

Fader Master

Introduction

Fader Master helps you create timed moves for Group Masters, Playback Masters, Speed Masters and Timing Masters in MA Lighting's grandMA3 software and consoles.

Fader Master allows you to move a Group or Special Master to a chosen value, capture its current position and restore it later. Fader Master's Command Builder allows you to build line Widgets that creates Lua function commands easily and allows for these Lua commands to be stored into Macros or a Cue's Command field. There is no need to have knowledge in Lua code, the plugin takes care of all this.

This guide covers Fader Master v1.1.0.4. Start with Getting Started to create your first move, then use the function sections to build more detailed commands.

First Time Use

Paste the supplied XML file into the directory location 'grandMA3/gma3_library/datapools/plugins' folder on a USB drive, then Import 'Fader Master.xml' from the USB drive into the Plugin pool. Run the plugin from the Plugin Pool to open the Command Builder.

The first time you open the plugin interface, you will need to activate the Licence Key provided at purchase. Activation requires an internet connection on your grandMA3 system.

USB Licence

Connect the USB drive that will hold your licence. The same drive can hold any other Matt Jones LD plugin licences. Keep the licensed USB drive connected when using the plugin interface. Existing Fader Move functions that are in Cues or Macros will continue to work normally without a Licence attached, but access to the plugin User Interface is blocked without a valid Licence. It is best to do this process for USB Licences, using MA Lighting's grandMA3 onPC software.

Device Licence

A Device Licence is bound to an eligible grandMA3 console or RPU. grandMA3 onPC systems, including onPC command wing XT systems, cannot be registered with a Device Licence.

It is possible to Remotely register and deregister a console using grandMA3 onPC connected in sessions with the console intended to be the Device Licence holder.

Open Licence Management from the Plugin's Settings should you need to check or manage your Device Licence.

More information on the Device Licence procedure is documented at the end of this User Guide.

The screenshot shows the 'FaderMaster Builder' application window. The title bar includes a 'Retain Lines' button and standard window controls. The main area has a dark background with white text. It starts with a 'Welcome to FaderMaster!' message, followed by instructions on how to use the plugin to create Lua strings for moving various masters over a fade time. Below this, it says 'Add upto 10 line to add to a Cue CMD or create or add to a Macro.'.

The interface features a list of lines, with 'Line 1' selected. Each line has a set of controls: 'Type' (set to 'GroupMaster'), 'Target' (set to 'Individual'), 'Target Object' (set to '<Select>'), 'Action' (set to 'Move'), 'Value' (with a dropdown arrow), 'Fade' (with a dropdown arrow), 'Curve' (set to 'Linear'), and a 'Test' button. At the bottom right of the line list is an 'Add Line' button with a plus icon.

Below the line list is a 'Preview' section. It contains a red error message: '1. Preview Error: Missing targetObject'. At the bottom of the window is a footer bar with five buttons: 'Export', 'Import', 'Execute Preview CMD', 'Refresh Preview', and 'Close'.

If a move command runs without a valid licence, a small temporary warning notification will appear after the move completes. The command still executes; opening the Fader Move builder requires a valid licence.

Once the Licence is Validated by the server, the main UI will open.

Getting Started

The Command Builder can contain up to 10 lines or Widgets. Each Widget describes one Fader Move action. The preview shows the command string that will be created from the function options you select.

The Target is the Special Master or Group Master, or set of Masters, that you want to control.

The Value is the Fader value destination you want to move a Fader to.

Fade defines how long the Fader's move from its current Value to the destination Value, should take.

Create Your First Fader Move

This example demonstrates the move of a Speed Master called TrackBPM to 120 BPM over two seconds. Use any other Speed Master in your own show if you do not have one labelled TrackBPM.

1. Open Fader Master from the Plugin pool and use the first Widget line that is already visible.
2. Choose SpeedMaster as the Type and Individual as the Target Mode. Select TrackBPM or any other Speed Master from the Target picker that is displayed.
3. Set Action to Move. Leave the Value input mode as Value Input and enter 120BPM.
4. Leave the Fade input mode as Value Input. Enter 2s using the calculator and its Seconds option, or enter 2 on the console numeric keypad for two seconds.
5. Choose Linear as the curve. Press Test on the line to run the move.
6. Check the result, then use Export to save the command to a Macro or a Cue CMD field.

