SMARTFADE™

Control Console
User Manual

Version 3.0.1

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Introduction

Congratulations on your purchase of the SmartFade lighting control console. The SmartFade console offers a great feature range including hands-on manual control, memory driven operation, and an impressive array of features for systems work. SmartFade is perfect for any venue, usable for small touring shows, auditorium productions, or as a stage manager's remote console.

This chapter contains the following sections:

Using this Manual

This manual will hopefully get you up and running in no time. These are the manual conventions.

Instructions

Instructions are shown in a table with columns for Action, Console and Feedback.

Action	Console	Feedback
Activate Blackout mode	BLACK OUT	Button lights up. No output except from the Independents.*

* There may be a comment like this with an asterisk.

Menu Directions

Many functions require menu navigation. For brevity's sake, menu navigation is conveyed in the following method:

Menu>Settings>Language>[English]

Each "**>**" indicates passage to a new menu sublevel, usually by pressing the **MENU** button. Items [within brackets] are changed with the wheels.

Displays are shown like this

```
Crossfade faders
>Upwards only
```
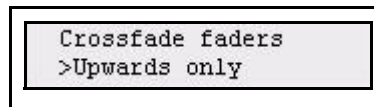
Text Conventions

- Buttons in tables are shown as images. Buttons in text are indicated with bold capital letters followed by the word button. Like **STACK** button.

- References to other parts of the manual are indicated in *italics*. When viewing this manual electronically, click on the reference to jump to that section of the manual.

Note: *Notes are helpful hints and information that is supplemental to the main text.*

CAUTION: *A Caution statement indicates situations where there may be undefined or unwanted consequences of an action, possible data loss or equipment problems.*

Please E-mail comments about this manual to: **TechComm@etcconnect.com**

Help from ETC Technical Services

If you are having difficulties, your most convenient resources are the references given in this user manual. To search more widely, try the ETC Web site at www.etcconnect.com. You can ask other users for advice on the ETC forums at www.etcconnect.com/community.

If none of these resources is sufficient, contact **ETC Technical Services** directly at one of the offices identified below. Emergency service is available from all ETC offices outside of normal business hours.

When calling for help, please have the following information handy:

*   Console model and serial number (located on back panel)

*   Dimmer manufacturer and installation type

*   Other components in your system (Unison®, other consoles, etc.)

Americas

Electronic Theatre Controls Inc.

Technical Services Department

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Middleton, WI 53562

800-775-4382 (USA, toll-free)

+1-608 831-4116

service@etcconnect.com

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Power-up and Shutdown Procedures

Unpack & Connect

You can get SmartFade up and running in no time.

- Unpack
- Connect power
- Connect DMX to dimmers
- Power up

Power-up Procedure

SmartFade uses the power button for power-up and power-down. It is also used to access the operating mode selection menu.

Action	Console	Feedback

Press and release	⏻	The LCD shows the current software version.
		
		 `SF ML:3.0.0.1.0.17`
		`Personalities:6.4.2`
		
		 The button LEDs will light up in the following order: GREEN, RED, then the rest. After this all LEDs light to the levels appropriate to the selected mode of operation. *

* During the startup process, LEDs will fade to full brightness regardless of user settings.

Shutdown Procedure

Action	Console	Feedback
1. Press and release	⏻	The LCD shows a message asking that you confirm the shutdown command.
2a. Confirm	✓	Console is shut down.
2b. Cancel	<	Shutdown is cancelled and operation resumed.

When you use the shutdown procedure, the SmartFade console will complete any pending operations and save any system data as required to ensure error-free startup at the next session. Disconnecting power from the console while it is shut down produces no ill effects.

Operating Modes

Hold the power button during start-up to enter the Operating Modes menu. This allows you to select different operating modes. No data is lost when changing modes, it will reappear when the corresponding mode is selected again.

Action	Console	Feedback
1. Press and hold (console must be off)	⏻	The LCD shows the Operating Modes menu.
2. Select mode	Wheel	**>Full Control** All functions available **>DMXBackup** The console is a DMX backup for up to 512 outputs, levels are stored from an external device sending to the DMX input. **>TwoScene mode** The console functions primarily as a traditional two-scene console.
3. Activate mode	✓	The console will enter the selected mode. The console will continue to power up in this mode until the mode is changed.

Save & Load to Memory Card

SmartFade uses either a standard SD Memory card or SDHC Memory card as the primary external storage device. Before you can use a new SD card make sure it is formatted correctly (FAT16). *See "Format SD Memory Card" on page 7.*

Note: *When using SDHC Memory cards for show file storage, please use the following guidelines for best performance:*

*   *Keep your show file names to 8 characters or less. This will ensure the entire name can be viewed in the SmartFade LCD display when loading and saving shows.*

*   *Keep fewer than 100 show files in the root directory of your SDHC Memory card. Other file types or archived show files should be kept in folders on the card. This will speed performance of reading the file directory and will help to minimize excessive scrolling of the file menu.*

CAUTION: *Only **standard** SD Memory cards or connection to a PC via USB may be used for updating the software on a SmartFade console. Software update is not possible using an SDHC Memory card.*

The file format is ***ASCII Text Representation for Lighting Console Data***. This format is compatible with all systems that follow this standard. Although there may be discrepancies between systems, usually the main play data is compatible. See www.usitt.org.

Save Show to card

This is done from the Save/Load Show menu

`Menu>Save/Load Show>[Save as]`

```
Save Show
Save>SHOW01.ASC
```

Shows may be given a two digit number with the wheel. Select the show with the wheel. Confirm loading by pressing **MENU**.

Show files saved in the ETC application SmartSoft can be given any valid DOS-style name and the suffix ".asc"

*   A file or directory name can be no more than eight characters long.

*   No spaces can be included in the file name, the extension or the directory name.

*   Certain characters (? * , ; = + # >| [ ] / \) are illegal and cannot be used.

Load show from card

This is done from the Save/Load Show menu

Menu>Save/Load Show>[Load show]

```
Load Show
Load>SHOW01.ASC
```

Select the show with the wheel. Confirm loading by pressing **MENU**.The default show offered for loading will be the last show, or the lowest numbered recording on the card.

Load patch from card

This is done from the Save/Load Show menu.

Menu>Save/Load Show>[Save as]

```
Load Patch
Load>SHOW01.ASC
```

Select the show with the wheel. Confirm loading by pressing **MENU**.

The default show offered for loading a patch from will be the lowest numbered recording on the card. The reason for this is that you may want to save a dummy show with just a patch as show 01.

Format SD Memory Card

SD and SDHC Memory cards are usually pre-formatted. You may need to reformat your card(s) so that they will function with the console. SmartFade supports the following formats on SD and SDHC cards:

• SD Memory cards : FAT16 only

• SDHC Memory cards : FAT16 or FAT32 only

Formatting has to be done in a PC. You will need an SD card reading device connected to your PC.

CAUTION: *Formatting your SD Card will erase any information stored on the card. Be sure to remove any important files from the card before formatting.*

CAUTION: *Only **standard** SD Memory cards or connection to a PC via USB may be used for updating the software on a SmartFade console. Software update is not possible using an SDHC Memory card.*

Step 1: Insert the SD card into its reading device. Make sure the device is connected to your Windows PC.

Step 2: The SD card will appear as a new drive. You should be able to find it as an icon with some drive letter A-Z under **My Computer**.

SD Card (G:)

Step 3: Right-click on the SD card icon and select **Format**. This will open the formatting window.

Format Removable Disk (E:)

Capacity:
125 MB

File system
FAT
FAT32
FAT
Default allocation size

Volume label

Format options
☐ Quick Format
☐ Enable Compression
☐ Create an MS-DOS startup disk

Start   Close
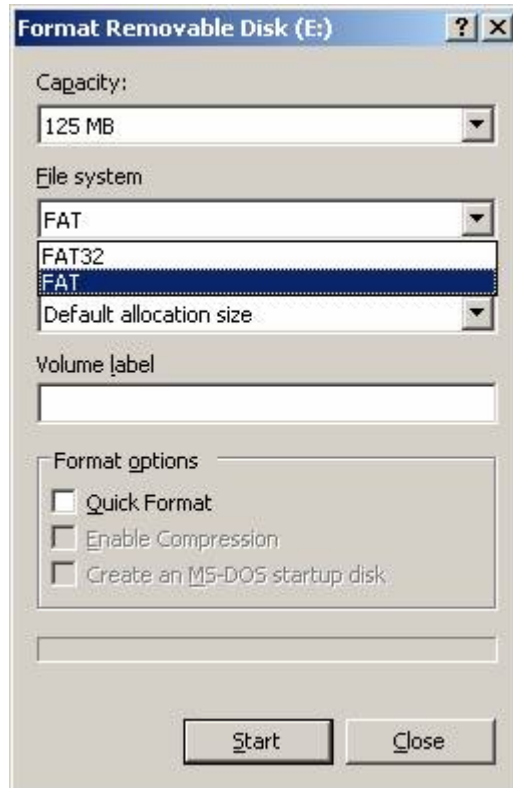
Step 4: In the **File System** field, select **FAT**. This will establish the card's file system as FAT16.

Step 5: Click **Start** and then complete the formatting process.

C h a p t e r 1
General Information

This chapter gives you the general information you need to get started.

This chapter contains the following sections:

Control Capacity

SmartFade is a simple to use but very powerful lighting console for 48 (96) intensity channels a specifically designed to be usable right out of the box.

Intensity channels

There are 48 (96) intensity channels. Each intensity channel can control one or more dimmers. Dimmers with the DMX address 1-48 (96) should be able to control right out of the box from these two fader modes, since the default patch is 1:1. Intensities can be controlled live, and then stored into memories, sequences or the Stack steps. All intensities interact on a Highest Takes Precedence basis (HTP). *HTP control rules, page 15*

Independents

There are two Independent buttons that can control one output each, for specials like houselights, smoke machine or followspot. *See "Patch Independents" on page 22.*

DMX Output

There is 1 DMX Out allowing control of up to 512 DMX outputs.

DMX In

There is 1 DMX In allowing input of up to 512 DMX outputs.

