20, for easier mental arithmetic)

Replace Existing Dimmers and Scroller Roll don't apply in this case

Press **Modify on Execute** - 5 devices are patched, and the Wizard remains open

Patch the remaining Moving Lights

5x Mac 250 Entour

Starting at Channel 106

Addresses 201, 221, 241, 261, 281 on Universe 2

1x VL1000TS

Starting at Channel 115

Address 71 on Universe 2

There are some problems remaining - the VL1000 has an external dimmer for its tungsten lamp (much like a Scroller, it effectively has independet Dimming and Moving bits). Also, it's been rigged backwards - its pan will go the other way from the Mac 250s when controlled together. These can both be fixed.

MODIFY

&

CHANNEL

Open the Channel List

1

1

5

CHANNEL

Looking at Channel 115, it has a device address but not a dimmer address

5

.

1

MODIFY

The lamp is patched to dimmer 5 on universe 1

ESC

Close the Channel List

Browser

Patching > Device List

MODIFY

Opening the Device List. **Arrow down to Channel 115, and across to the Invert Pan Column**

Choose "Manual Control" from the drop-down

ESC

Close the Device List

*Unsuccessful working title for the 7th Harry Potter book

Basic Control

Moving lights are controlled in much the same way as Scrollers and LEDs. except with more Parameters. These are mapped to the Encoder Wheels using the Focus, Color and Beam keys. When a fixture has more than 4 Parameters, in the Beam category for example, multiple presses of the Beam key cycle through the pages.

These parameters can also be controlled via the Device Control Dock, where all of a fixture's parameters can be laid out on touchscreen tiles.

Parameters on Pots

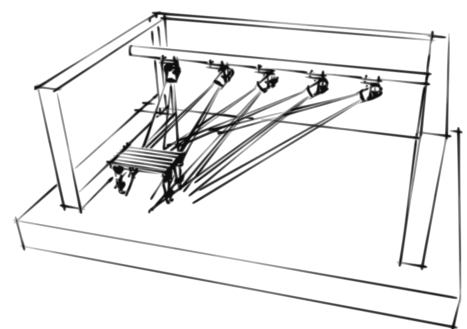
A unique feature on Cobalt 20 and Cobalt 10 is the ability to lay out parameters on the 20 pots usually assigned to Masters 21 thru 40. Including the 4 normal encoders, this allows 24 parameters to be accessed at once without paging around - very useful for parameter-heavy moving lights, or parameters like framing shutters, which need to be tweaked all at once. Each pot can be populated with a parameter of your choice.

This is a toggle state, and has nothing to do with the actual contents of Masters 21 thru 40. Press Device in the centre of the console to toggle between Masters and Device pots.

Focus Palettes

Focus Palettes contain only Pan & Tilt data. They work in a similar way to Color Palettes, but their referencing feature is perhaps even more useful. If all your moving lights need to point to somewhere specific, for example the King's throne in a play, or a downstage line in a music gig, it makes sense to record these positions as Focus Palettes, rather than directly into a Preset. This way, if the director decides to move the throne, or the next venue on the music tour has a different shaped stage, you can simply update the Palettes and run your show as normal.

You also see the Focus Palette's label in the Channel tombstone, which can be helpful for lighting designers or busking operators.



Basic Control



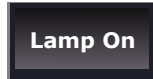
To speed things up, record your newly patched moving lights into some groups

Group 8	101 thru 105	Washes
Group 9	106 thru 110	Spots
Group 10	115	VL1000

Select Groups 8 & 9

As the Washes and Spots are arc movers, they need to be lamped on

Cobalt 20
Cobalt 10



(A softkey on the right touchscreen)

CONGO
CONGO JR
CONGO KID

Device--->

Control--->

Enable

Lamp On

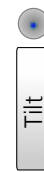


These are softkeys on the built-in LCD on Congo consoles

Channel 101 @ Full



Pan and Tilt are mapped to the first 2 encoders



Wheel the Tilt encoder



JR / KID

Recording Focus Palettes



Focus Channel 101 on Charlie. Tilt first to come downstage, then pan across to backlight Charlie.

We could repeat this process for Channels 102 thru 105, selecting them one by one, but there's a quicker way!

Group 8 @ Full

Select and turn on the Mac 250 Washes



Channel 101 gets a red Selection Border - it is now the sub-selection, and will be the only Channel to respond to commands



Using Next and Last, sub-select each of the washes in turn, and focus them on Charlie

SELECT ALL

It is very important to press Select All (between Next and Last, not to be confused with the All key) after using a sub-selection, to select all the Channels in gold again



Record this as Focus Palette 1, labelled **Charlie**



Repeat this process for the other three characters (Marilyn, Nessie, Lara), recording these as Focus Palettes 2, 3 and 4 Remember to press Select All when you're done focussing!

Parameters on Pots (Cobalt consoles only)

DEVICE

The pots above the top deck of Masters change from blue to yellow



(Pan)

The first pot, mapped to Pan by default, pans the selection left and right

So you're happy with Pan, Tilt and CMY on pots 1 thru 5, but pots 6 thru 10 don't contain useful parameters for moving lights



(Red)

The pot is cleared



Frost



(Empty)

Hold the Encoder Key for the parameter you want, and press the pot down



Select the Mac 250 Entours. Clear pots 7 thru 10 and put Focus (from the Beam category), Strobe, Gobo 1 and Gobo 2 on them.

Cobalt 20 users, go wild and select Channel 115, the VL1000, and put the 9 shutter parameters (Shape 1a, Shape 1b etc) on pots 11 thru 19

A More Complex Palette

The third type of Palette is the Beam Palette, which, as you'd expect, contains parameters from the Beam category, such as Zoom size, Focus (as in Edge, or "in-focus-ness"), Prisms, Gobos, and so on. They work in exactly the same way as Focus and Color Palettes, but there is an additional complication: while Focus Palettes almost always want to contain both Pan and Tilt information, and Color Palettes generally include all Color parameters for a fixture, this isn't necessarily the case with Beam.

For example, just because you recorded your gobo Palette while the beam was at full zoom, doesn't mean you want to go to full zoom every time to recall the gobo. But with standard Palette behaviour, that's exactly what would happen.

Masking

To solve this little conundrum, there's a feature called Mask. Mask is a toggle state, which selectively excludes certain parameters from control and recording. For example, you could Mask out everything except the zoom parameter, so only zoom is recorded into your Beam Palettes.

When done with recording, pressing Mask turns the Mask state off. When turned on again, the same parameters will be Masked out as before.

All Palettes

The final type of Palette is the All Palette. As its name suggests, it can contain any type of Parameter (but not Intensity). This is useful if there's a specific combination of parameters from across categories that you want to be able to recall.

For example, in the Focus Palettes tutorial there was an example of a King's throne. Using the VL1000 with its shuttering abilities, it's likely that you would want to point the fixture at the throne, box it in with the shutters, choose a certain edge focus, and maybe put in some frost. Rather than recording this as a Focus Palette and several Beam Palettes, we could make an All Palette called "Throne", which contains Pan, Tilt, Shutters, Focus and Frost. To achieve this, simply Mask out the parameters you don't want recorded (in this example, probably just the whole Color category).



Recording Beam Palettes

& **Group 10 @ Full** Time to play with the VL1000

A snowflake gobo is placed in the fixture. & Beam Palette 1 is recorded. Label it **Snowflake**

A useful medium-sized zoom & Beam Palette 2 is recorded. Label it **Medium**

Now let's try out our Beam Palettes So far, so good. The gobo is in. Now let's make it a bit smaller
(Or press Direct Select for Beam Palette 1)

Disaster! The show is ruined! Beam Palette 2 has whipped the Gobo out, because it was recorded with no Gobo in. Better delete these Palettes. & A list of Beam Palettes opens

The recorded Beam Palettes are deleted. Let's try that again, using Mask

Using Mask

The snowflake gobo is back again Mask is turned on. A warning balloon reads "Mask ---" The dashes represent Focus, Color and Beam, none of which are currently masked out

& The entire Beam category is Masked out, indicated by a capital B in the Mask balloon. Any Beam Palettes recorded now would be empty & Just the Gobo parameter is unmasked - note the lowercase "b"

& Beam Palette 1 is recorded (again). Label it **Snowflake** & The Mask is reset, but still on



Repeat this process to record Beam Palette 2 properly, containing only Zoom at 50%. Remember the procedure: Mask everything, unmask what you want to leave in, record.

Now that you've finished recording for a moment, turn off Mask. This is important, as Mask affects all recording, including Presets, as well as manual control

All Palettes

The VL is homed Shape 1a Shape 1b ... Set **all 8** Shutter parameters to 30

Point the VL at Lara Zoom it to just get her whole body Put a breakup gobo in And soften it on the lens



Turn on Mask, and mask out the entire Color category, and the Frost parameter from the Beam category. Your Mask warning balloon should end up looking like "Mask - C b"

& The relevant parts of the VL are recorded as All Palette 1. Label it **Lara Window** Mask is turned off

Sequences

The other major use for Presets is to stack them together and run them off the Go button - this is called a Sequence. Sequences are simply ordered series of Presets with associated times (and a few other properties), and can either be placed on Masters and run from there, or run from the Main Playback.

The Main Playback is special because it has its own dedicated Go Button and fader pair on the right hand side of every console. By default, it contains Sequence 1, and this is where Presets saved with a simple press of the Record key (rather than holding Record and pressing Preset) will end up.

Recording to the Main Playback also presents the **only exception to the rule that only selected channels are recorded**. When you press Record, all active channels will be recorded, including contributions from Masters. This exception exists because it's the expected behaviour when recording a cue-based show.