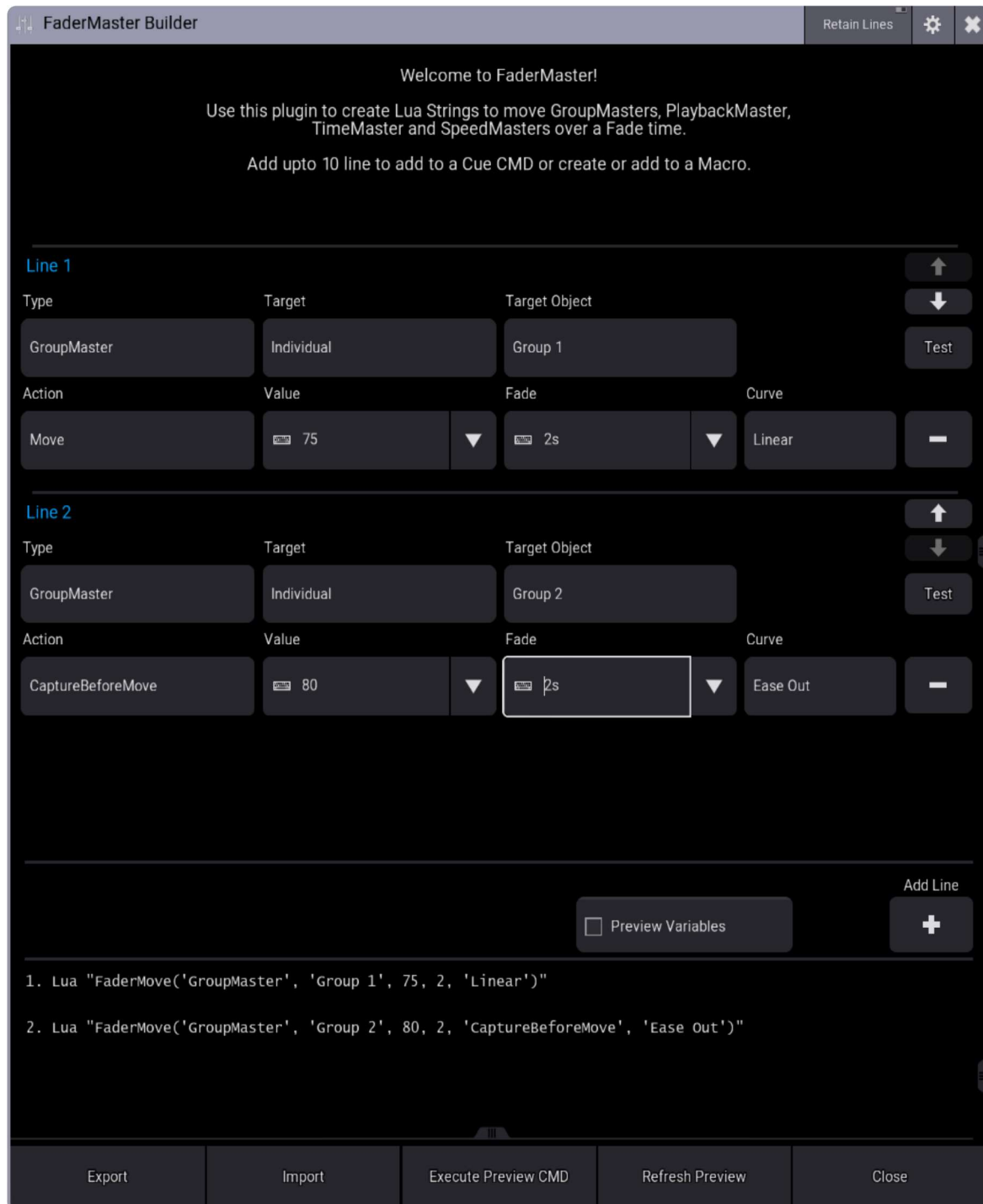
Testing and Preview

The Test button on each Widget line executes the Widget's current chosen options. Execute Preview CMD runs all valid Widget lines in the Builder. Both Test controls change the chosen Master's Fader values in your show; they are not simulations.

Refresh Preview rebuilds the displayed commands in the Preview section, should they not appear to accurately reflect the expected Command string values.

Correct any highlighted missing values or reported errors before exporting to a Cue or Macro.

The CMD Preview allows you check the settings Applied in each Widget, but does not prove that every target will be available when the command runs.



Working with Widget Lines

Use Add Line to add another action. The up and down controls change the line order, and the remove control deletes a line. Use Retain Lines when you want to keep the builder content after applying it to a destination.