MIDI

There is a recommended subset of the standard MIDI Show Control (MSC) which is one of the most common ways to use MIDI to synchronise show equipment. General MIDI (Music MIDI) may be used to link consoles or to record fader, button and stack actions into a music sequencer for subsequent playback and sound track synchronization

Memory Card

Shows can be saved to a standard SD Memory card. *See "Save & Load to Memory Card" on page 6.*
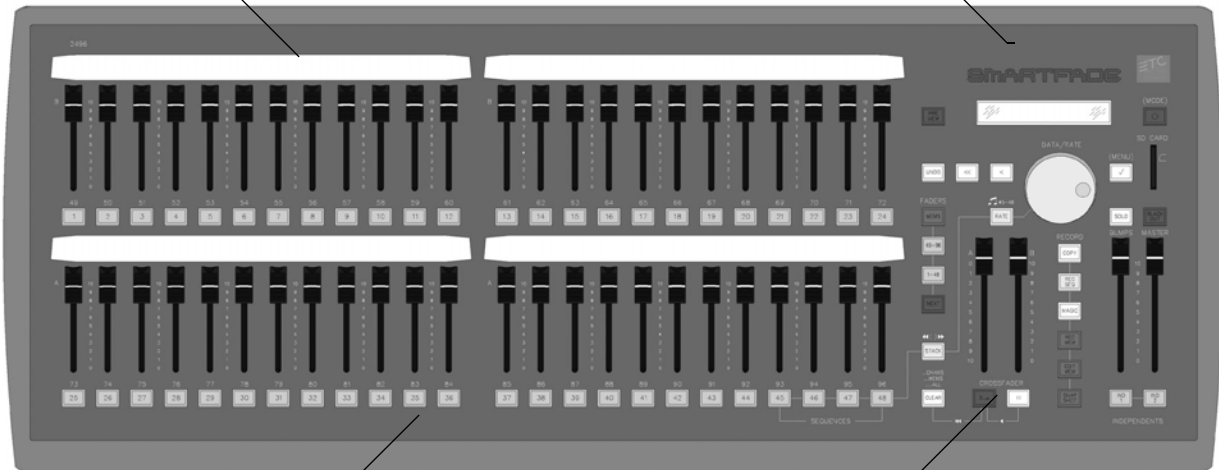
Frontpanel Functionality

This is an overview of the functionality of the frontpanel of your SmartFade console.

SmartFade 1248 and 1296 look exactly like this 2496 console, the only difference being that they have two rows of 12 faders instead of two rows of 24 faders.

LCD Menus
The display with wheels and buttons is used for menu functions.

Faders and Bump buttons
The 24 (48) faders can be used to control intensities, parameters and memories or sequences. Select mode with the Faders buttons to the right.

Crossfader
The crossfader controls the Stack of 199 steps. It can be used for fading into manually preset looks as well.

General Buttons

All buttons have LED's. Some are multi-color. They light up when active, and blink when they can be selected for the current function.

Power button

The power button is used to power up and shut down the system. *See "Power-up and Shutdown Procedures" on page 4.*

Clear button

The **CLEAR** button is used to clear intensities and set memory faders to zero (press 2-4 times). *Nothing is deleted, it only sets levels to zero. See "Clear" on page 56.*

It can also be held with other buttons for some special functions, this is described in this manual where it so applies.
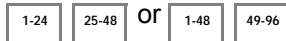
Undo

The **UNDO** button is used to reverse some specific situations. This applies only to the last performed command, and there is only one level of undo.
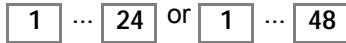
Faders & Bump buttons

There are 24 (48) faders. They can be set to control intensities or memories and sequences. These modes are set with the FADERS buttons.

| 1-24 | 25-48 | **or** | 1-48 | 49-96 |

Each fader has a Bump button below it. This button will light up when there is content, and it will mimic the output of the content by varying its intensity. The button color will vary depending on the type of content.

| 1 | ... | 24 | **or** | 1 | ... | 48 |

Bump Playback Modes

There are two Bump modes when a Bump button is pressed, **Pile-on** and **Solo**. Both use the level of the BUMPS fader. The SOLO button toggles between these modes. *See "Bump Master" on page 56.*

| SOLO |

Note: *For intensity faders to control light output live, three things are required:*

- The Master Fader is over zero, and normally set to full (the topmost position).
- The BLACKOUT button is off (not lit)
- The NEXT button is off (not lit).

Master & Black Out function

The Master fader proportionally limits all intensity outputs. The Blackout button instantly sends all intensities generated by the console to zero. *See "Master & Black Out function" on page 56.*

| BLACK OUT |

Independents

The two Independent buttons are separate control channels (IND 1, IND 2) that can control any outputs in a toggle or bump mode. These outputs can be separated from all other controls. *See "Set up Independents" on page 22.*

| IND 1 | IND 2 |

Crossfader

The Crossfader consists of a Live and Next fader, plus the Crossfade transport buttons. It can be used for fading between the 199 steps of the programmable Stack, or for single-scene fading into intensities that are set blind in NEXT mode. *Stack & Crossfader, page 60*

The following buttons are used together with the crossfader

| NEXT | STACK | ▶ ,, | ‖ |

Sequence & Stack functions

These buttons are used to program and edit Sequences in the Mems faders, and the Stack of the Crossfader. *See "Sequences" on page 36. See "Stack" on page 39.*
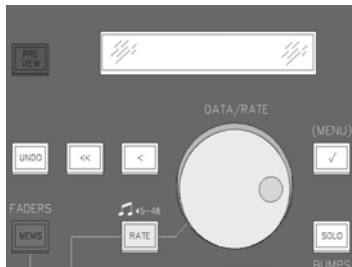
| REC SEQ | RATE |

Record & Edit functions

The row of buttons under the wheel offer recording and editing functions described in the *Program* and *Edit* chapters of this manual. *See "Program" on page 29. See "Edit" on page 43.*

| COPY | REC SEQ | MAGIC | REC MEM | EDIT MEM | SNAP SHOT |

LCD & Wheel Functions

The LCD menu provides quick access to functions.

Main functions.

Action	Console	Feedback
Activate menus	✓	Buttons Intensity:> 84
Scroll through choices	Wheel	Choices are shown over the wheel. Use the Menu button again to move to subsequent levels, and to accept setting changes.
Previous choice	<	Return to previous menu level.
Exit	<<	Cancels out of the menus.

LCD - Preview mode

In preview mode it's possible to see programmed intensities for MEMS faders 1-24

Action	Console	Feedback
Activate preview mode	PRE VIEW	Bumps 1-24 start blinking. Press again to deactivate preview mode.
Select fader	1 … 24	The selected Bump stops blinking. The LCD(s) will show intensities for the currently selected fader mode.

Philosophy of the Console

SmartFade is designed to be simple to use, and still offer advanced functionality for a standard rig of conventional lights.

The back-lit buttons make it possible to run SmartFade without an additional screen. They offer information about content, fader mode and channel intensities.

The LCD and the wheel provides a powerful menu-driven editing functionality.

HTP control rules

Dimmer channels operate using Highest Takes Precedence (**HTP**). This means that if an intensity is output from more than one fader, the highest level will be the resulting output.

Intensity channels can be set to a level using the channel faders. These channel faders operate in the *Live* fader of the Crossfader. They can be used to take a level originating from the Crossfader either up or down. Set levels will fade out when the Crossfader is operated.

Different ways to use SmartFade

SmartFade consoles can be run in Normal Mode, Two Scene Mode and DMX Backup Mode. *See "Two Scene Mode" on page 65. See "DMX Backup" on page 69.*

These are some different approaches to using SmartFade in **Normal Mode**.

Manual control

Levels are set directly using faders.

Single Scene crossfading

Set up levels blind, and then crossfade into them Live. *See "Single Scene Crossfading" on page 63.*

Programming for improvised playback

Prepare memories and sequences.

Programming a Cue List for playback

Record a Stack with up to 199 steps and fade times for playback in the crossfaders.

Data Structure & Timing

The data structure is very simple. The faders offer direct control of intensities and parameters. These levels can be stored in different ways.

Memories

Memories are created to store intensities to a fader. These memories can be played back from the faders, and they can be stored as steps in sequences or the Stack. There are 24 fader memories in 12 fader pages = 288 memories in total (in SmartFade 24/96 this is doubled to 576 memories in total).

Snapshots

The complete output can be instantly stored with a Snapshot function. Up to 10 such Snapshots can be buffered. They can be stored as memories at a later point.

Sequences

The fastest way to create a loop of memories is to record a sequence. A sequence is a list of 24 steps that can be played back manually, looped or as a OneShot from the faders. Each step can be a single intensity channel or a memory. Each step can have an Up, Down and Wait time. There are general timing override functions like Rate, Fade and BPM as well.

Stack

The Stack is theatre style list of 199 steps that can be played back manually or as a OneShot from the Crossfader. It is intended as a main cue list for a show. Each step can be a single intensity channel, a memory or a unique Stack memory state. Each step can have an Up, Down and Wait time. There are general timing override functions like Rate and Fade override as well.

C h a p t e r   2

Setup

The default setup of any SmartFade console allows you to run 48 or 96 dimmer channels straight out of the box with a one-to-one patch. You can create your own patch as well. There are user settings for MIDI, buttons, displays and language. These features are described in this chapter.

This chapter contains the following sections:

DMX Output

DMX (Digital MultipleX) is a worldwide standard (or *protocol*) that your SmartFade console uses to communicate with lighting equipment. It is a digital protocol that basically defines a state of "on", "off" or a percentage of "on". DMX can be used to control dimmers, moving lights, fog machines, color scrollers, media servers or any number of other DMX devices.

DMX is restricted to a total of 512 (output) channels available in one DMX line (often referred to as a *universe*). Your SmartFade console has one such universe.

The DMX outputs are patched to console channels for intensities in SmartFade. There are 48 or 96 intensity channels and 2 independent channels. Each console channel can be patched to multiple outputs. The default is set 1:1.
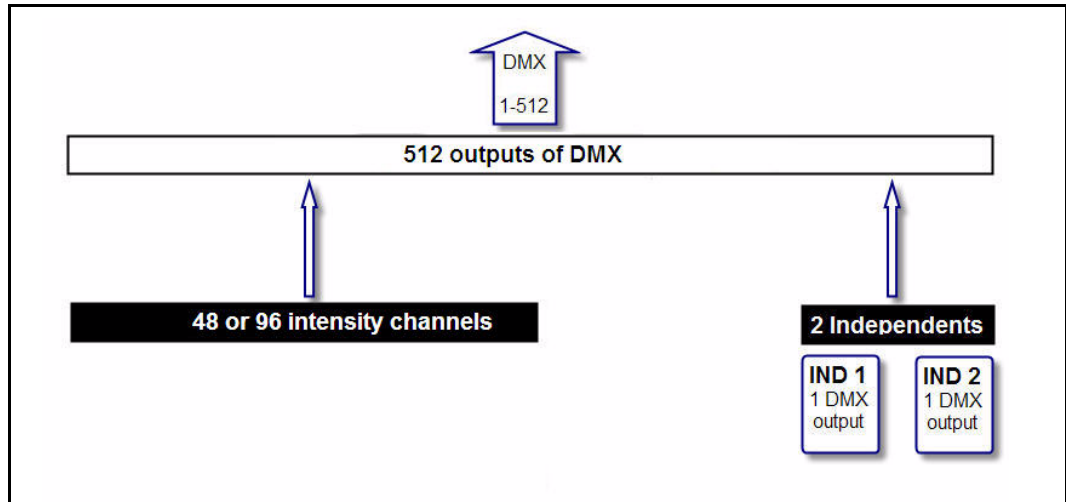
DMX Out Speed

In rare cases some DMX devices may have trouble reading DMX at the full standard speed supplied by SmartFade. This is often seen as flicker in your lighting devices. You can slow down the DMX out speed to try to alleviate such communications errors with other manufacturer's equipment. The default is set to "Max".