Each Sequence contains several numbered Steps, each of which references a Preset. While Presets can be re-used within Sequences, and decimal point Presets can be recorded, step numbers are always whole numbered and chronological. So a Sequence might look like this:

Step	Preset	In Time	Out Time	S-Text	P-Text
1	1	5	5	Preset	Houselights
2	1.5			Top of Show	Bright State
3	2	10	20	Build	
4	3	0.01	0.01	Snap B/O	B/O
5	1	3	7	Interval	Houselights
6	8	3	10	Top of Act 2	Dim Cave

Note the two different texts. S-text applies to the sequence step, while the P-text is a property of the Preset (and will appear on the LCD of a Master containing that Preset).

Timings

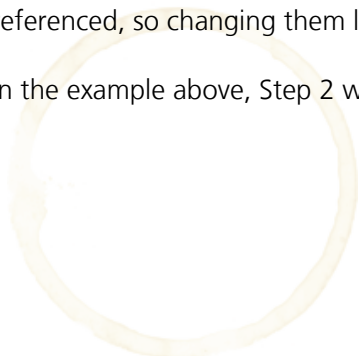
Each step of a Sequence has a timing, which consists of an In Time (the time for channels coming up in level) and an Out time (channels going down), along with an optional Delay (which can be split into In- and Out-Delay).

There are 3 default times set in a Play, which we saw in the Let's Begin window. These behave in slightly different ways:




The **Default Go Time** is referenced by Steps which don't have a time of their own. This means that if the Default Go Time is changed in Setup, those time-less Steps will now reference the changed time


The **Default In and Default Out Times**, if present, are applied to Steps at the point of recording. These are not referenced, so changing them later will not affect existing steps, only ones recorded later


In the example above, Step 2 will run in whatever the Default Go Time happens to be at that time.





Recording Presets into the Main Playback



 **C ALT** &   **Group 3 @ 60%, Channel 71 @ 75%, Group 2 @ Full**



 A familiar Record New Preset pop-up appears, this time without warnings about selected channels. By default, the first Preset recorded in this way is Preset 1



S-Text **Top of Show** 

Preset 1 is recorded into the Main Playback, and is now in the A-field, the active Preset on stage.


Channel 72 @ 75%  S-Text **Enter Charlie**  Preset 2 is recorded

Channel 71 + 72 @ 0%  S-Text **All Exit**  Preset 3 is recorded


  The SEQ+ and SEQ- keys step forwards and backwards through the Main Playback - Preset 1 is now in the A-field and Preset 2 is in the B-field

 Preset 2 is now on stage  And back


The Lighting Designer has now decided we need a new "cue" to boost Nessie's special.


Channel 71 @ Full **1** **.** **5**  S-Text **Boost Nessie**  Preset 1.5 is recorded

This works as expected - Preset 1.5 is inserted between 1 and 2. However, the Step Numbers no longer tally with the Preset Numbers, which could be confusing, especially in a called theatre show

 The Setup window contains settings for all aspects of the show. The first tab, Basic, resembles the Let's Begin window. **Tap or arrow across to the Crossfade tab**, which contains settings relating to the Main and other playbacks

Untick the box labelled "Show Sequence Numbers" and press **Modify on Close**. The Main Playback now resembles a traditional theatre cuelist, with only Preset numbers down the left-hand side.

3  The GOTO key sends you to a chosen Preset, in that Preset's time


 Record some more Presets in the Main Playback. Each one assumes you're working from the previous one


Preset 4:	Group 2 @ 0	Lose Gobos	Preset 6.5:	71 + 72 @ 80	Dip N & C
Preset 5:	71 thru 74 @ Full	All Enter	Preset 7:	1 thru 6 @ Full	Add Toplight
Preset 6:	Group 3 @ 80	Boost B/L	Preset 8:	Blackout	Blackout


Timings



2  None of the Presets we've recorded have timings - only Preset 3 (in the B-field) shows a time, the Default Go Time


To the left of the times in the B-field is a very small white triangle - this indicates that timing changes we make now will be applied to the B-field Preset (remember how we "Set Times to B" in the Let's Begin Menu)


 **TIME** & **A** The Triangle moves - times are now set to A, and timing changes will affect the current Preset


 **TIME** & **B** Times are set to B

7  The time on Preset 3 is set to 7 seconds

4  **8**  Separate In and Out times are set - this is reflected in the crossfade graphic

0  As 0 removes information on Cobalt, Preset 3 reverts to referencing the Default Go Time. Useful, but not a snap!

0 **.** **0** **1**  Much better

 Go to Preset 4, set times to A, and assign an In Time of 5 and an Out Time of 8

In the Setup Window, set the Default In and Default Out times to 4 and 7, respectively.

Playback and Updating

Once recorded, Presets in the Main Playback are played back using the Go button on the lower right hand side of the console. The active Preset is shown in the A field, and the upcoming one (normally the following step) is shown in the B-field.

The keys relevant to playing back Presets are:

Go - Runs the Preset in the B-field in time

Pause - Pauses a running crossfade

Go Back - Reverses to the previous step, in the default Go Back time

Seq- and Seq+ - Cut forwards and backwards between steps

On Cobalt 20 and 10 and Congo Sr, the two silver springy wheels can be used to slow down or speed up the In (left) and Out (right) fades - dragging both wheels down slows the crossfade to a crawl, while pushing them both up will rush the fade through.

To run presets out of order, the **Goto** key runs straight into a specified preset (in that preset's time) and the **Jump to B** key places the specified preset in the B-field, ready to be run on Go. If a preset appears more than once in a sequence, both Goto and Jump to B will use the next instance of the specified preset.

Updating Presets is straightforward. When you are "in" a Preset, simply change some levels, and press Update. Only changed levels (those with purple backgrounds) will be updated.

Sequence Lists

As you might expect, you can open a list of all Sequences (the Sequences List), from which individual Sequences can be accessed and edited in blind (for example, Sequence List 1).

A Sequence List looks a lot like the Preset list, and can be used in the same way - Presets can be edited and updated. However, the spreadsheet portion of the window is dedicated to the properties of each Sequence Step, including Times, Delays, Follow Times and attribute behaviour.

Any changes you make to the Presets themselves (Channel levels, parameters) will be reflected in the Preset List, and on any Masters those Presets are used on.



Playback and Updating



Reset to the top of the Main Playback, with the first Preset in the B-field



Preset 1 runs - observe the graphical representation of the crossfade happening.



Preset 1.5 runs, and is paused midway



Reverses back into Preset 1



Preset 5 is loaded into the B-field



And played back - this is a quick way to jump over Presets

Group 3 @ 50%

When making a change to a Preset, the purple "changed" background appears in the Channel tombstone



A pop-up appears, indicating that you're updating Preset 5



Confirmed

Group 2 @ 65%

Another change, but we don't really like this one.



The Playback is refreshed, i.e. the Preset is reloaded as recorded



Go into Preset 6.5 ,and drop channels 71 & 72 to 40%. Update this change.

Press Go on Preset 7 - too fast! Use the springy wheels to slow down the fade (Cobalt & Congo Sr only)

Sequence Lists



The Sequences List is opened, showing all the Sequences, which in this case is just Sequence 1



Opens Sequence List 1



...

Arrow across to the In time column



&



The column is moved next to the Out column - possibly a more logical place for it

You can rearrange columns this way in all spreadsheet-style windows

71 @ 85%

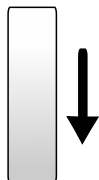
Making a change to Preset 1 - note the familiar purple bar



Confirmed



&



Holding an Arrow key and moving the Level Wheel moves you around a list quickly. **Go to the bottom of the list**



Preset 801, which we recorded onto a Master earlier, is inserted as the next Sequence step



A pop-up asks if you want to Delete Preset 801 as well as the Step. You don't.



Change the times on Presets 1 thru 2 to 5 seconds in, 7 seconds out

In Preset 1, drop Group 2 to 50%

Marking

When using moving lights in a rock'n'roll gig, you'll probably have them sweeping all over the stage, or at least don't mind too much if the audience sees them move into position as you bring them up. In theatrical shows on the Main Playback, this is usually undesirable. Instead, moving lights are often used in fixed positions, and their non-intensity parameters need to be preset in a position before the Intensity comes up.

As it would be very annoying to have to manually go back a step and preset your parameters every time, Cobalt has a function called Automark. Automark looks ahead to the Preset where the moving light's intensity comes up, and sorts out the non-intensity parameters in the previous step.

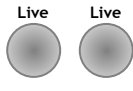
Whether Automark is used or not is decided on a Step-by-Step basis - the alternative is "On Go", i.e. the parameters are played back when Go is pressed, leading to the undesirable outcome described above. The default for recorded Presets is set in the Let's Begin or Setup windows. For individual Presets, it is available in the Record pop-up under the Advanced tab, and can also be changed for each Step in the Sequence List.

By default, Automark will prepare the non-intensity parameters in the previous Step to the one they come up in. If you need the Mark to happen earlier, for example for noise reasons, you can give the relevant Channels an intensity of "Mark" in the intervening Presets, a virtual intensity which forces the fixtures to perform their marking earlier.

As it happens, all the Presets we've recorded into the Main Playback so far are set to Automark, as this is the default we chose in Let's Begin all those tutorials ago. For the purposes of the tutorial opposite, a dastardly masked programmer has come along and set the default to On Go. It's up to you to save the day!



Automark

 & 

Channel 101 @ Full; FP Charlie; CP Yellow

30

RECORD

Record Charlie's spot as Preset 30

Channel 102 @ Full; FP Marilyn; CP Pink

31

RECORD

Channel 103 @ Full; FP Lara; CP Brt Blue

32

RECORD

Channel 104 @ Full; FP Nessie; CP B Green

33

RECORD

Group 3 @ Full; CP Blue Green

34

RECORD

A series of Presets using movers and scrollers is recorded

29

GOTO

GO

Channel 101 moves as it comes up on Charlie - ugly!

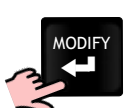

GO

GO

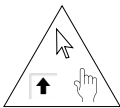
GO

GO

The same thing happens for the other Presets - the scroller move is especially unpleasant

 & 

Open the Sequence List - let's fix this mess!