`Menu>Setup>DMX Out>[Max]..[Slow]..[Medium]..[Fast]`

Clear/Set Patch

Clear Patch

The patch is cleared from the Patch Menu.

Menu>Patch>Patch - special>[Clear Patch]

```
Clear patch
Clear patch?
```

Press **(MENU)** to confirm.

Set Patch 1 to 1

The patch is set 1 to 1 from the Patch Menu.

Menu>Patch>Patch - special>[Set Patch 1 to 1]

```
Patch 1 to 1
Set patch 1 to 1?
```

Press **(MENU)** to confirm.

Unpatch a dimmer

You can unpatch any single dimmer from the Patch Menu.

Menu>Patch>Patch - special>[Unpatch dimmer]

```
Unpatch dimmer
Dimmer:>  2
```

Select dimmer with the wheel, press **(MENU)** to confirm.

Patch Dimmers

Your SmartFade controls 48 or 96 intensity channels that can be patched to a DMX universe with 512 outputs.

The Default Patch

SmartFade defaults to a "1 to 1" patch for dimmers.

This is the simplest version of a patch and is the most common, as it is easy to remember and provides immediate control with all of your available channels. It is also possible to create a custom patch by assigning *any* DMX output(s) to *any* control channel. Setting the patch is simple and is performed on the LCD menu.

Patch Live or Blind

Patching in **Live** will set the selected DMX output to full , and set all other dimmers to zero so you can see what's connected to that dimmer. Patching in **Blind** will not affect current DMX values until changes in the patch override any active channels.

N o t e :   *A dimmer can only be patched to one control channel at a time. If you patch a dimmer and then later patch the same dimmer to a different channel, the dimmer will be automatically unpatched from its original channel and assigned to the new channel.*

Patch by Dimmer

Patching by dimmer is probably the easiest way to patch a rig that is unknown to you. In Live mode you can turn on each output one by one, select an intensity channel and patch it.

Step 1:   Open the Patch:
Menu>Patch>[Patch by dimmer]

Step 2:   Choose between **Live** and **Blind** mode using the wheel.

```
Patch by Dimmer
Patch mode:>Live
```

Press **(MENU)** to confirm.

Step 3:   Use the wheel to select dimmer.

```
Patch mode: Live
D:>  1  C:  1
```

Press **(MENU)** to confirm and move to Channel.

Step 4:   Now use the wheel to select a channel for this dimmer.

```
Patch mode: Live
D:   1  C:> 1
```

Press **(MENU)** to confirm and move back to dimmers.

Patch by Channel

Patching by channel is just as simple as patching by dimmer. The only difference is that the starting point is the intensity channel. By doing it Live you can check what is patched to each intensity channel, and then patch or unpatch more dimmer outputs to this channel.

Step 1:   Open the Patch:
           Menu>Patch>[Patch by Channel]

Step 2:   Choose between **Live** and **Blind** mode using the wheel.

```
Patch by Channel
Patch mode:>Live
```

Press **(MENU)** to confirm.

Step 3:   Use the wheel to select channel.

```
Patch by Chan:> 1
      1
```

Press **(MENU)** to confirm and move to Dimmer. There are five dimmer positions for each channel to allow you to patch more than one dimmer. If you select an output that is already patched there is an "*" after the number as after dimmer 4 in the image below.

Step 4:   Now use the wheel to select a dimmer for this channel.

```
Patch by Chan:   2
    1>   4*
```

Press **(MENU)** to confirm and move through all five dimmer positions, back to channels.

Patch Independents

Independent buttons **IND 1** and **IND 2** provide two outputs separated from all other controls. They are intended to operate devices such as smoke machines, tab tracks, cue lights, etc.

- **SOLO** does not affect these outputs.

- The state or result of the 2 independent outputs is not recordable.

The Default Patch

SmartFade defaults to the outputs 97 & 98 for the independents.

> IND 1 = DMX 97
> IND 2 = DMX 98

This is easy to remember and provides immediate control with two outputs. It is also possible to create a custom patch by assigning *any* DMX outputs to the independents. This is done in the Patch. They are indicated in the patch as channels i1 and i2. *See "Patch by Dimmer" on page 20. See "Patch by Channel" on page 21.*

Set up Independents

The basic behavior of the buttons and faders are set up in the Independents menu.

`Menu>[Independents]`

```
Independents
Independent level
```
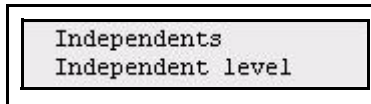
Button behavior

Menu choice	Console	Feedback
[Button mode]	Use **MENU** to select independent and the wheel to select function	```Ind. button mode``` ```i1:>Bump 2: Latch```

[Master mode]	Use **MENU** to select independent and the wheel to select function	```Ind. master mode```
		```i1:>GM 2: no GM```
		
		Sets if BLACKOUT and MASTER fader will affect or not.

[Set Level]	Use **MENU** to select independent and the wheel to set the level	```Independent level``` ```i1:>100 i2: 100```

Console Settings

Erase Functions

Erasing data is done from the Settings menu.

`Menu>Settings>[Erase]`

```
Erase
Erase Memories
```
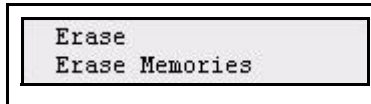
The following kind of data can be erased

- All show data

- Memories

- Sequences
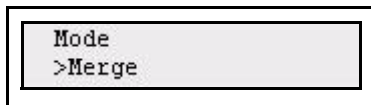
- Stack

MIDI Settings

DMX In

There are two settings for DMX In. One is the mode, which is how the incoming DMX is patched and merged. The other is what Smartfade shall do if incoming DMX stops (data loss).

DMX In mode

This is set up in the Settings menu.

`Menu>Settings>DMX In>[Mode]`

```
Mode
>Merge
```

DMX In can be used in two ways in normal operational mode: **Merge** or **To Memory**.

- **Merge**: combines the DMX Input data with the SmartFade's post-patch output. DMX input data is not mastered in this mode.

- **To Memory**: directs the input DMX to fader 1 in page 1 and patches incoming DMX outputs 1-48/96 to the intensity channels of the SmartFade console. Fader 1 will be a master for the DMX in control. DMX In data cannot be patched.

Data loss

This is set up in the Settings menu

Menu>Settings>DMX In>[Data Loss]

```
Data loss
>Keep
```

Data loss can be handled in two ways: **Keep** or **Fade Out**.

- **Keep**: the last input is held.

- **Fade Out**: the last input is faded out in 5 seconds.

DMX Out

See "DMX Out Speed" on page 18.

Language

You can choose language for the menus from the Settings menu. The console will continue to boot with the last selected language until it is changed.

Menu>Settings>Language>[English]

```
Language
>English
```

Current choices are

- English

- Français

- Deutsch

- Español

- Italiano

Display

Display settings are done from the Settings menu.

Menu>Settings>Display>[Contrast]

```
Contrast
> 61
```

Menu>Settings>Display>[Brightness]

```
Brightness
> 91
```

Buttons

You can set the overall intensity for the LED buttons. This is done from the Buttons menu.

Menu>Settings>[Buttons]

```
Buttons
 Intensity:> 84
```

Disable Recording

Select OFF to allow recording and ON to disable recording.

Menu>Settings>[Recording]

```
Recording
 Disable:>Off
```

Crossfade faders

The direction in which the Crossfade faders advance to the next step in STACK mode is set in the Settings menu.

Menu>Settings>[Crossfade faders]

```
Crossfade faders
>Upwards only
```

There are two choices of behavior

- *Upwards only*, meaning that you will need to pull the faders back to the bottom before fading "up" into the next cue.

- *Both ways*, meaning that each time you move the faders from bottom-to-top or top-to-bottom you will fade into the next cue in the stack.

Software Version

You can verify what software version your console is running in the Diagnostics menu.

Menu>Diagnostics>[Software version]

```
SF ML:3.0.0.1.0.17
Personalities:6.4.2
```

MIDI Setup

SmartFade includes MIDI (Musical Instrument Digital Interface) facilities to provide three primary functions.

- *Show control systems:* SmartFade may be set to respond to MIDI data from a time-based sequencer or show control system. This can be MSC or functions from the Basic MIDI implementation of SmartFade. The default setting is OFF.

- *Synchronising playback of two SmartFade consoles:* MIDI may be used to connect any two SmartFade consoles together, including SmartFade and SmartFadeML. The Memory faders, bumps and the playback functions of the Stack plus Grand Master and Blackout can be synchronised. The default setting is ON.

- *MIDI Sequencing:* You can record button presses and fader movements to a sequencer and play back.

For show control and synchronising playback it is normally enough to make a MIDI connection and start using without having to set up anything.

> **Note:** *You must decide if you want to use **either** MIDI (ch) **or** MSC to link consoles, and turn ON the one you want and turn OFF the one you don't. Leaving both functions on will cause double stepping and some other strange behaviors.*

MIDI Show Control

MSC is a show control standard within MIDI that usually is used when different devices are linked in a show control setup. SmartFade supports a basic set of Midi Show Control (MSC) commands. They are both sent and received at all times - regardless of the settings for MIDI channel.

You can set the MSC Device ID from the MIDI menu.
Menu>Settings>MIDI>[MSC Device ID]

```
MSC Device Id
>All    On
```
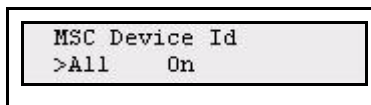
Use **MENU** to select Device ID (0-126 or All) or On/Off. Use the wheel to change the currently selected parameter.

Midi Show Control Commands

- Go
- Stop
- Resume

Synchronising Two SmartFades

To synchronise playback of two SmartFade consoles, just connect MIDI OUT from console A to MIDI IN on console B. Now the main playback functions are "mirrored" from console A to console B.

Functions

- GO, PAUSE and STOP will be synchronised*.

- In MEM mode the faders and bumps will be synchronised*

- SOLO mode will be synchronised for MEM bumps*

- Grand Master, Blackout and Bumps Master will be synchronised*

* These functions are transmitted from within the Basic MIDI implementation on the currently set MIDI channel. .

Basic MIDI implementation

A set of controllers and buttons can be sent and received. This can be used both for Show Control and to Synchronise two SmartFade consoles.

Controllers

- 1-48 = Master 1-48 (only in MEM mode)

- 124 = Live fader

- 125 = Next fader

- 126 = Bump Master

- 127 = Grand Master

Program Change

- 0 = Reset the Stack to step 0

- 1-99 = GOTO step 1-99 in the Stack

- 100-111 = Memory pages 1-12

- 124 = Pause

- 125 = Start (GO)

- 126 = B.O. not active

- 127 = B.O. active

Note on/off

- 0-47 = MEM bumps 1-48 (only in MEM mode)

MIDI Channel

The Basic and Advanced MIDI functions apart from MSC are sent and received on the same MIDI channel. This is set in the MIDI menu.

Menu>Setup>MIDI>[Midi Channel]

```
MIDI Channel
> 1     On
```

Use **MENU** to select MIDI Channel (1-16) or On/Off. Use the wheel to change the currently selected parameter.

C h a p t e r   3

Program

Once you have set up your console to control the dimmers in your rig, you can start programming.

This chapter contains the following sections:

Intensity channels

Intensities for dimmers are set with the faders. Simply press one of the intensity mode buttons and then use the faders to set intensities. The currently selected button is lit in green.

| 1-24 | | 25-48 | or | 1-48 | | 49-96 |
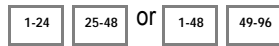
Intensities are piled-on to the output of the console in an HTP manner (Highest Takes Precedence). Intensities may be sourced by a channel fader, a memory fader or the Stack.They are limited by the Master fader and Black out button.

Intensity mimic

The bump button under each fader will light up proportionally to the actual intensity of the corresponding outputs, regardless of the position of the fader. It will do so even if there are no outputs patched to the fader.

The LCD will show the current output of the selected fader mode, with bar graphs.

```
   1 ■ ■              U 5.0
  13                  D 5.0
```

Bumping channels

The bump buttons will bump instantly to the level of the BUMP fader. If SOLO mode is active the other intensity channels will be temporarily muted.

Matching values

Since the faders are used for several functions, there will be situations where the physical position of the fader does not match the output of the fader. When you move an unmatched fader, the bump button will blink until the actual level is matched by that of the fader.

Set all intensities to zero

Use the CLEAR button to selectively turn lights off. Press CLEAR four times in rapid succession to get a blackout on stage.

Live or Next mode

Intensities can be set Live or blind (NEXT mode).

Live mode

Normally Intensities are set directly in the Live fader of the Crossfader. The result of this fader is piled on to the output of the other faders. If a crossfade is run manually or with the Go button - the levels will fade to zero, or to the next step in the Stack of the Crossfader.

Next mode

| NEXT |

When NEXT mode is activated, all faders will set intensities in the Next fader of the Crossfader - which means that these levels will be output after the next crossfade. This allows you to preset levels manually and fade into them like in a traditional single-scene manual lighting console.

Adjust Channel Range

It's possible to select any channel range and adjust proportionally in the Channels menu.

Step 1: Open the Adjust Channel Range menu:
Menu>Channels>[Adjust Channel Range]

Step 2: Use the wheel to select start channel.

```
Adjust Chan Range
Ch:> 1 -  1  Lv:   0
```

Press **(MENU)** to confirm and move to end channel.

Step 3: Use the wheel to select end channel.

```
Adjust Chan Range
Ch:  1 ->24  Lv:   0
```

Press **(MENU)** to confirm and move to the level.

Step 4: Use the wheel to adjust the levels for the selected range. The level displayed is the value of the first channel in the selected range, other channels will be altered proportionally from their starting values.

```
Adjust Chan Range
Ch:  1 - 24  Lv:> 28
```

Press **(MENU)** to set a new start channel or exit.

Set Channel Range

It's possible to select any channel range and set a level in the Channels menu.

Step 1: Open the Set Channel Range menu:
Menu>Channels>[Set Channel Range]

Step 2: Use the wheel to select start channel.

```
Set Chan Range
Ch:> 1 -  1  Lv:   0
```

Press **(MENU)** to confirm and move to end channel.

Step 3: Use the wheel to select end channel.

```
Set Chan Range
Ch:  1 ->20  Lv:   0
```

Press **(MENU)** to confirm and move to the level.

Step 4: The level displayed is the value of the first channel in the selected range, as the wheel is moved other channels will be forced to this value and then all will be altered in parallel to the same dialed value

```
Set Chan Range
Ch:  1 - 20  Lv:> 34
```

Press **(MENU)** to set a new start channel or exit.

Memories

Every intensity can be stored to a memory for playback.

There are 12 fader pages with 24 (48) memory faders in each page. This provides a possible total of 288 memories in a SmartFade 1248/1296 and 576 memories in a SmartFade 2496.

A recorded memory is indicated in red. The bump button lights up at full if the fader is above zero, contributing to the light output.

To select Memories mode for the faders press **MEMS**.

MEMS

The current fader page 1-12 is indicated in the bump buttons during a second when **MEMS** is pressed. You can hold **MEMS** to verify this and to change fader page.

Record a memory

Set up a look you want to record using the channel faders. You may record the output from other memory faders as well.

Action	Console	Feedback
1. Activate recording	REC MEM	Buttons that can record in this mode will blink at full. If there is a memory stored already, this button is dimmed (press **CLEAR** to exit).
2. If needed, change page	MEMS 1 … 12	If needed, hold **MEMS** and press a bump button 1-12 to change page.
3. Select fader	1 … 24 or 1 … 48	The moment the bump button is pressed, the memory is stored and the console will automatically return to it's previous fader mode. Press **UNDO** to undo this recording.

Test memory

Press CLEAR four times to clear all intensities. Select MEMS mode. The light in the bump button of the fader will be dimmed to show that it has content. Move the fader up. The same look you recorded should appear on stage.

Record a Magic memory

You can set up and record a random look using the Magic function.

Action	Console	Feedback
1. Set channels or memory faders	Faders	All channel and memory faders over 0% will be included in the Magic function. If you are using memory faders, make sure **NEXT** is off.
2. Activate recording	REC MEM	Buttons that can record in this mode will blink at full. If there is a memory stored already, this button is dimmed (press **CLEAR** to exit).
3. Create a Magic look	MAGIC	Every time **MAGIC** is pressed, a new random look will be created from all channel and memory faders over 0%.
4. If needed, change page	MEMS 1 … 12	If needed, hold **MEMS** and press a bump button 1-12 to change page.
5. Select fader	1 … 24 or 1 … 48	The moment the bump button is pressed, the memory is stored and the console will automatically return to it's previous fader mode. Press **UNDO** to undo this recording.

Test memory

Press CLEAR four times to clear all intensities. Select MEMS mode. The light in the bump button of the fader will be dimmed to show that it has content. Move the fader up. The same look you recorded should appear on stage.

Snapshots

The Snapshot function is designed to make it easy to capture the current output, and store it as a memory at a later point.

• Snapshot can be pressed at any time inside any menu or function.

Snapshot captures a complete state of all output channels and stores them into a buffer. This buffer has 10 snapshot positions. If pressed 11 times, Snapshot will overwrite the 1st Snapshot in the buffer.

The Snapshot button

The button is off when there are no Snapshots recorded. As soon as there is a Snapshot recorded it will light at full in red.

Record a Snapshot

Action	Console	Feedback
Record the current output	SNAP SHOT	The current output is recorded. The display will momentarily display a confirmation. Snapshot 1 recorded The Snapshot button will light up as soon as there are one or more Snapshots.

Clear all Snapshots

Action	Console	Feedback
Clear the Snapshot buffer	CLEAR and SNAP SHOT	The Snapshot buffer is immediately deleted, this cannot be undone.

Copy a Snapshot to a Memory

It's possible to copy a Snapshot to a memory live (View & Copy Snap) or blind (Copy Snap) in the Snapshot menu.

Step 1: Open the Snapshot menu:
Menu>Snapshot>[Copy Snap]

Step 2: Use the wheel to select live (View & Copy Snap) or blind (Copy Snap).

```
Snapshots
 View & Copy Snap
```

Step 3: Use the wheel to select a snapshot.

```
 View & Copy Snap
 View Snap:> 1*
```

Press **(MENU)** to confirm and move to the target page.

Step 4: Use the wheel to select a snapshot.

```
 View Snap:  1*
 Store in:> 1    1
```

Press **(MENU)** to confirm and move to the target fader.

Step 5: Use the wheel to select a fader.