Arrow across to, or tap, the **Attrib. Move cell for Preset 30** (currently reads On Go)


Column



The entire column from that point down is selected



All the Presets you just recorded are changed to "Automark"




29


GOTO

GO

Much better! Now let's set Automark as default so it doesn't happen again



Set **Sequence Attribute playback default to "Automark"** and close the Setup window



For some reason, you have decided that in Preset 31, Channel 102 should actually sweep onto Marilyn while fading up. Go back into the Sequence List, and set this Preset only to move "On Go".

Currently, when Preset 33 runs (Nessie in Green), the scrollers with Mark for the following Preset. Unfortunately, Preset 33 is for Nessie's monologue, and as a sea monster, she's not very good at projecting, so a noisy scroller move might not be a good idea.

Go to Preset 33 Set Group 3 to an intensity of "Mark" - this is a softkey under Channels -> Mark, or a hardkey next to Thru on Cobalt. Also put them in CP Blue Green. Update the Preset.

Now the scrollers will mark in Preset 32.

Wait, Follow and Alert

When running theatre-style on the Main Playback, you may want to have one "cue" run after another automatically, without having to press Go. This is generally called a follow-on, and can be achieved in two ways on Cobalt.

A **Follow time** is applied to the first step (the one you press Go on), and the time counts down from that Go before executing the following step.

A **Wait time** is applied to the second step (the one which follows), and the time counts from the completion of the previous step's fade.

Which you use depends on the situation - a Wait of 0.01 would always be an "auto-follow", while a Follow of 6 would have a constant gap between steps, regardless of the timing of the first one.

Wait times can be set in Live, using the softkey Wait. Both Follow and Wait times can be set in a Sequence List using the WFA column.

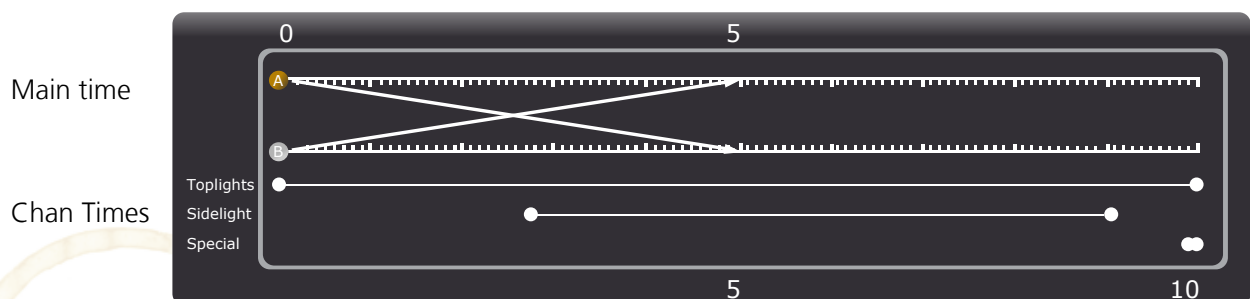
The A in this column stands for **Alert**. When the previous step completes, the next step's Alert time starts to count down; when it hits zero, it gives a visual and audible warning that the next step should be executed.

Channel Times

The times and delays we've been using so far apply to the entire step. If you want finer control of a crossfade, you can apply times to individual channels or sets of channels. This can be useful, for example:

- To slow down a particularly hot channel relative to the others coming up
- To delay a channel until a piece of set has flown out of its way
- To snap a channel in once all the others have finished fading


These channel times can be given a label, and are displayed in the crossfade graphic

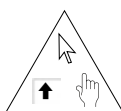


In this example, the main time of the step is 5, the Toplights are fading over 10, the sidelights have a 2.5 second delay then fade over 6.5, and the special snaps after a delay of 10.

Follow and Wait

3 0 **GOTO** Go into Preset 30

 **MODIFY** & **PLAYBACK** Open the sequence list




Set the WFA column for Preset 32 to F (follow), and set the WFA time to 8

ESC

GO **GO** When you press Go on Preset 32, the Follow time starts to count down, then triggers Preset 33

3 0 **GOTO** Go back into Preset 30

 **MODIFY** & **PLAYBACK** Open the sequence list




Clear the WFA Time field for Preset 32. Instead, set the Wait for Preset 33 to 1 second

ESC

GO **GO** Now, when Preset 32 completes, the wait on Preset 33 starts to count down immediately, then runs the Preset. The effect is the same, but achieved by different means.

3 1 **GOTO** Go into Preset 31 this time

 **MODIFY** & **PLAYBACK** Open the sequence list




Change the W for Preset 33 to an A, and change the time to 5

ESC

GO Now, when Preset 32 completes, Preset 33 starts to count down in the top left of the main playback. As the Alert time approaches 0, the field goes amber, then red, to warn you that the next preset should run soon

Channel Times

 **C ALT** & **Live** **Live** **Group 1 @ 75%; Group 2 @ Full; Group 4 @ 90%** Building a state

2 0 **RECORD** Record the state as Preset 20 **SEQ -** **5** **TIME** An overall time of 5 seconds is set on the Preset, which is now in B

GO The state is great, but the timings are off. Let's fix them. **SEQ -** Preset 20 is now in B, so you can see what you're doing

2 **GROUP** Select Group 2 **1 0** **CHAN TIME** **CONGO / JR / KID** **1 0**  **TIME** & **CHANNEL**

A pop-up appears. Text the Channel Time **Gobos**  **MODIFY** A new line appears on the crossfade graphic, showing the new Channel time with its label

4 **GROUP** Select Group 4 **0 . 0 1** **CHAN TIME** Label this one **Specials**  **MODIFY**

1 0  **DELAY** & **CHANNEL** No pop-up appears, as these Channels already have a text. The Message Area announces "Channel Delay Set"

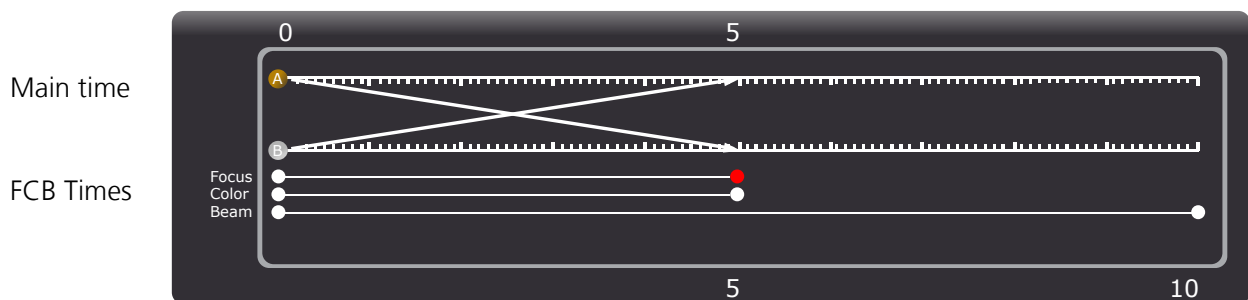
GO Much better - the toplights fade in over 5 seconds, the gobos over 10, and the specials snap on after everything else is finished.

FCB Times

Now that we have thrown moving lights into the mix, we also have parameters which may need their own timings when you press Go. Any Preset which contains moving light parameter moves will also have Focus, Color and Beam time lines below the Crossfade in the B-Field. These can also be changed, for example to slow down a live color change on an LED fixture, or to snap moving light gobos at the end of a fade.

These timings can either be set globally for the Preset, or for the individual fixtures within that Preset.

The graphic below shows a 10 second beam time; the red focus time blob indicates that some channels have their own focus time set.



Attribute View and Individual Parameter Timings

The tombstone view of Live shows channels, and for devices shows fields for Focus, Color and Beam. There are times when you may need to see more detail. For example, to see the individual Pan and Tilt values for a moving light, or to see which 2 beam palettes it's in. To do this, you can press the Attrib key.

This provides a very powerful window, which by default can't be edited directly. If you turn on Spreadsheet Editing, you can edit the values for individual parameters, and add timings to them.



FCB Times

3 **4** **GOTO** Go into Preset 34 - somebody has added extra Presets in the show

GO The moving light sweeps across onto Charlie, and changes colour as it goes. We want to change those timings

SEQ - Put Preset 35 back in the B field, so you can see what you're doing

1 **0** **TIME** & **FOCUS** Change the Focus time for this Preset - choose **Preset FCB times** from the pop-up

0 **.** **0** **1** **TIME** & **COLOR** **MODIFY** **1** **0** **DELAY** & **COLOR** **MODIFY**

The color time line shrinks to a snap, and is moved to the end of the fade.


GO The moving light now moves over 10 seconds, and the color snaps once it's arrived

Attribute View

3 **6** **GOTO** Now in Preset 36, looking at 37 in the B-field

Live Make sure you're focussed on Live

ATTRIB You are now looking at the Attribute view. All devices with non-intensity parameters are shown

 You can now arrow around, or tap, the parameter fields for all these units


SETUP & **Tab** For tabs like this you can **enable spreadsheet editing**.

Format & **↓** You can now see times for each individual parameter.

 **Select the Gobo time for Channel 115** **0** **.** **0** **1** **MODIFY** This is now set to a snap

UPDATE **UPDATE** As the time had a purple background, we need to update

GO The gobo now changes in a snap, while the rest of the Preset runs in the normal time

 Turn off spreadsheet editing, and press Attrib to go back to tombstone view in Live

Section Markers

You can mark steps as Section Markers within a sequence - useful key points, for example the top of a band's set or a scene in a play. These markers are highlighted in blue in the main playback, for easy visual reference, and you can jump between them quickly using the keypad or direct selects.