```
 View Snap:  1*
 Store in:  1 > 6
```

Press **(MENU)** to confirm.

Sequences

A Sequence is a list of up to 24 steps that can be recorded to and played back from the last four faders. Each fader page carries up to 4 sequences and there are 12 fader pages - so a total of 48 sequences can be recorded. Memory faders containing sequences have yellow bump buttons

Each step of a sequence can contain one of two items:

- One single intensity channel.

- A memory from any of the 12 fader pages
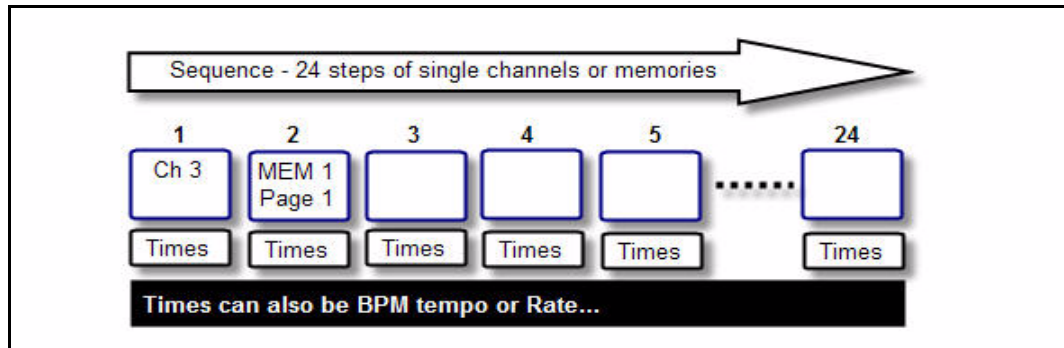
Sequence steps can contain memories that have already been recorded, or empty memories that can be edited later.

You can use **MAGIC** to create randomized sequences. Once recorded, Magic sequences can be edited like any other sequence.
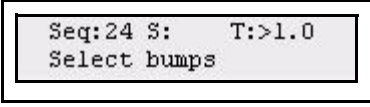
Step Times

Sequence steps can have three times; Up, Down and Wait time. There is also an override Rate and Fade factor. *See "Sequence & Stack Times" on page 52.*

Playback modes

Sequences can be played back as a loop (chase), OneShot or manually. *See "Run Modes" on page 51.*
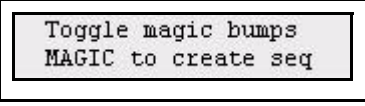
Record a Sequence

Action	Console	Feedback
1. Activate record sequence	REC SEQ	All buttons that can record in this mode will blink at full in yellow. If there is a memory or sequence stored already, this button will be dimmed (press **CLEAR** to exit).
2. Choose location (change page if desired)	21 ... 24 or 45 ... 48	The moment the bump button is pressed, the console will switch back into the previous fader mode. All bump buttons that can be used will blink at full.
3. If desired, set the time for this step	Wheel	`Seq:24 S:    T:>1.0` `Select bumps`
4. Select source for this step	1 ... 24 or 1 ... 48	You can select any **memory or intensity channel.** Change fader page if desired. When a bump button is pressed, that memory or intensity will be stored as a step with the times set in the wheels. Repeat steps 3-4 until satisfied.
5. End recording	REC SEQ	End recording. The console will return to the fader mode prior to recording this sequence. Press **UNDO** to undo this recording.

Test sequence

Press **CLEAR** three times to clear all intensities. The light in the bump button of the fader will be dimmed in yellow to show that it has a sequence stored. It lights up at full if the fader is above zero and contributing to the output. Select **MEMS** mode and move the fader for the recorded sequence up. The sequence you recorded should appear on stage.

Record a Magic Sequence

| Action	Console	Feedback
1. Activate record sequence	REC SEQ	All buttons that can record in this mode will blink at full in yellow. If there is a memory or sequence stored already, this button will be dimmed (press **CLEAR** to exit).
2. Choose location (change page if desired)	21 … 24 or 45 … 48	The moment the bump button is pressed, the console will switch back into the previous fader mode. All bump buttons that can be used will blink at full.
3. Bring the fader to full	Fader	Select MEMS and set the desired seq fader up in order to view the magic seq steps as they are created.
4. Activate Magic mode	MAGIC	Toggle magic bumps MAGIC to create seq
5. Select source faders	1 … 24 or 1 … 48	You can select/deselect any **memory or intensity channel within the same fader page**. Change fader page if desired. When a bump button is pressed, that memory or intensity fader is selected as a source.
6. Change values	wheel	You can use the wheel to change the % of the order in the magic function. Magic Order>100% Fade: 1.0 Rate: 1.0
7. Generate magic looks	MAGIC	You can use the wheel to change the % in the order of the magic generation function. Press **MAGIC** again to create a new random chase. Continue until satisfied.
8. End recording	REC SEQ	End recording. The console will return to the fader mode prior to recording this sequence. Press **UNDO** to undo this recording.

Test sequence

Press **CLEAR** three times to clear all intensities. The light in the bump button of the fader will be dimmed in yellow to show that it has a sequence stored. It lights up at full if the fader is above zero and contributing to the output. Select **MEMS** mode and move the fader for the recorded sequence up. The sequence you recorded should appear on stage.

Stack

The Stack sequence is recorded and played back on the Crossfader. It is intended to be the main cue list for a show. The Stack can contain up to 199 steps. Stack steps are arranged as 199 incremental steps with up to 9 decimal insertions allowed between major steps.

Each step of a Stack can contain one of two items:

• One single intensity channel.

• A memory from any of the 12 fader pages (or created on the fly)

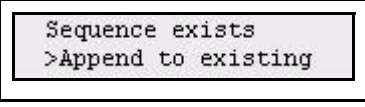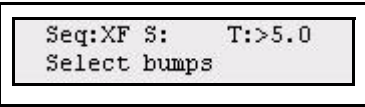• A unique Stack memory state (Que)
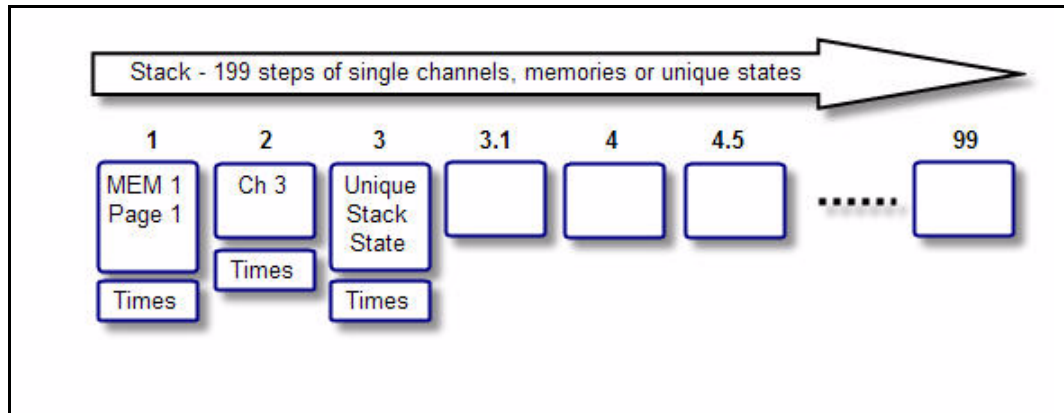
Step Times

Stack steps can have three times; Up, Down and Wait time. These times are adjusted on the wheels during playback. They can also be set in the Sequence Time menu afterwards.

The Stack button

When a Stack is recorded but not active, the **STACK** button will be dimly lit. Pressing **STACK** will activate the stack for playback on the crossfaders and the button will light fully. If there is no stack recorded, the button will be unlit.
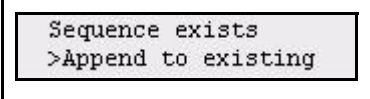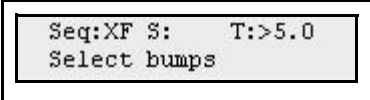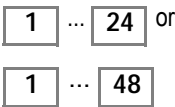
Record the Stack from bumps

This function allows you to create the Stack with referenced memories or intensity channels. The steps are created as each bump button for a memory or intensity is pressed.

Action	Console	Feedback
1. Activate record sequence	REC SEQ	All buttons that can record in this mode will blink at full in yellow (press **CLEAR** to exit).
2. Choose Stack	STACK	The moment the **STACK** button is pressed, the button will light up in full. Now all bump buttons can be stored as steps, and blink at full in each fader mode.
2.5 If the Stack exists...	Wheel	If this display is shown: ```\nSequence exists\n>Append to existing\n``` Choose **Erase & Make New** or **Append To Existing** with the wheel and press **(MENU)** to confirm.
3. If desired, set the times for this step	Wheel	```\nSeq:XF S: T:>5.0\nSelect bumps\n```
4. Select a source for this step	1 ... 24 or 1 ... 48	You can select any **memory or intensity channel.** Change fader page if desired. When a bump button is pressed, that memory or intensity will be stored as a reference to this step. Repeat steps 3-4 until satisfied.
5. End recording	REC SEQ	End recording. The console will return to the fader mode prior to recording this sequence. Press **UNDO** to skip the recording**.**

Record a Memory and Stack step
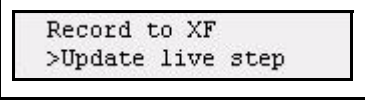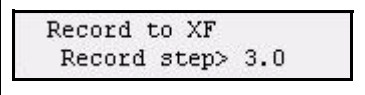
It's possible to set up and record a memory state as a step of the Stack at the same time.

Action	Console	Feedback
1. Activate record sequence	**REC SEQ**	All buttons that can record in this mode will blink at full in yellow (press **CLEAR** to exit).
2. Choose Stack	**STACK**	The moment the **STACK** button is pressed, the button will light up in full. Now all bump buttons can be stored as steps, and blink at full in each fader mode.
| 2.5 If the Stack exists... | Wheel | If this display is shown:<br><br>```
Sequence exists
>Append to existing
```<br><br>Choose **Erase & Make New** or **Append To Existing** with the wheel and press **(MENU)** to confirm. |
| 3. If desired, set the times for this step | Wheel | ```
Seq:XF S:    T:>5.0
Select bumps
``` |
4. Create a new memory & step	**REC MEM**	Hold **REC MEM**. While holding, set levels with the faders in any mode. Release **REC MEM** when done.
5. Select a source for this step	**1** ... **24** or **1** ... **48**	You can select any **memory or intensity channel.** Change fader page if desired. When a bump button is pressed, that memory or intensity will be stored as a reference to this step. Repeat steps 3-5 until satisfied.
6. End recording	**REC SEQ**	End recording. The console will return to the fader mode prior to recording this sequence. Press **UNDO** to skip the recording.

Record a Stack state
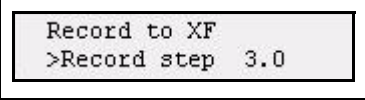
It's possible to record a unique Stack memory state as a step of the Stack. In other words it does not reference a memory from any of the fader pages.

Set up a look you want to record, including effects.

Action	Console	Feedback
1. Activate record	REC MEM	All buttons that can record in this mode will blink at full (press **CLEAR** to exit).
2. Choose Stack	STACK	The button lights up.

3. Select Record step or Update live step.	Wheel	Record to the next free step
		
		`Record to XF`
		`>Record step  3.0`
		
		Replace the Live step
		
		`Record to XF`
		`>Update live step`

4. Move to step. Adjust step (optional, when recording a new step). This is not necessary when updating the Live step.	✓ Wheel	Selects step to record to. The next free step from the current live step is auto-selected.
		
		`Record to XF`
		`  Record step> 3.0`

4. Confirm recording	✓	The moment the button is pressed, the output is stored and the console will automatically return to it's previous fader mode. Press **UNDO** to undo this recording.

Chapter 4
Edit

Once you have started recording information as described in Program you can play back this information, and you can edit it. This Chapter is about editing.
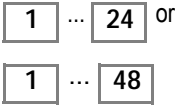
This chapter contains the following sections:

Edit Memories

Every memory can be edited blind (fader at zero) or live (fader at full). It is possible to erase all memories at once. *See "Erase Functions" on page 23.*
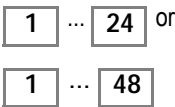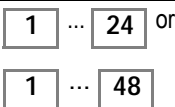
Edit a memory

Action	Console	Feedback
1. Activate Edit mode	EDIT MEM	All buttons with content that can be edited will blink at full (press **CLEAR** to exit).
2. Select memory (change page if necessary).	1 ... 24 or 1 ... 48	The moment the bump button is pressed, this memory is selected for editing. **EDIT MEM** and **CLEAR** will blink.
3. Edit intensities	Programming functions	Make any changes with all normal programming functions for intensities. *See "Program" on page 29.* Intensities may have to be matched by the faders before the level can be changed.
4. End editing	EDIT MEM	As soon as **EDIT MEM** is pressed the changes are stored. The console will automatically return to it's previous fader mode. If you press **CLEAR** instead, changes are aborted.

Delete a memory

To delete a single memory edit it so all intensities are at zero.

Copy a Memory

Action	Console	Feedback
1. Activate Copy mode	COPY	This button lights up. All buttons with content will blink at full (press **CLEAR** to exit).
2. Select source memory (change page if necessary).	1 ... 24 or 1 ... 48	When this button is pressed, all possible targets for this copy operation will blink. Empty ones blink at full, occupied ones are dimmed.
3. Select target	1 ... 24 or 1 ... 48	As soon as the button is pressed, the source memory is recorded.

Edit Sequences & Stack

Sequence and Stack steps can be edited in the same way. The Stack has some extra editing functions since there are unique Stack states and point cues, which don't exist in sequences. There is also a way to edit any Stack step directly, without entering the edit menus. To delete all Sequences and the Stack *See "Erase Functions" on page 23.*

The functions available for modifying Sequence & Stack steps are *Edit, Delete, Insert and Change*. For the stack there is also the option of recording up to 9 point Q's between each step.

Edit the content of a Step

A sequence or Stack step can contain a reference to a memory in a specific page, or a single channel intensity. The Stack can have a unique Stack memory state as well. Memories can be edited in the memory fader, or in the step. Steps that reference a single intensity channel can not be edited, you have to use change instead to change to a different single intensity channel. Unique Stack steps are edited as described, just like memories.

Step 1: Open the Sequences menu:
         Menu>[Sequences]

Step 2: Use the wheel to select Sequence (1-24) or Stack (XF).

```
Sequences
Playback:>24
```

Press **(MENU)** to confirm.

Step 3: Use the wheel to select **Modify Steps**.

```
Playback: XF
Modify Steps
```

Press **(MENU)** to confirm.

Step 4: Use the wheel to select **Step:#**.

```
XF Step:> 6   Mem:01
  Select step
```

Press **(MENU)** to confirm.

Step 5: Use the wheel to select **Edit** (channels can only be changed).

```
XF Step:  6   Mem:01
>Edit
```

Press **(MENU)** to confirm.

Step 6: Use the channel faders to edit the contents.

```
   1          Edit:
 13           01/01
```

Press **EDIT MEM** to confirm and exit or **CLEAR** to abort.

Delete a Step

Step 1: Open the Sequences menu:
Menu>[Sequences]

Step 2: Use the wheel to select Sequence (1-24) or Stack (XF).

```
Sequences
Playback:>24
```

Press **(MENU)** to confirm.

Step 3: Use the wheel to select **Modify Steps**.

```
Playback: XF
Modify Steps
```

Press **(MENU)** to confirm.

Step 4: Use the wheel to select **Step:#**.

```
XF Step:> 6    Mem:01
  Select step
```

Press **(MENU)** to confirm.

Step 5: Use the wheel to select **Delete**.

```
XF Step:  6    Mem:01
>Delete
```

Press **(MENU)** to confirm.

Step 6: You will be asked to confirm this command.

```
XF Step:> 6    Mem:01
Delete step?
```

Press **(MENU)** to confirm. You can press **UNDO** to skip and revert to the data previous to this action.

Insert a Step

Step 1:   Open the Sequences menu:
Menu>[Sequences]

Step 2:   Use the wheel to select Sequence (1-24) or Stack (XF).

```
Sequences
Playback:>24
```

Press **(MENU)** to confirm.

Step 3:   Use the wheel to select **Modify Steps**.

```
Playback: XF
Modify Steps
```

Press **(MENU)** to confirm.

Step 4:   Use the wheel to select **Step:#**.

```
XF Step:> 6    Mem:01
  Select step
```

Press **(MENU)** to confirm.

Step 5:   Use the wheel to select **Insert**.

```
XF Step:  6    Mem:01
>Insert
```

Press **(MENU)** to confirm.

Step 6:   You will be asked to insert by pressing a bump for a channel or memory fader.

```
XF Step:> 6    Mem:01
Insert with bump
```

Press **(MENU)** to confirm. The new step will be inserted *after* the selected step. You can continue selecting steps and inserting steps. You can press **UNDO** to skip and revert to the data previous to this action.

Insert a PointQ

Step 1: Open the Sequences menu:
Menu>[Sequences]

Step 2: Use the wheel to select Sequence (1-24) or Stack (XF).

```
Sequences
Playback:>24
```

Press **(MENU)** to confirm.

Step 3: Use the wheel to select **Modify Steps**.

```
Playback: XF
Modify Steps
```

Press **(MENU)** to confirm.

Step 4: Use the wheel to select **Step:#**.

```
XF Step:> 6    Mem:01
 Select step
```

Press **(MENU)** to confirm.

Step 5: Use the wheel to select **Ins PointQ**.

```
XF Step:  6    Mem:01
>Ins PointQ
```

Press **(MENU)** to confirm.

Step 6: You can select point 0.1-0.9 with the wheel. You will be asked to insert by pressing a bump for a channel or memory fader.

```
XF Step:> 5.1
Insert with bump
```

Press **(MENU)** to confirm. The new step will be inserted *after* the selected step. You can continue selecting steps and inserting steps. You can press **UNDO** to skip and revert to the data previous to this action.

Change the content of a Step

Use this function to change the memory or channel content of a step to another content. This is the only way to edit a step referencing to a single channel.

Step 1: Open the Sequences menu:
Menu>[Sequences]

Step 2: Use the wheel to select Sequence (1-24) or Stack (XF).

```
Sequences
Playback:>24
```

Press **(MENU)** to confirm.

Step 3: Use the wheel to select **Modify Steps**.

```
Playback: XF
Modify Steps
```

Press **(MENU)** to confirm.

Step 4: Use the wheel to select **Step:#**.

```
XF Step:> 6    Mem:01
  Select step
```

Press **(MENU)** to confirm.

Step 5: Use the wheel to select **Change**.

```
XF Step:   5    Ch:4
>Change
```

Press **(MENU)** to confirm.

Step 6: You will be asked to change by pressing a bump for a channel or memory fader.
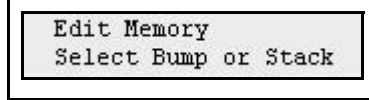
```
XF Step:> 5    Ch:4
Change with bump
```

Press **(MENU)** to confirm. You can continue selecting steps and inserting steps. You can press **UNDO** to skip and revert to the data previous to this action.
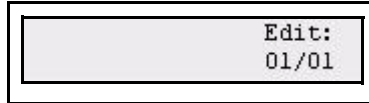
Edit the content of a Stack Step directly

A Stack step can contain a reference to a memory in a specific page, or a unique Stack memory state can be edited directly with the **EDIT MEM** function. Steps containing single channels must be edited with the normal editing functions.

Step 1:   Press **EDIT MEM**
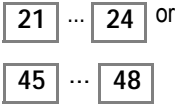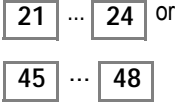
```
Edit Memory
Select Bump or Stack
```

Step 2:   Select Sequence by pressing a bump button, or press **STACK**. The content of the current step will be selected for editing.

```
                    Edit:
                    01/01
```

Step 3:   Use the intensity faders to edit the memory. Press **EDIT MEM** to confirm.

Copy a Sequence

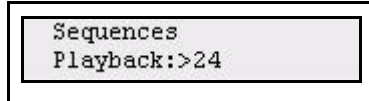| Action	Console	Feedback
1. Activate Copy mode	COPY	This button lights up. All buttons with content will blink at full (press **CLEAR** to exit).
2. Select source sequence (change page if necessary).	21 … 24 or 45 … 48	When this button is pressed, all possible targets for this copy operation will blink. Empty ones blink at full, occupied ones are dimmed.
3. Select target	21 … 24 or 45 … 48	As soon as the button is pressed, the source sequence is recorded. The console will automatically return to it's previous fader mode.

Run Modes

There are three run modes for a Sequence: Manual, One Shot and Loop (default). The Stack run mode is determined by the wait times recorded in the Stack steps, if a non-zero wait time is recorded on the last step the Stack will loop back to step 1. Run modes are set from the Sequences menu.
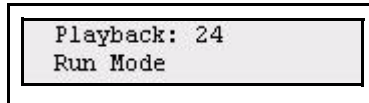
Step 1: Open the Sequences menu:
Menu>[Sequences]

Step 2: Use the wheel to select Sequence (1-24).

```
Sequences
Playback:>24
```

Press **(MENU)** to confirm.

Step 3: Use the wheel to select **Run Mode**.

```
Playback: 24
Run Mode
```

Press **(MENU)** to confirm.

Step 4: Use the wheel to select run mode: **OneShot, Manual** or **Loop**.

Menu choice	Console	Feedback
Loop	Wheel	The Sequence will loop from the last step back to the first, endlessly.
Manual	Wheel	Sequences in this mode use the bump button to advance to the next step.
OneShot	Wheel	Runs sequences through one full cycle only. The seq will stop and hold the last step. To prevent the last step persisting on stage record it as a blackout by using an empty memory.

Step 5: Press **(MENU)** to confirm. Continue from Step 2 with another Sequence or exit the menus.

Sequence & Stack Times

Each Sequence step can have three times, Up, Down and Wait. In addition to these times there is an overall Rate and Fade time that affect the whole Sequence. These times are set/changed during playback.

Default Fade Times

Step 1: Open the Set Sequences menu:
Menu>[Sequences]

Step 2: Use the wheel to select a Sequence (**1-24**) or the Stack (**XF**).

```
Sequences
Playback:>24
```

Press **(MENU)** to confirm.

Step 3: Use the wheel to select **Step Timing**.

```
Playback: XF
Step Timing
```

Press **(MENU)** to confirm.

Step 4: Use the wheel to select **Default Times**.

```
Default times
U> 6.2 D  6.2 W  0.2
```

Use **(MENU)** to step between choices, and wheel to set a value.

Menu choice	Console	Feedback
U>	Wheel	Default Up times
D>	Wheel	Default Down times
W>	Wheel	Default Wait times

Step 5: Use **EXIT** to end and exit.

Rate

The **RATE** button can provide Fade controls for the Stack. This will affect the playback of the whole Stack.

Press **RATE** (with **STACK** active).

```
XF Fade:> 98%  Q 2
U: 5.0 D: 5.0  Ch: 1
```

Use the wheel to set a balance between the fade and the wait time for all steps. Fade 0% means no fade.

Edit step times blind

It is possible to edit the times blind, for each step of a Sequence or Stack. This is done with the Step Timing - One Step function in the Sequences menu.

Step 1: Open the Set Sequences menu:
Menu>[Sequences]

Step 2: Use the wheel to select a Sequence (**1-24**) or the Stack (**XF**).

```
Sequences
 Playback:>24
```

Press **(MENU)** to confirm.

Step 3: Use the wheel to select **Step Timing**.

```
Playback: XF
Step Timing
```

Press **(MENU)** to confirm.

Step 4: Use the wheel to select **One step**.

```
XF Step:> 1    Ch: 1
U  5.0 D  5.0 W
```

Use **(MENU)** to step between choices, and wheel to set a value.

Menu choice	Console	Feedback
Step:>	Wheel	Select step
U>	Wheel	Up time
D>	Wheel	Down time
W>	Wheel	Wait time

Step 5: Done. Press **EXIT** to exit.

Global Time for all steps

It is possible to edit Up, Down or Wait times globally for all steps of a Sequence or Stack. All previous timing information is replaced and cannot be undone.

Step 1:   Open the Set Sequences menu:
           Menu>[Sequences]

Step 2:   Use the wheel to select a Sequence (**1-24**) or the Stack (**XF**).

```
Sequences
Playback:>24
```

Press **(MENU)** to confirm.

Step 3:   Use the wheel to select **All steps**.

```
Step Timing
All steps
```

Press **(MENU)** to confirm.

Step 4:   Set Global Timing for all steps of the selected Sequence or Stack.

```
All steps
U>---- D ---- W ----
```

Use **(MENU)** to step between choices, and wheel to set a value. The "----" means these times will *not be affected* by the global edit.

Menu choice	Console	Feedback
U>	Wheel	Global Up times
D>	Wheel	Global Down times
W>	Wheel	Global Wait times

Step 5:   Press **(MENU)** to store.