Section markers can be set

- At the point of recording, in the Advanced tab of the Record pop-up
- In a sequence list, by ticking the Section Marker cell
- By right-clicking on a step in the Main Playback window



Section Markers

  Go into Preset 1

  &  Open the sequence list










Scroll across to the very right of the spreadsheet, to the column Section Marker



Tick the Section Marker box for Presets 1, 8 and 33, then close the Sequence List

Note how in the Main Playback tab, those Presets are now highlighted in blue.

  &  Jump straight to the next section marker   &  And back to the previous one

  &  Jump the next section marker into the B field  and run it



Set your bottom bank of Direct Selects to be Section Markers ("Section"). Tap a Direct Select to jump straight to that Preset.

Using the mouse cursor, right click anywhere on the blue bar for Preset 8, and click Section Marker to un-mark that Preset

Tracking Updates - Intensity

Tracking consoles handle their cue information in a very specific way - in cues where a channel doesn't change, that cue simply shrugs its shoulders and lets the channel keep doing what it's doing. Therefore, if the channel level is changed in the source cue, that change will track until it encounters a level change (or a Block, see below).

Preset Desk:

Cue	Time	Down	Breakup	Back	Special
0.5	5	20	0	40	0
0.7	4	0	0	0	0
1	2	0	0	0	70
2	3	0	40	40	0
3	2	40	40	40	0
4	2	0	40	40	0

Tracking Desk:

Cue	Time	Down	Breakup	Back	Special
0.5	5	20		40	
0.7	4	0		0	
1	2				70
2	3		40	40	0
3	2	40			
4	2	0			

Cobalt is not natively a tracking console. In the above example, the Cobalt method of stacking together standalone presets to create a sequence looks very much like the Preset Desk example on the left. The "cues" are not interdependent, and modifying or deleting one preset will not affect subsequent ones.

However, it is possible to perform tracking updates on Cobalt. This is very helpful when plotting a theatrical show. Imagine a long sequence with several cues, during which the backlight stays at the same level. Running through the show a second time, you decide the backlight is too bright. Rather than updating every single preset as you get to it, you can update the new backlight level to track.

In the tables above, if you're in Preset 2 you would track forwards only. If you were already in Preset 3, but wanted to change the backlight level in the entire scene, you could update forwards and backwards.

Tracking Updates - Attributes

Attributes can also be tracked. To understand how this differs from intensity tracking, first we need to look at how attributes are recorded in the first place.

In the Let's Begin menu, there was a setting called Record Attribute Mode. This defines which parameters get recorded into a preset. The options are:

- Active: Only the parameters of non-zero channels are recorded (this is the default)
- Changed: Only those parameters that have been changed (purple background) are recorded
- All: All parameters are recorded every time
- Pop-up: A pop-up appears for every record action, asking you to confirm recording parameters for inactive channels

Recording Active means that, in those presets where a moving light is not active, no parameter information is recorded. Parameters will therefore stay put as they fade out, no matter what changes you make in the last step in which they appear.

This solves one problem. However, attribute changes will also need to be tracked through scenes if you want to edit multiple presets.

Tracking Levels



Go to Preset 5 - Channel 73, Lara's special, comes on in this Preset, and stays on for the next few Presets



Set the channel to a much lower level. An ordinary update here would just update Preset 5, but we know that we want it lower in the whole scene



A pop-up appears, asking whether to track Forwards, Backwards or Both. **Choose Forwards**



The level has tracked through the next Presets



But the blackout is still ok.



Go back into Preset 5



Add a new channel



Again, **select Forwards only**



The level has tracked through the next Presets



But the blackout is ruined, as Channel 11's original level of zero has been replaced



To avoid this, it is a good idea to Block Tracking on steps like blackouts, or key states which you never want levels to track into. Open the sequence list, and tick "Block Tracking" for Preset 8.

Fix the blackout in blind, and exit the sequence list

Tracking Parameters



Go to Preset 30



Changing a parameter this time. Again, with a normal update, the colour would revert to yellow in the next Preset



Again, **select Forwards only**



The moving light stays pink



Block tracking for Preset 36

Go into Preset 33, and send channels 101 thru 104 to FP Charlie. Update this to track, forwards only.

Run the following presets. The moving lights will stay put, but revert to the originally recorded position in Preset 36, because it was blocked.



The Flexibility of the Master

We have touched upon Masters in earlier tutorials, but we can now investigate their full potential for creating both very simple fader-based shows, and as very powerful busking tools that can be set up however you like.

The key fact about Masters is that they are empty vessels which can take every kind of content recorded on the keypad side of the console, including Presets, all kinds of Palette, Groups, Channels and Sequences.

When content is loaded onto a Master, you then have two ways to affect the way it appears on stage. You can edit the content (for example a Preset) itself, and also change the settings of the Master on which it's loaded. This means you can load the same Preset onto several different Masters to do different jobs - one could be normal (simply adding itself to the pile when you bring it up), another could be solo (takes out all other Masters when brought up), and yet another could be inhibitive (Channels in that Preset can't be live unless the Master's up).

Master Pages

An important concept when working with Masters is that of paging. Unlike some other consoles, changing page doesn't load a new set of Masters onto the faders. Instead, Masters 1 thru 40 are fixed to their faders, and the content is changed.

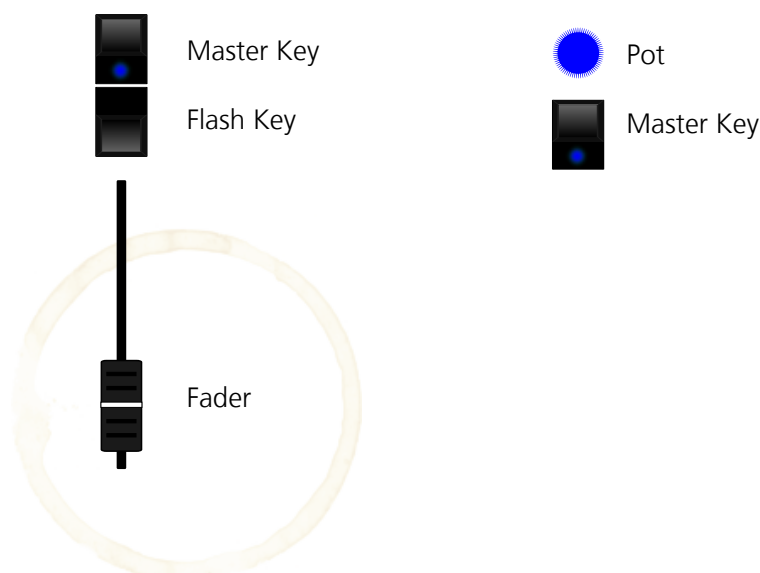
A Master Page is a set of 20 Masters' worth of content, meaning that paging is independent between the top and bottom decks of Masters. By default, the bottom deck is set to Page 1, and the top deck to Page 2.

Master Faders

Cobalt 20, Congo Sr, Congo Jr consoles with a Master Playback Wing, and Congo Kid all have 40 faders each, arranged in 2 decks of 20. With the exception of Congo Kid, the top 20 Masters (21 thru 40) have only Master Keys, while the bottom 20 (1 thru 20) have both Master Keys and Flash Keys.

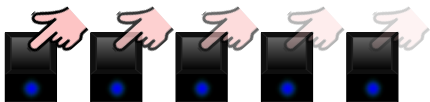
Cobalt 10 has 20 faders. To maintain consistency, the bottom 10 are 1 thru 10, and the top 10 are 21 thru 30.

On Cobalt 20 and Cobalt 10, the top deck consists of infinite pots rather than faders. These work in the same way as faders, but take up less space. If you need access to the contents of Masters 21 thru 40 on actual faders, the Swap key swaps the content between the 2 decks.




Loading onto Masters

0 **GOTO** Enough with the Go button, it's time to busk! Let's clear the decks on the Masters.


C **ALT**  ... Hold C/Alt and run your finger along the Master Keys to empty the Masters

3 **0** **PRESET** & **1** Preset 30 is loaded onto Master 1

 Load some further content onto Masters


2: Preset 31	6: Color Palette 3
3: Preset 32	7: Color Palette 5
4: Preset 33	8: Preset 803
5: Preset 35	9: Preset 806

Editing Content on Masters

 Raise Fader 8 - Preset 803 is on stage, but Channel 1 is too bright. **1** **CHANNEL** **5** **0** **@** **LEVEL** As we've seen before, this can't work, as the Master wins on HTP

We need to edit the Master directly. **MODIFY** & **8** The Master Editor for Master 8 is opened. This shows Preset (803) in the context of the Master. Changes here will happen in Live

1 **CHANNEL** **5** **0** **@** **LEVEL** The command works, and the Level of Channel 1 changes on stage **UPDATE** Purple bar! Update the Preset **MODIFY**


 Leaving Fader 8 up, enter the Preset List. In Preset 803, change the level of Channel 3 to 40%, and Update. Note what happens on stage.

Lower Fader 8 to Zero, and back to Full. Note the difference - the content of the Preset is fetched from the Preset List when the fader is raised.

Master Pages

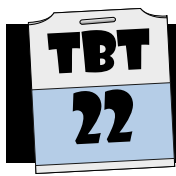
To change pages on the **bottom deck**:

COBALT **PAGE** & **3** **CONGO / MP WING**  OR **3**  Page

 Load Color Palettes 1 thru 10 onto Masters 1 thru 10 on this page - type 1, hold Color, and keep holding Color as you hit the sequential Master keys

Return to Page 1 on the bottom deck. Raise Fader 8 to full. Change back to page 3 and observe what happens - because this fader is always Master 8, it will remain occupied until you lower it, at which point it will adopt its Page 3 duties.

Set the bottom deck back to Page 1



Master Settings



Your Masters, Your Rules

Now that you have filled your Masters with content, it's time to decide how the Masters' Faders and Keys behave when you actually need to access that content. This can be decided on a Master-by-Master basis, and is a property of the Master itself rather than the content (e.g. the Preset).