```
U   0 D  0.6 W  0.4
Set to all steps?
```

Press **(MENU)** to confirm

Step 6:   Done. Press **EXIT** to exit.

Chapter 5
Playback

As soon as you have programmed information you can play it back in different ways. This Chapter is about playback functions.

This chapter contains the following sections:

General Functions

Master & Black Out function

MASTER

To get light output (at all), the Master needs to be at full, and the Black Out button off.

The Master fader proportionally limits all intensity outputs. As soon as the Master is faded under 100% the Blackout button will blink.

The Blackout button instantly sends all intensity outputs to zero. As soon as it is activated the button will light up.

BLACK OUT

N o t e : *The Independent channels patched to IND 1 and IND 2 are not affected by the Master fader or Black Out button unless they are set to "GM" in the Independent Settings. See "Set up Independents" on page 22.*

*Light output from the intensity faders is also affected by the **NEXT** button. See "Intensity channels" on page 30.*

Clear

Clear is a very useful button that will bring you back to a "clean" state of the console with no output. Pressing **CLEAR** will *NEVER* erase content - it only brings the fader intensities to zero. You can press **CLEAR** to abort any recording function if it is blinking.

• Set all dimmer intensities from channel faders and Stack to zero . . = 2 presses

• Set all memory faders to zero (blackout). . . . . = 3 presses

• Set sequence faders to zero (blackout). . . . . = 4 presses

CLEAR is also used in combination with other keys. For example

Action	Console	Feedback
Clear intensities 1-24	CLEAR and 1-24	All intensities 1-24 are cleared.
Clear intensities 25-48	CLEAR and 25-48	All intensities 25-48 are cleared.
Clear intensities 1-48	CLEAR and 1-48	All intensities 1-48 are cleared.
Clear intensities 49-96	CLEAR and 49-96	All intensities 49-96 are cleared.
Clear Stack	CLEAR and ▶ ·· ▸ ▸	The Stack is cleared and set to zero.
Clear Snapshots	CLEAR and SNAP SHOT	All Snapshots are cleared, and the counter is set to 1.
Clear Rate	CLEAR and RATE	All Rate settings are cleared.

Bump Master

The Bump Master sets the level to which bump buttons will flash. See Bump Button functionality for each type of fader mode.

Memories

Memories are played back from the faders in MEMS mode. In each of the 12 fader pages the buttons with memories stored will light up dimmed in red when a page is selected. When the fader is contributing to the output, the button will light up in full.

Select Fader Page

If a fader is above zero when a different page is selected, it will not be updated to the content of the new page until it is brought to zero. Press MEMS twice within 1 second to select page 1 quickly.

Action	Console	Feedback
Select fader page	MEMS (Held)	As long as the button is held, the current fader page is indicated with a lit bump 1-12. Bumps for pages with recorded information will blink. To select a new page, press bump 1-12 and let go of the MEMS button.

Memory Bump Modes

The content of memory faders can be bumped to the level of the BUMPS fader in two ways. This is controlled with the **SOLO** button.
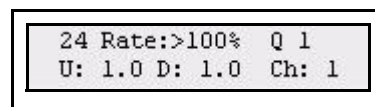
SOLO

- **OFF** = The level generated by pressing a bump button adds into the live output.
- **ON** = The level generated by pressing a bump button replaces the current output.

Clear Output from Memory Faders

Action	Console	Feedback
Clear output from Memory Faders	CLEAR and MEMS	All memory faders will be set to zero.

Sequences

Sequences can have up to 24 steps, and are played back from the *last four* faders in MEMS mode. In each of the 12 fader pages the buttons with stored sequences will light up dimmed in yellow when a page is selected. When the fader is contributing to the output, the button will light up in full.

Select Fader Page

If a fader is above zero when a different page is selected, it will not be updated to the content of the new page until it reaches zero.

Action	Console	Feedback
Select fader page	MEMS (Held)	As long as the button is held, the current fader page is indicated with a lit bump 1-12. Bumps for pages with recorded information will blink. To select a new page, press bump 1-12 and let go of the MEMS button.

Sequence Bump Modes

The content of sequence faders can be bumped to the level of the BUMPS fader in two ways. This is controlled with the SOLO button.

SOLO

- **OFF** = The level generated by pressing a bump button adds into the live output.
- **ON** = The level generated by pressing a bump button replaces the current output.

Fade, Rate & BPM for Sequences

The **RATE** button can provide Rate, Fade and BPM override for any sequence. This will affect the playback of the whole Sequence temporarily. When a Rate, Fade or BPM override is cleared the original times are retained.

Rate

Activate **RATE** and then press the bump button of any fader (in **MEMS** mode) with a sequence.

```
24 Rate:>100%  Q 1
U: 1.0 D: 1.0  Ch: 1
```

Use the wheel to set a Rate % that will scale the total time of the whole Sequence. Original timing is not lost and may be recovered by clearing the Rate %.

If a BPM is set, it will replace the Rate %.

Fade

Activate **RATE** and then press the bump button of any fader (in **MEMS** mode) with a sequence.Then hold **RATE**.

```
24 Rate:>100%  Q 1
U: 1.0 D: 1.0  Ch: 1
```
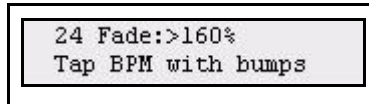
Use the wheel to set a Fade % that will scale the fade times of the whole Sequence. Fade 0% means no fade. Original fade timing is not lost and may be recovered by clearing the Fade %.
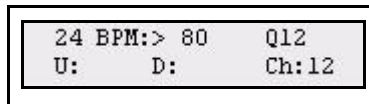
BPM

Beats Per Minute (BPM) is a musical term that can be applied to the playback rate of a sequence in looped mode. The BPM rate will override all times. All steps will be set to toggle on/off with the same duration as the BPM.

Step 1: Activate **RATE** and then press the bump button of any fader (in **MEMS** mode) with a sequence. Then hold **RATE**.

```
24 Fade:>160%
Tap BPM with bumps
```

Step 2: While holding **RATE**, tap the bump button of the fader with a sequence to set the BPM. When you let go of **RATE** you will return to the rate display, where the resulting BPM time is shown instead of Rate.

```
24 BPM:> 80    Q12
U:      D:     Ch:12
```

Step 3: Use the wheel to set a BPM that will scale the step times of the whole Sequence. Original timing is not lost and may be recovered by clearing rate.

Clearing Rate, Fade & BPM

Action	Console	Feedback
1. Activate Rate	RATE	The rate and fade settings for the last selected sequence will be selected and shown in the display.
1. Select sequence (in **MEMS** mode)	21 ... 24 or 45 ... 48	The rate and fade settings for the selected sequence will be shown in the display.
2. Reset Rate, Fade & BPM	CLEAR and RATE	The rate and fade settings for the currently selected sequence will be reset and will default back to its original times.

Stack & Crossfader

The Crossfader can be used to play back the Stack with up to 199 steps, or for single-scene operation (depending on the state of the **STACK** and **NEXT** buttons).

General Crossfader Controls

The Crossfader consists of a Live (A) and Next (B) fader, plus the Crossfade transport buttons. A crossfade is done by moving the crossfaders from the down position to the up position. This can be changed,

The Crossfade transport buttons are these:

Action	Console	Feedback
Start a crossfade	▶..››	Starts a crossfade. The button will blink during the fade.
Pause a crossfade	‖	The current crossfade is paused. It can be resumed with **GO**, or reversed with **PAUSE**.
Go Back	‖ and ▶..››	Hold **PAUSE** and press **GO** to fade to the previous step (only when STACK is active).
Go to first step	CLEAR and ▶..››	Hold **CLEAR** and press **GO** to clear the output of the Crossfader. If STACK is active it will jump to the first step of the Stack.

> **N o t e :**   *DIPLESS: SmartFade provides dipless crossfades as long as both faders are moved in parallel. This means that active channels which remain unchanged in both scenes will not 'dip' to 50% of their level as you move the crossfaders from one scene to the next, making for much better-looking scene transitions. To create a blackout between two steps, move only the Live fader to it's end position.*

Stack functions

By pressing **STACK**, the Stack is activated (lit at full) and connected to the Crossfader controls.The cue stack is loaded onto the Crossfader at step 0 (a non-existent step before step one) so that pressing **GO**, or starting a manual fade, will fade to step 1.

STACK

The LCDs will show the current state of the Stack.

```
■Live: 1    Next: 2
   Ch:13      Ch:14
```

If STACK is off the Crossfader operates only the Single Scene Crossfading function (except when in Backup Mode).

If there is nothing stored in the Stack, the button will be off completely when not activated. otherwise it will be dimmed.

Jump to step

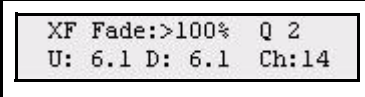It's possible to go directly to any step of the Stack with this function.

Action	Console	Feedback

Activate GOTO mode	[STACK] (held)	As long as the button is held, the display will allow you to scroll to any step.
		
		`Jump to step:> 2`
		`Ch:14`
		
		Let go of **STACK** to transport the whole sequence to this step in Next - ready for the next crossfade.

Rate & Fade for the Stack

The **RATE** button can provide Rate and Fade override for the Stack. This will affect the playback of the whole Stack temporarily. When a Rate or Fade override is cleared the original times are retained.

Fade

Activate **RATE** and press **STACK**.

```
XF Fade:>100%  Q 2
U: 6.1 D: 6.1  Ch:14
```

Use the wheel to set a Fade % that will scale the fade times of the whole Stack. Fade 0% means no fade. Original fade timing is not lost and may be recovered by clearing the Fade %.

Rate

Activate **RATE** and press **STACK**. Then hold **RATE**.

```
XF Rate:>100%
```

Use the wheel to set a Rate % that will scale the total time of the whole Stack. Original timing is not lost and may be recovered by clearing the Rate %.

Reset Rate& Fade

Action	Console	Feedback
1. Select Stack rate	[STACK] and [RATE]	The rate and fade settings for the Stack will be selected and shown in the display.
2. Reset Rate	[CLEAR] and [RATE]	The rate and fade settings for the currently selected stack/sequence will be reset and will default back to its original times.

Tap Mode for the Stack

Tap Mode allows the recording of actual elapsed time for each step of the Stack by means of the GO button. It should set to OFF at all times unless a timed recording is being made.

Step 1: First record a Stack in the normal way

Step 2: Open the Sequences menu:
Menu>[Sequences]

Step 3: Use the wheel to select the Stack (**XF**).

```
Sequences
Playback:>XF
```

Press **(MENU)** to confirm.

Step 4: Select Tap mode
Menu>Sequences>Playback>Step Timing>[Tap mode]

Step 5: Use the wheel to set On.