There are two ways of achieving this, with the same results:

The **Master List** is yet another blind editor, a list of all the Masters and their content, with a spreadsheet of settings for each Master. This provides a nice overview, but can be slower for editing individual settings.

The **Master Settings** window for each Master is a pop-up, accessed through [Setup] & Master Key, which shows some of the same options as the spreadsheet in the Master List. This is much quicker to access, but only lets you edit one Master at a time.

There are many settings for each Master, but they fall into some broad categories

- Content: What's actually on the Master*
- Times: Timings for use with Flash keys*
- Basic Settings: What type of Master it is
- Button Settings: How the Master and Flash keys behave
- Fader Settings: How the Fader or Pot behaves

* These settings are only available in the Master List, not the individual Master Settings windows.

Using these settings, it is possible to customise a Master to your needs.

Master View & Masters Dock

The Master View is a tab which shows the Masters as tiles. This is a useful way of graphically showing your Masters and their content, label and current level. You can also drag and drop content between the Master tiles, allowing you to rearrange your Master faders without clearing and re-loading using the keypad.

The Masters Dock fulfills the same role, but in a dock. Both the Tab and the Dock have multiple Formats, such as All Master, Active Masters, Masters with Content.

The Masters Dock is also especially useful on Congo Kid, which doesn't have LCDs between the Master Faders.



Master Settings



&



The Master List is opened. It looks a lot like the Preset List and the Sequence List, and works the same way

Master	Content type	Content
1	Preset	30.0

This part of the spreadsheet shows what type of Content is on the Master, and which item of that content. These can be changed here - press **Modify** on the Content Type field to see all the things that can be placed on a Master

Master 1: Set the In, Wait and Out Times to 5
Tick "Flash Use Time" (scroll to the right to find)



Press the Flash Key for Master 1 - the Master comes up over 5 seconds, waits 5 seconds, and goes down over 5 seconds.

Master 8: Set the Mode to Inhibit

The Master jumps to full, so as not to inhibit things straight away



Channel 1 is inhibited by Master 8

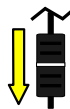


Set the Mode of Master 2 to Exclusive instead. See what happens in Live - only that Master can now control those Channels.

Set the Master back to Inclusive



Raise Master 5 - the attributes move as the Intensity comes up. Automark can't help us here



Select the Channels on the Master and send them home



&



The Master Settings for Master 5 are opened



Arrow across to the Button Settings tab

Set Master Button to Execute Attributes



The Master Key now sends the Parameters into position



and the fader raises the Intensity - much nicer!



Raise the faders of Masters 1 thru 5 to Full.

In the Master Settings for Master 9, set the Flash Type and Fader Type to "Solo", and escape the Settings window

Raise Master 6 - all other Masters are dipped to zero as it approaches full. Try out the Flash Key too. Note that this Solo function only affects Masters - contributions from the AB Playback will not be dipped.



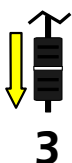
&



This command also loses all Masters.



Raise Master 3 - the Parameters move



Lowering the Master leaves the Parameters where they are - there's no reason for them to go anywhere.



&



Set Return To (FCB) to Previous



Now raise then lower Master 5, to put the movers somewhere else.

Raise Master 3 - the moving lights move. Lower Master 3 - the return to where they were.

Multiple Sequences

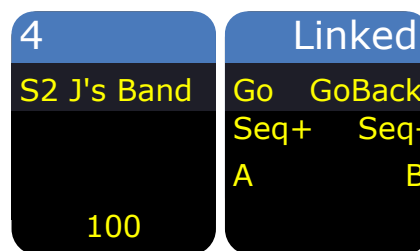
By default, a single sequence (Seq 1) lives on the Main Playback, and is run off the Go button, but you can record multiple sequences and place them on masters. Sequences on Masters have more options than other types of content, including:

- The master and flash keys can be assigned playback functions such as Go, Pause, Seq+, Seq-
- A sequence can be recorded straight to a master, piece by piece, by recording presets steps straight to that master

These sequences, along with the one on the main playback, can all be run simultaneously, and will follow the usual rules of interaction (HTP for intensities, LTP for attributes).

Sequences can also be run in Dual Fader Mode - the sequence will occupy both its own master, and the one to the right, making it more like the main playback crossfader. In this mode, all 4 buttons can be assigned playback functions. The two faders can either act as an AB fader pair, or a both-way AB fader and an intensity master.

On Cobalt consoles and Congo Sr, a sequence on a master can be "connected" to the Master Playback buttons in the centre of the console. This allows you to run it off the Play buttons, and creates a tab for the sequence, similar to the Main Playback tab.



Graphics for a sequence in Dual Fader mode. The right-hand area shows the functions of the four buttons and two faders.

Chase Mode

Once recorded, a sequence can have its mode changed from Normal to Chase. This allows you to play an entire sequence back as a chase, with each step following on from the previous one. In combination with the Rate option, this can be used to create very specific chases, where you want control over each individual look, and want to be able to go into and edit those looks.

Note that this option is entirely independent from the Effects engines, which are covered in later tutorials.



Recording a Sequence on a Master



&

**Channel 21 @ Full**

&



This is the usual way to record a Preset to a Master.
This time, **go to the Sequence Tab in the pop-up**

You now have the option to create a new sequence on this master. Preset 101 will be the first step in that sequence.
By default, this will be Sequence 2, so **label this sequence as New Seq and press Modify on Record**

Channel 22 @ Full

You now have a sequence on a Master. Let's add some more steps to it.



&



This time, your only option is to make this the next step in the existing sequence



Add 3 more steps to the sequence, recorded as Presets 103 thru 105, adding channels 23, 24 and 25 respectively.

Now do a [C/Alt] & [Live] [Live], then raise the fader for Master 9



9

By default the master key is a Go button.
Press it repeatedly and observe the presets playing back



&



Open the settings for this Master



In the Dual Fader Mode tab, set Dual Fader Mode to A + B, and set the 4 buttons to Go, GoBack, Seq+ and Seq-

Exit the Master Settings pop-up, and use the pair of faders together to run through the steps of the sequence

Cobalt and Congo Sr Only



&



A new tab appears for the Sequence, labelled Master Playback 9



The central panel keys now control the sequence on this master

Chase Mode



Open the Sequences List. **Change the Mode of your Sequence 2 to Chase**



&



9

Open the settings for Master 9, and **turn Dual Fader Mode off**



9

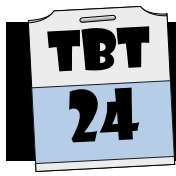
Raise the fader for Master 9. The sequence runs as a chase, but quite slowly.



Open the Sequences List again, and change the rate of Sequence 2 to 500%



Open the sequence list for Sequence 2, and edit the times for the individual steps. Run the chase again and see what happens. Also try ticking Bounce and Reverse in the sequences list.



Independents - Pots and Buttons

All Cobalt and Congo consoles have Independents - a set of controls designed for manipulating Channels outside of the usual control structure. Their contributions are not recorded, nor are they affected by C/Alt & Live commands, RemDim, etc.

Examples of Independents might include:

- Working lights (you generally don't want to record these!)
- Houselights
- DMX controlled non-dim relays for moving lights
- A smoke machine you want to control manually
- A haze machine inhibitor, for when it gets too hazy

Cobalt 20, Cobalt 10 and Congo Sr consoles have 9 Independents - 6 pots and 3 buttons. Congo Jr and Congo Kid have only 3 pots, but the buttons are still called 7, 8 and 9, so they make sense between consoles.

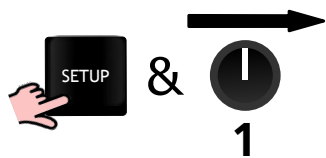
Independents can be set to one of three modes, similar to Masters:

- Inclusive: Independent controls Channels, but other sources (AB, Masters) can override it on HTP basis.
- Inhibitive: Channels from other sources are inhibited proportionally by the Independent.
- Exclusive: Only that Independent can control its Channels - no other source has any effect

Button Independents have the additional option of being a toggle - when active, one press of the button latches the Independent on, and another unlatches it. Otherwise the button must be held down.



Setting up Independents



Hold Setup and quickly flick Independent 1, letting go of Setup while still flicking. This is a knack. If you don't get the knack, you can also go to Browser > Independents > Independent 1



Channel control works in the usual way in an Independent editor.

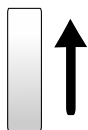
Give the Independent a text of **Toplights** and press **Modify on Execute**



Turn the Independent up to 50%.
The Toplights come up in the normal way



Channel 1 is selected. Note that the tiny source tab on the tombstone reads "In" for Independent



Wheel up Channel 1. When it passes 50%, the wheel takes over - standard HTP behaviour.



Enter the editor for Independent 1 again.



Change the Function of Independent 1 to Inhibitive, and close the editor. Set Group 1 to Full, then lower the Independent - the behaviour is the same as an Inhibitive Master.



Opening the Editor for button Independents is much easier.



The Specials Group is set to Full

Set the **Function to Exclusive** and choose **Toggle Button**, then close the editor.



This doesn't work - the Channels' tombstones contain **Blue Zeroes**. They are under the exclusive control of the Independent



In 7

The Channels go to Full, and stay there when you let go of the button.
This is a toggle button



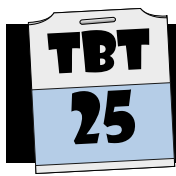
In 7

The Channels go out



This could be inconvenient in the future, so reopen the editor for Independent 7, and wheel the Channels it contains down the Zero. Exit the Editor - the Independent is now cleared, and the specials are back under normal control.

Change the Function of Independent 1 back to Inclusive.