```
Tap mode
>On
```

When TAP mode is on an asterisk is displayed in the bottom right position of the LCD.

Step 6: Press GO for each stack step at the appropriate time and the wait time is stored for subsequent playback, independently for each of the steps. Only wait times are affected by Tap mode.

Step 7: Once a recording has been timed in this way Tap mode should be turned off to play back with the recorded times.

```
Tap mode
>Off
```

Step 8: Press **EXIT** to confirm and exit.

N o t e : *You can reset all wait times set with Tap to zero. See "Global Time for all steps" on page 54.*

Single Scene Crossfading

When **STACK** is off and **NEXT** is on, SmartFade is set up to run like a single-scene crossfading console. When Next is on the green channel bumps are lit with the levels to be output to stage on the next Crossfade, when Next is Off the lights indicate the actual stage levels. Next may be turned on and off to toggle between these two displays

NEXT

Action	Console	Feedback
1. Activate Next mode	NEXT	The intensity faders no longer contribute to the live output.
2. Set intensities	1-24 25-48 or 1-48 49-96	Set up any intensities manually with the intensity faders. They will not be output.
3. Crossfade manually	Crossfaders	Move the Crossfader pair from bottom to top. As soon as both crossfaders reach the end of the current fade, the intensity channels are released from the Live fader for setting the next look.

To fade endlessly between Live and Next: hold **PAUSE** before reaching the end of a crossfade - this will prevent the release of the intensity channels. Let go of **PAUSE** to terminate the crossfade.

Fade with Times

You can activate set the default Up/Down times with the wheel.

```
   1            U 1.4
  13            D 1.4
```

Press **GO** to execute a crossfade using these times.

Chapter 6

Two Scene Mode

There are three operating modes, and Two Scene Mode is one of them. In this mode you can use your SmartFade console straight out of the box like a manual two scene presetting console.

This chapter contains the following sections:

General Information

To use the console as a two scene console, you have to start it in Two Scene Mode. *See "Operating Modes" on page 5.*

You will no longer be able to access "normal" SmartFade functions as described in this manual. It is now only a two scene presetting console.

In Two Scene Mode no memories are stored - everything is set manually and faded with the Crossfaders.

Console Settings in Two Scene Mode

Console settings are more or less identical to Normal Mode. *See "Console Settings" on page 23.*

These are some special settings for Two Scene Mode.

Default Time

Allows you to set a **default time** for all crossfades.

`Menu>Settings>[Default Time]`

Patch

Allows you to choose a **1:1** patch, or the **Custom** patch from Normal Mode. *See "Clear/Set Patch" on page 19.*

`Menu>[Patch]`

Two Scene Fading

A two scene console duplicates the same channels over two sets of faders. The principle is that one set of faders contributes to the live output, while a new look is prepared blind levels for the same channels in the other set.

Your SmartFade console has two rows of faders. When the console is started in Two Scene Mode the top row is connected to Crossfader A, and the bottom row is connected to Crossfader B.

In other words, it is the number of physical faders of the console that will decide how many channels your console can control in this mode.

Smartfade 1248 and 1296 = 12 channels

Smartfade 2496 = 24 channels

Preparation & crossfade

Step 1:   Make sure the Grand Master is at full, and that BLACKOUT is off.

Step 2:   Make sure Crossfader A and B are both down. This means that light is being output from the bottom set of faders since Crossfader A is at 100%

Step 3:   Set the channel faders in the top set of faders to new values. No change is visible on stage yet, because Crossfader B is at 0%.

Step 4:   Now move both Crossfaders to the top position simultaneously. The output will change from the levels of the bottom set of faders, to the levels of the top set of faders. The time used is the default time shown in the display. You can change this with the wheel anytime.

Step 5:   Now the top set of faders control the output. This means that you can set the channel faders in the bottom set of faders to new values.

Step 6:   Crossfade to these values by moving both Crossfaders down.

Step 7:   Repeat from step 3.

Chapter 7
DMX Backup

Backup mode is the third console operating mode. You can capture 512 outputs of DMX from an external console and store to 24 (48) memories that can be played back from the faders or the Stack.

This chapter contains the following sections:

General Information

To use the console as a backup, you have to start it in Backup Mode. *See "Operating Modes" on page 5.*

You will no longer be able to access "normal" SmartFade functions as described in this manual. It is now only a backup console.

In Backup Mode, there can be no console output until you connect DMX input from another DMX output device or until you record DMX from another device into the memory faders.

You will be able to store 24 (48) memories to the faders. These can be played back with faders and bumps or from the Stack, in consecutive order (this cannot be edited).

Fader #1 and the Master Fader must be up to pass DMX input levels to the output or to record to memories.

Console Settings in Backup Mode

Console settings are more or less identical to Normal Mode. *See "Console Settings" on page 23.*

These are some special settings for Backup Mode.

DMX In

Data loss is handled in the same way as in Normal Mode. *See "Data loss" on page 24.*

There is an additional setting to select if DMX In is controlled from fader 1 or the last fader (First/Last) in your SmartFade console.

Menu>Settings>DMX In>[DMX In Fader]

Bump Mode

Bump Mode is specific for Backup operational mode. It allows you to define if the bump buttons for the memory faders will **Bump** or **Toggle** the content of each fader.

Menu>Settings>DMX In>[Bump mode]

Save/Load Backup

Allows you to save or load the currently stored backup memories to the SD memory card.

Menu>[Save/Load Backup]

Backup memories

The backup memories are recorded by connecting the DMX output of an external console to the DMX in port of your SmartFade console when it is started in Backup Mode.

Preparation

Step 1: Set DMX In:To Memory. *See "DMX In" on page 70.*

Step 2: Connect the DMX out of the external console to DMX in of your SmartFade console.

Step 3: Bring up Fader 1 (or Last) to allow DMX In. *See "DMX In" on page 70.*

Step 4: Make sure the Grand Master is at full, and that BLACKOUT is off.

Record a Backup Memory

Set up a look you want to record in the console connected to DMX In.

Action	Console	Feedback
1. Activate recording	REC MEM	Buttons that can record in this mode will blink at full. If there is a memory stored already, this button is dimmed (press **CLEAR** to exit).
2. Select fader	1 … 24 or 1 … 48	The moment the bump button is pressed, the memory is stored. Press **UNDO** to undo this recording.

Test memory

Bring down the fader controlling DMX In. Move the fader of this memory up. The same look you recorded should appear on stage. The light in the bump button of the fader will be dimmed to show that it has content.

Clear Levels

Clear may be used to clear output levels.

Action	Console	Feedback
Clear levels from one memory	CLEAR and 1 … 24 or CLEAR and 1 … 48	The selected fader is set to zero. Bring the fader down and back up to restore.
Clear all levels	CLEAR and MEMS	All faders and the Stack is set to zero. Bring the faders down and back up to restore.
Clear all levels	CLEAR CLEAR CLEAR	All faders and the Stack is set to zero. Bring the faders down and back up to restore.

Stack in Backup Mode

The Stack provided in DMX Backup mode consists of memories 1-24 (48) linked in order. This Stack cannot be edited. Stack step 1 is the memory recorded to fader 1, etc.

Stack functions

By pressing **STACK**, the Stack is activated (lit at full) and connected to the Crossfader controls.The cue stack is loaded onto the Crossfader at step 0 (a non-existent step before step one) so that pressing **GO**, or starting a manual fade, will fade to step 1, which is the memory stored in fader 1.

STACK

The LCDs will show the current state of the Stack, and the Up/Down time "**Time:>5.0**", which you can change with the wheel.

If there is nothing stored in the Stack, the button will be off completely when not activated. otherwise it will be dimmed.

General Crossfader Controls.

Jump to a step.

Appendix A
Software Update

This appendix contains the instructions for updating the software in your SmartFade console. There are two ways of updating the software.

- Using the **SD** card

- Connecting with **USB** to a **PC**

Software can be downloaded from the ETC Web site: www.etcconnect.com

Please make sure to download the correct software for your console - ***SmartFade*** and ***SmartFadeML*** use different software.

To verify the version that your console is running, *See "Software Version" on page 25.*

CAUTION: *Make sure to back up any show data you want to keep to the SD card before proceeding with a software upgrade.*

CAUTION: *Only **standard** SD Memory cards or connection to a PC via USB may be used for updating the software on a SmartFade console. Software update is not possible using an SDHC Memory card.*

Update the Software

SD Card Update

If you are using an SD card for the very first time - make sure it is formatted correctly (FAT16), or it will not function with SmartFade. *See "Format SD Memory Card" on page 7.*

Step 1: Obtain the software update file **SMRTFADE.SRC** from the download section of the ETC Web site: www.etcconnect.com

Step 2: Copy the **SMRTFADE.SRC** file to the root directory of the SD card. DO NOT RENAME THE FILE!

Step 3: Start the console in test mode. This is done by holding down the **MENU** button and pressing once on **ON**.

✓	⏻

The unit will enter self-test mode. Press **MENU** for each of the tests until the memory test has completed. At the end of the memory test the display will prompt:

```
Firmware Upgrade
Are you sure? [No]
```

Step 4: Insert the SD card into the console.

Step 5: Turn the encoder to select **YES** and press **MENU**. The update will start and the console will boot into the new updated software after the process is complete.

USB Update

To update with USB you need a **PC** running the Windows operating system (Windows 98, Windows 2000, Windows XP, or Windows 7).
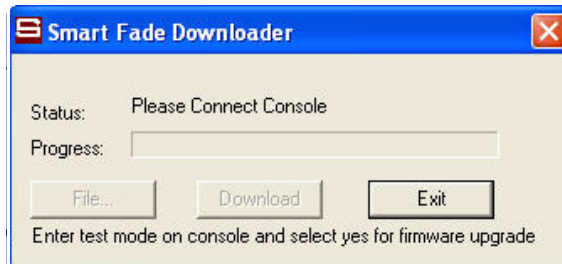
Step 1:   Obtain the software update file **SMRTFADE.SRC** and the USB Download application **SFDownloader.exe** from the download section of the ETC Web site: www.etcconnect.com

Step 2:   Connect a USB cable between the SmartFade and the PC. The USB cable must have Type A and Type B connectors.

Make sure you have backed up any show data you want to keep to the SD card before proceeding. Show data will be lost and cannot be recovered.

Step 3:   Double-click on the **SFDownloader.exe** application you downloaded from the ETC Web site. You should get this display.

Step 4:   Start the console in test mode. This is done by holding down the **MENU** button and pressing once on **ON**.

The unit will enter self-test mode. Press **MENU** for each of the tests until the memory test has completed. At the end of the memory test the display will prompt:

```
Firmware Upgrade
Are you sure? [No]
```

Step 5:   Once the connection with the console is recognized, the status information will display the Bootloader Version, and then "Please Load Firmware File". The FILE button will be displayed with solid text.

Click **FILE** and select the **SMRTFADE.SRC** file.

Step 6:   Now the DOWNLOAD button will be displayed with a solid text.

Click on **DOWNLOAD** to start downloading. The progress bar will begin to move. When the download is complete, the console will boot into the new updated software.

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