Introduction to Effects

Cobalt uses 4 distinct categories of Effect:

- **Chase Effects** are a simple series of steps affecting pre-specified Channels
- **Content Effects** can be applied to any Group of Channels, and can reference palettes or individual parameters
- **Dynamic Effects** are shapes, usually applied to moving lights to create movement or color effects
- **Image Effects** allow you to map a Jpeg image over a pre-defined grid of fixtures

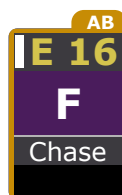
All these Effects are built and controlled in the same way, which is peculiar to Cobalt. Firstly an Effect handle is inserted, as one of the above types. This is then manipulated exactly like a moving light - it has an Intensity (used to activate the Effect), and a number of Parameters, laid out on the Encoder Wheels. These might include:

- **Channel Source:** Which Channels to do the Effect to (for example, a certain Group)
- **Distribution:** Sequential, Interlaced, Random etc
- **Direction:** Forwards, Backwards, Bounce
- **Series:** For a Content Effect, which set of flexible steps to use on the Channels
- **Dynamic Template:** For a Dynamic Effect, which shape to use (e.g. Circle, Ballyhoo, Rainbow)
- **Rate:** Speed of the Effect.

This has two major consequences.

Firstly, an Effect handle can be reused multiple times in a show. Just like a moving light might do "Big Blue stage wash" in Act 1 and "Shattered white table special" in Act 2, a single Effect handle could do "Color steps on LEDs" at one point, and "Focus sweep on Mac 250s" later on.

Secondly, this means that once you've built an Effect you love, with the right Channels, movements, speed, and distribution, you must Record this effect, usually into a Preset. What the Effect actually looks like is not inherent in the Effect handle, but a function of its many attributes. Again, just as with moving lights: you wouldn't spend 10 minutes setting up a lovely state, tweaking shutters and mixing just the right shade of mauve, then walk away for a cup of tea after doing a [0] [Goto].



A Chase Effect handle, which looks just like a Channel tombstone, and can be selected and wheeled up in the same way

Chase Effects

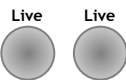
Chase Effects are the simplest kind of Effect - a series of steps, each containing certain Channels, using only Intensity. A basic Chase effect can be created while inserting the Effect handle, using the selected Channels.

As with other types of Effect, it is important to distinguish between the Effect handle (Effect 1, Effect 2 etc), and the Parameters chosen on that handle. For Chase Effects, one of those Parameters is the (confusingly named) "Chase", i.e. the steps and their Channels. These chases can be viewed and edited.

Inserting an Effect



&



Set up the top Dock Area on your right-hand touchscreen (or elsewhere) as an Effects Dock.



Group 1 is selected



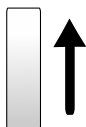
&



A pop-up appears, allowing you to choose which of the 4 types of Effect to insert. Chase Effect is the option on the first tab. There are also options for automatically creating a Chase to run on the Effect.

Tick **Create Chase from Selected Channels**, and name the Chase **Tops**. The Wizard has assumed we want 6 parts, which is fine, so press **Modify on Execute**.

A new Effects handle, Effect 1, appears in the Effects Dock. and is already selected.



Wheel the Effect up. The Toplights start to chase, one by one.



User Keys 1, 2 and 3 map the Effect's parameters to the Encoders

JR / KID



&



Wheel the Rate encoder up - the chase speeds up. The number shown for the encoder is a percentage.



&



26

Record a Preset straight onto a Master - containing the selected Effect. Otherwise, our chosen Rate would be lost.



&



26

Your Effect, as recorded, is now available to you on a Master. The Effect's Intensity is shown in yellow, just like a Channel

Editing a Chase

Browser



Effects > Chase Effects > Chases



A list of all the Chases is opened, in this case just the Chase "Tops" Here you can change the Chase direction and timings



Arrow over to the Steps column, and open the Steps List for this Chase.



The content of Step 1 is now Channel 6, rather than Channel 1. Each Step can be edited in this way, to create an exact series of Steps for your Chase



Set all the In and Out times for all Steps to 0.5 seconds. Change the Channel in Step 6 to Channel 1 - your Effect now looks quite different.

Insert a new Effect 2, also a Chase Effect, running on Channels 71, 73, 72 and 74 (in that order). Adjust the steps so each Channel fades up over 1 second, then snaps off.

Record this Effect into a Preset on Master 27.

Content Effects

Chase Effects are quick to make, but are quite simple and limited to just Intensity. Content effects allow the same level of control, but on all Parameters.

Additionally, while a given Chase references a fixed set of Channels (the ones in its Steps), Content Effects can be applied to any Channels that understand the content (Palettes or Parameters).

The key to unlocking the power of the Content Effect is the **Series**. This is similar to the Chases used with Chase Effects, but more flexible. A Series also contains steps, and each of these can contain up to 3 types of Content, and associated timings. So, a simple Color Series might look like this:

Step 1	Color Palette 1
Step 2	Color Palette 3
Step 3	Color Palette 7
Step 4	Color Palette 2

This Series can then be applied to any channels that reference those Palettes (Scrollers, LEDs, moving lights).

A more complex Series could include more content:

Step 1	Focus Palette 1	Color Palette 8	Zoom 20%
Step 2	Focus Palette 4	Color Palette 2	Zoom 50%
Step 3	Focus Palette 2	Color Palette 6	Zoom 70%
Step 4	Focus Palette 3	Color Palette 1	Zoom 5%

Once a Series has been built, it is applied to a Content Effect as a Parameter. Content Effects have far more Parameters than Chase Effects, including which Channels to run on, how the Effect is split up over those Channels, Direction, Rate, and separate Attack, Sustain and Release times.

Channel Sets

Channel Sets are a useful alternative to Groups, designed for use with Effects. While Groups can happily be used as Channel Sources (i.e. Effect 3, please happen to Group 9), they don't necessarily split the Channels up in a useful way.

Sets allow Channels to be put in a certain order, in discrete parts, so that an Effect runs on each of those parts in turn.

For example:

Channel Set 1:

Part 1	Part 2	Part 3
1, 6	2, 5	3, 4

When run with a simple Intensity Series, this would create a chase-style effect in which 1&6, then 2&3, then 3&4 would flash on in 3 steps.

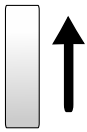
Content Effect on Intensity



The Effect Insertion pop-up appears again. This time, **select Content Effect and press Modify**. Note that there are no further options this time.

Effect Playback 5, a Content Effect, is inserted and selected. Before this Effect can do anything, we need to tell it what to do.

If an Encoder has several discrete options (e.g. 5 different Gobos), holding down the Encoder Key will display those options on the direct selects. Alternatively, choose these options in the Device Controls Dock tiles, on the All page

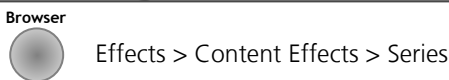


Wheel the Effect up. The toplights do a chase, similar to the Chase Effect from the previous tutorial.



The Effect is now running on the scrollers instead. Note the empty step, as it is still set to 6 Parts

Creating a Series



A list of Series is opened - only "Empty" and "Intensity" exist by default.



An new Series is inserted, and opened for editing.



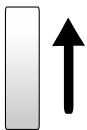
4 steps are inserted



For Steps 1 thru 4, set the Intensity to Full. For these 4 steps, set the 1.Content field to Focus Palette. In the Value field, set values of 1 thru 4 to the 4 Steps respectively.

Escape the Series Step Editor, name your new Series "Characters", and escape the Series List.

Insert a new Content Effect 6, apply it to the Washes, in 1 Part, using the Characters Series.



Wheel the Effect up. The Washes start to move between the 4 Focus Palettes, all together



Play with the Group Parts Parameter of the Effect, and observe how the Washes behave.

Insert a new Content Effect 7, and create a Series with 4 Steps, using Color Palettes 3, 5, 7 and 9. Call the Series "Colors!"

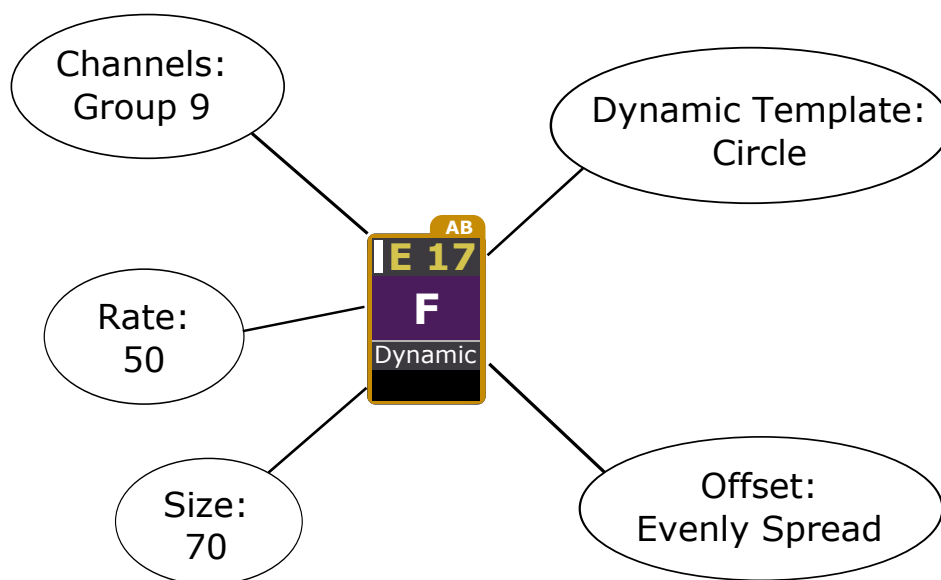
Run this Series on the Washes, and then try it out on the LEDs.

Dynamic Effects

Dynamic Effects combine speed and flexibility to provide the most "rock'n'roll" way of making effects. To start a Dynamic Effect, you only need an Effect Playback, a Group or Set of Channels, and a Dynamic Template. Many Dynamic Templates are supplied by default, such as Circle, Ballyhoo and Rainbow. These can be applied to any Channels with the right Parameters - Pan & Tilt for Circle and Ballyhoo, and some form of color mixing for Rainbow, for example.

Unlike Content Effects, Dynamics occur relative to the fixture's current position. For example, a Circle template applied to a fixture pointing downstage will create a circle around that central point.

Once a Dynamic Effect is running, it can be customised using its Parameters, including the size and rate, and the offset between the Channels in the Group/Set doing the Effect.



An example of a Dynamic Effect Playback with some of its parameters.



Dynamic Effects



The Effect Insertion pop-up appears again. This time, **select Dynamic Effect and press Modify.**

A Dynamic Effect Playback is inserted.

Group 8 @ Full and Home

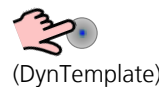
Because Dynamic Effects will only affect parameters, we need to give the moving lights an Intensity.



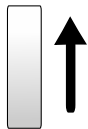
Group



Washes



Ballyhoo 1



Wheel the Effect up, and watch the fun.



Leave the Effect running, and insert a new Dynamic Effect Playback number 12.

Apply Effect 12 to the Washes too, but this time choose Rainbow as the Dynamic Template. Wheel it up!



Wheel the size of the Ballyhoo down to about 15. The effect is now more contained within the stage area



All

This is similar to Group Parts in a Content Effect. When set to all, all the channels will do the Effect together

Note how the washes are sticking together in a line - Dynamic effects take place relative to the starting point. A further example:



115 @ Full, FP Cyc, BP Medium

The VL is pointed at the middle of the cyc



Insert a new Dynamic Effect 13, apply it to the VL (Group 10), with a circle template and a size of about 25. See how the VL circles around the centre of the cyc.

Home the VL's Focus only. Note the difference - a moving light can't do a circle while pointing straight down, so the result is a sort of figure-of-8.

Fan

The Fan function distributes parameters for a selection of Channels around a central point. The most common (and most literal), use of Fan is fanning Pan or Tilt - for example, a set of 5 moving lights pan-fanned around the central unit will spread the beams out in a fan shape. However, other parameters can be fanned too, such as Cyan (making a line of beams get progressively bluer) or Iris.

The shape that Fan applies to a parameter can be chosen using [Setup] & [Fan]. The options are Linear, S-shape, V-shape and U-shape.

Align

Align allows you to grab aspects of one Channel, and apply them to a selection of other Channels. For example, the perfect colour and shuttering you've just achieved on Channel 101? You don't need to manually recreate that on Channels 102 thru 105.

Align makes use of the subselection you used while creating Focus Palettes. Using [Next] and [Last] allows you to select a Channel in a red subselection border - this Channel will become the "leader". The remaining golden-selected Channels will be aligned to the leader's values.







[Align] on its own will copy all non-intensity parameters from the "leader" Channel




[Align] & [Focus] will copy the entire category




[Align] & [Cyan] copies only that individual Parameter







Fan

 **C ALT** &   **Group 8 @ Full and tilt them downstage**    Subselect Channel 103

 **FAN** &   The pan parameter fans from the centre unit outwards

 **FAN** &   and inwards again.

  **HOME ATTRIB** &  Pan Pan is sent home




 **SETUP** & **FAN** The Fan Shape Setup menu opens.
Choose S-Shape and close the menu






Fan the pan of the Washes again and note the difference. Try out U-shaped and V-shaped, then set the shape back to Linear.


Set the Cyan value of Channel 101 to 35%, then use it as the leader to fan Cyan onto the other units.



Align

 **C ALT** &   **Group 9 @ Full** **Channel 106 FP Charlie, CP Red, Gobo Fat Bar**

Select Group 9  Channel 106 is subselected

 **ALIGN** &  Gobo The Gobo from channel 106 is copied to the other channels in the selection

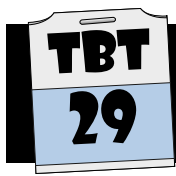
 **ALIGN** & **COLOR** The entire color category is aligned

 **ALIGN** &  **FOCUS** Focus is aligned onto Charlie



Home all the spots. Using the Pan & Tilt encoders, point Channel 106 at Nessie. Using the same method as above, use Channel 106 as the leader and align the focus to the other units. Note the difference - using absolute Focus data rather than a palette causes slightly less helpful behaviour in this case.

However, if you were simply tilting these units, and wanted to create a line downstage, this would be the intended behaviour.



Park and Capture



Park

Park allows you to lock off ("park") Channels at certain levels, outside of the standard control methods like the AB Playback and Masters. Parked Channels will not respond to changes in level, the Blackout knob, or any other form of manual control.

Parked Channels can still be worked on in Live, and continue to display the "correct" level data on screen. For example, you could Park a Channel at full while somebody works on it, but carry on plotting the show, setting that Channel to other levels and recording them into Presets. The Park level will never be recorded.

Parameters can also be parked, either as whole categories (Focus, Color, Beam), or individual Parameters (Gobo, Cyan, Tilt etc).

Examples of when you might want to use Park include:

- A unit has been kicked, and is now blinding the audience. Park it out.
- A moving light has gone crazy and is doing a little dance. Park it out.
- The director can't possibly work in the dark. Park the houselights at 10%

Remember: Park exists entirely outside of normal control, and doesn't ever interact with it.

Capture

Capture looks similar to Park, but actually functions quite differently. Captured locks off Channels within Live, rather than outside it.

Captured Channels won't respond to manual level changes, changing Preset in a Sequence, or levels from Masters. Unlike Park, however, the locked level can be recorded or updated.


This is best illustrated with an example:

You're in Preset 3, while the dancers learn to find their special. While they're standing around, you decide to play around with the cyc, and accidentally mix up the perfect pink for a later scene. Now you're stuck - if you go into Preset 20, you'll lose the beautiful colour you've created. This is where Capture comes in: Capture the cyc channels, go to Preset 20, and update it.



Parking Channels

 **C ALT** &   **6** **GOTO** Go to Preset 6 in the Sequence List


7 **1** **CHANNEL**  **PARK** & **CHANNEL** Channel 71 is parked at its current value. A warning balloon appears at the top of each monitor

GO Channel 71's level in the Live display changes, but the level on stage remains the same.

7 **1** **CHANNEL**  **UNPARK** & **CHANNEL** Channel 71 is unparked, and returns to its Live level.


Misc--->  **UNPARK** & **CHANNEL** (On Congo Jr and Congo Kid, Park is also a softkey)


CONGO
CONGO JR
CONGO KID

 Park Channels 1 thru 6 at 50% for use as workers.

 **MODIFY** & **PARK** A list of Parked Items is opened. **DELETE** The first item in the Park List is unparked **ESC**



3 **7** **GOTO** **Select Group 8**  **PARK** & **FOCUS** The focus of the selected channels is parked at its current value.

 **10** Raise the fader for Preset 807, Pink Flyout. The color changes but the focus stays parked.


 Bring the Spots to full, put a gobo in and park just that gobo
Unpark everything from the Park List


Capture

 **C ALT** &   **5** **GOTO** Go to Preset 5 in the Sequence List

Group 11 @ Full  Mix a nice shade of Amber on the cyc  **CAPTURE** & **CHANNEL** The selected channels are captured - note the red background

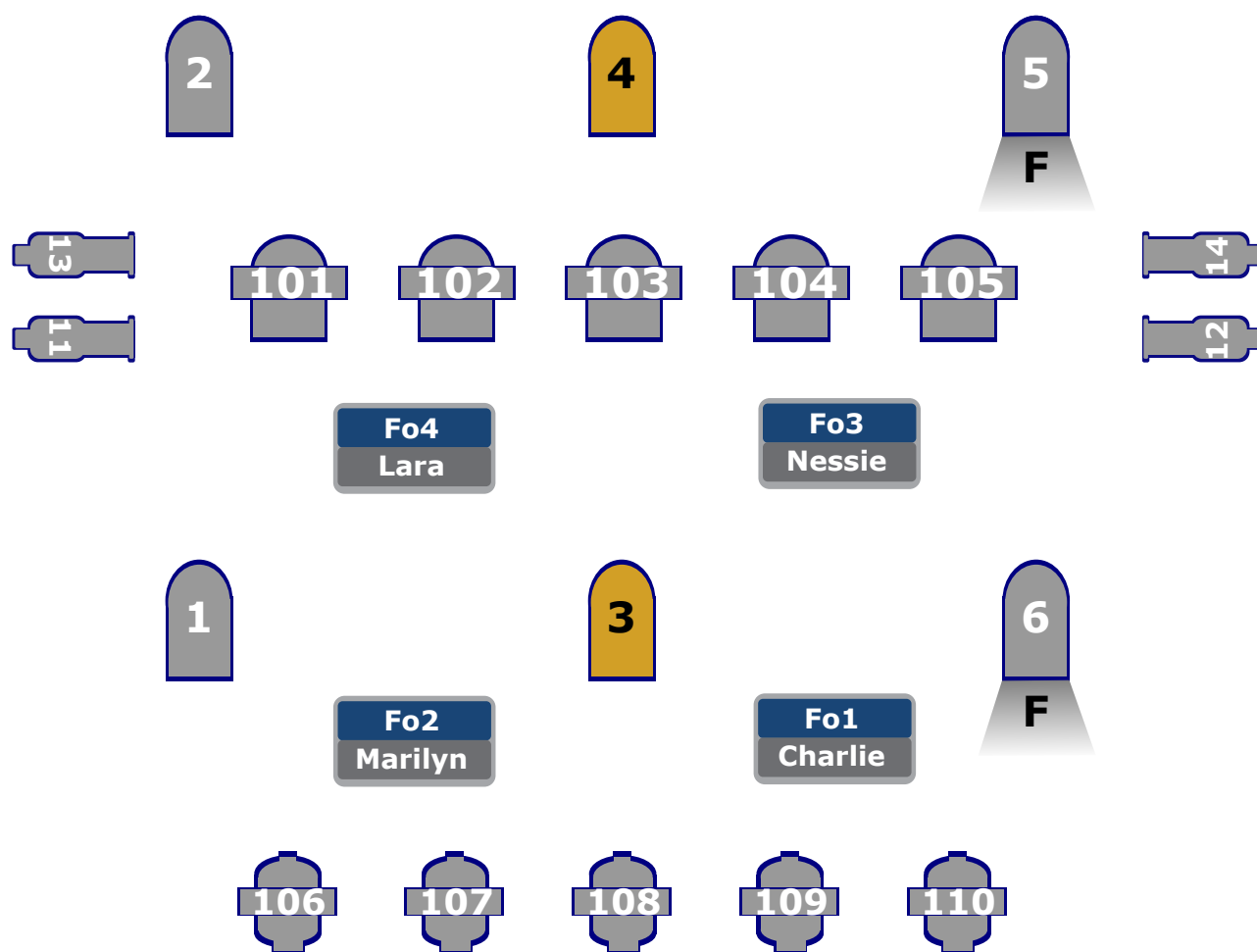
2 **GOTO** Go to another Preset which needs an amber cyc **UPDATE** **UPDATE** The captured cyc channels are updated into the Preset

 **RELEASE** & **CHANNEL** The channels are released and fade out **REFRESH** The playback is refreshed to its updated state

 Go to Preset 37, capture the VL1000's gobo and focus (beam) parameter using [Capture] & [Gobo], and go to Preset 32. The VL isn't used in this Preset, so wheel it up to full, and update the Preset. Release the parameters.

Channel Layouts

The tombstone display is the primary way of viewing Channels in Live, but there's another way - Channel Layouts. Most useful for longer-running shows or fixed rigs, Channel Layouts provide a visual representation of your lighting rig, like an old-school printed magic sheet. Unlike paper-based systems, however, Channel Layouts are also interactive. You can select Channels, hit Palettes and see level data. This is particularly useful on touchscreens.



In the above example, part of the training rig, Channels 3 and 4 are selected (in gold, as usual), Channels 5 and 6 are at full (note the virtual beam image). Our 4 Focus Palettes are laid out geographically, meaning that you could select one or more of the moving lights with a finger touch, then hit the Focus Palette tile to send them there.

Channel Layouts are an alternative format for the Live display, accessed by pressing the Format key. As you can have multiple Live tabs, you can keep one with tombstones, and one with a Channel Layout.

Multiple Channel Layouts can be created. They don't have to be literal representations of your rig, like the one above. Instead, you can lay out useful Groups, Palettes and Channels to make a custom work surface on your touchscreen.

Creating a Channel Layout

Select Groups 1, 2, 3, 8, 9



Channels > Settings and Tools > Channel Layouts



The Channel Layouts List is opened

1



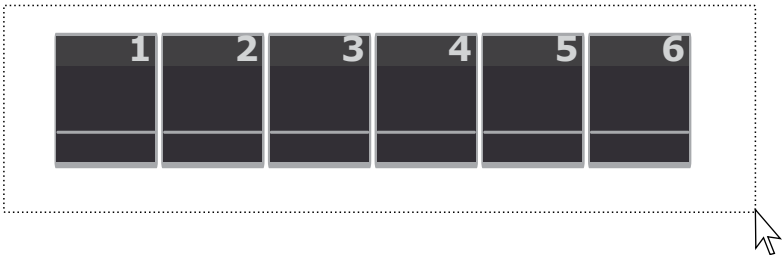
A new Channel Layout is inserted. A pop-up asks whether to populate the Layout with no channels, all patched channels, or all selected channels. Choose **Selected Channels**



You are now editing the Channel Layout directly. This works like a graphical layout software, and is one area where users of all consoles running Cobalt are best off using an external mouse.

The Channels you selected have been inserted and appear in a cluster as tombstones.

Drag a box around Channels 1 thru 6 to select them



From the drop-down menu **Symbol**, choose **PAR**. The Channels are turned into little Parcans.



Repeat this for Channels 11 thru 14 (Axial Ellipsoidal*), Channels 21 thru 25 (PARs), Channels 101 thru 105 (Moving Head Wash) and Channels 106 thru 110 (Moving Head Spot)

By Dragging individual Channels or selections of Channels, and using the Stretch H, Stretch V, Size and Rotate tools, **create a layout of the rig**. Refer to the image on the opposite page.



By clicking on the Channel symbol (with the red background), choose Focus. Your next 4 clicks on the drawing area will insert Focus Palettes 1 thru 4. Click in the correct areas, as shown on the opposite page, to visually lay out your Focus Palettes among the rig plot.

Using Channel Layouts in Live

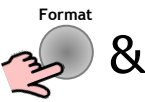


A new Live tab is created, separate from Tab 2, the standard Live tab.

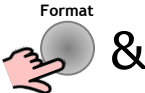


...

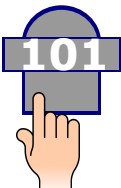
Press the Format key until your Channel Layout is displayed.



Zoom the layout to fit your display



Use the arrow keys to move the layout around



The channel is selected, put at full, and pointed at Charlie.



Using the "dragging a box" action, with finger or mouse, select all the spots and point them at Nessie.

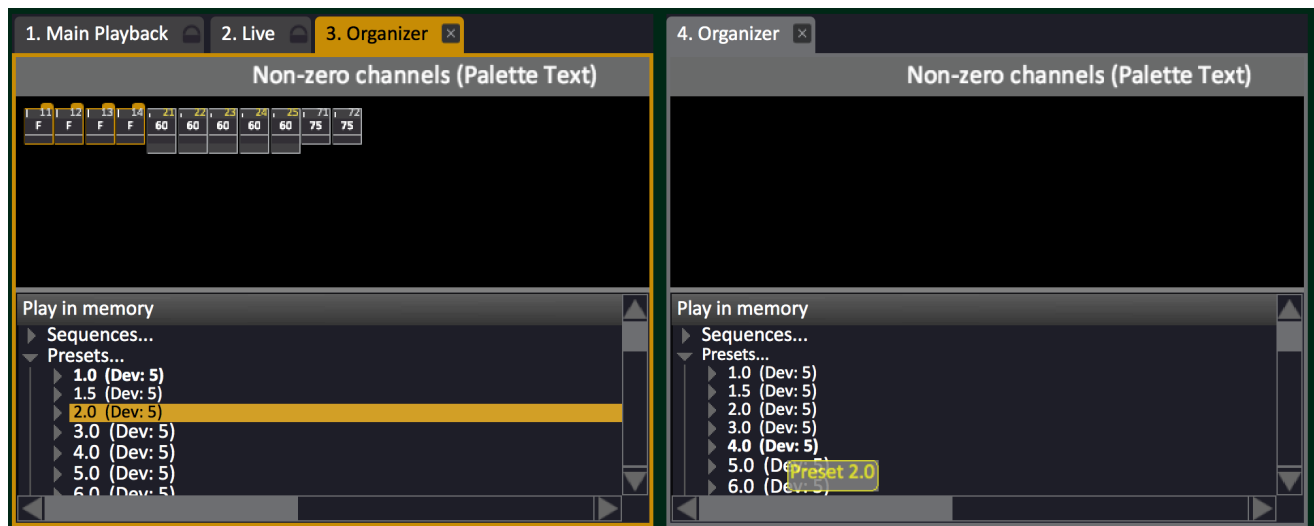
*This is American for "Profile"

The Organizer

Once you have a showfile full of delicious content, you may want to move it around, either between showfiles or within the showfile itself.

To do this, you can open the organizer, a sort of content manager. **To open the organizer within one showfile**, go to

Browser > Main Show Data > Organizer (2 tabs)



In this example, the contents of Preset 2 (in the left pane) are being dragged onto Preset 4 (in the right pane). This would normally add the channels from Preset 2 into Preset 5. In this case, however, only Channels 11 thru 14 are selected in the Channel area in the left-hand pane. This area acts as a filter, allowing only certain channels to be copied from one Preset to another.

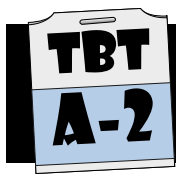
To copy items from one showfile to another, go to

Browser > Files > Import from... and select the source file you're after.

The left-hand pane is now called Organizer (Import from), and the path of the source file is shown above the content list, instead of Play in Memory

This can be used, for example, to pull in useful Color Palettes from an old showfile, or to retrieve deleted Presets from an earlier save. If content with the same numbers already exists, you're given the option to overwrite existing content, or stick the incoming content somewhere with a new number.



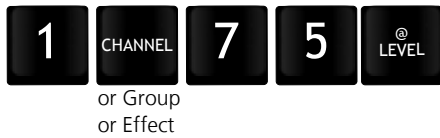


Appendix 2 : Cheat Sheet

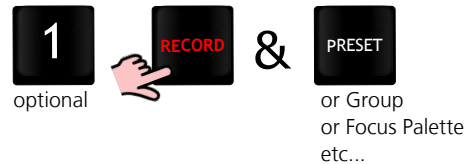
Need a Hand?

Here are some key things in case you get stuck

Setting a Level



Recording a Target



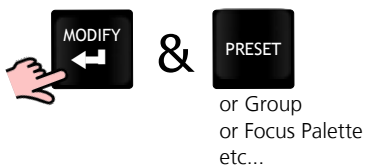
Recording to a Master



Clearing a Master



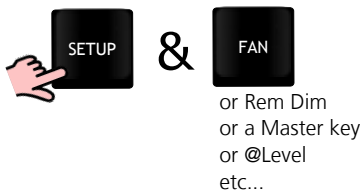
Opening a List of Targets



Opening the Main Playback Seq List



Changing something's behaviour



Quick Save



Blackout (Main Playback only)



Blackout (including Masters)



Blackout and everything Home