Master Types and Targets

GroupMaster

Allows you to move the level of a Group Master with Fade time. Choose an assigned Group Master from the picker and enter a value from 0 to 100. This controls the Group's Master value.

PlaybackMaster

Allows you to move a Playback Master to a value from 0 to 100. Choose the Playback Master you want to control from the picker.

SpeedMaster

Allows you to move a Speed Master to a speed value in beats per minute. Enter a value such as 120BPM. The builder accepts values from 0 to 225 BPM. The plugin will automatically append BPM if not provided.

TimingMaster

Allows you to move a Timing Master to a time value from 0 to 10 seconds. Its Value and the Fade duration are separate: moving it to 4s over a Fade of 2s takes two seconds to reach a four-second setting.

Target Modes

The option 'Individual' allows you to select a single Master.

Fader assignments on a non-current Page can be targeted using the 'Page' option; you do not need to change the current Page to action a move of Targets on other Pages.

Speed, Playback and Timing Masters can also be targeted from their respective Master pools.

Page targets matching Master assignments on the defined Page. This will only apply to the chosen Master type – Type set to SpeedMaster in a Widget will target any assigned Speed Masters on that Page.

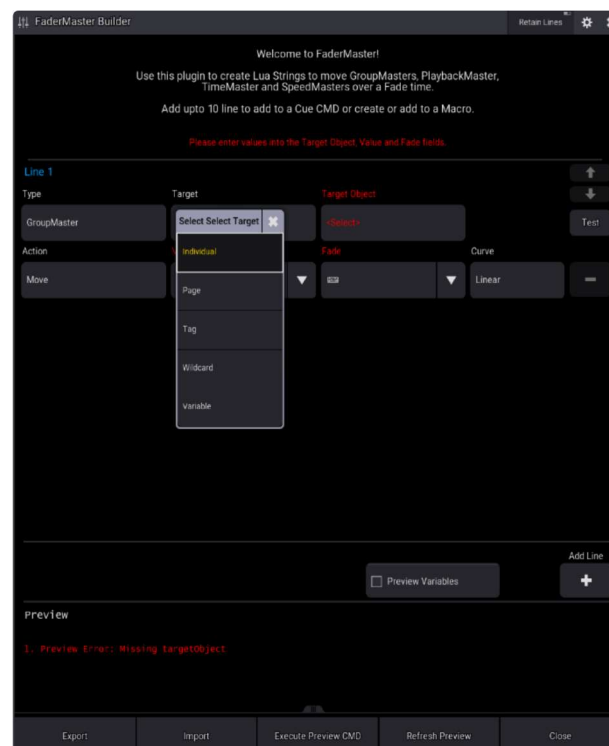
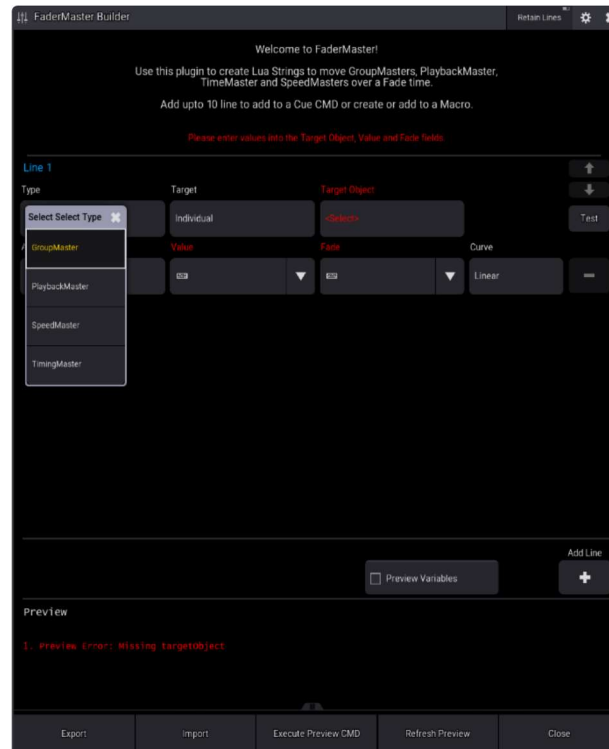
'Tag' will move targets with a matching assigned Tag on the defined Master Type. Use this when related masters are spread across Pages and you want to control them together.

Wildcard matches object names using the native grandMA3 Wildcard operator (*). For example, *BPM matches names ending in BPM. **Wildcard matching is case-sensitive**, so be sure to check the labelling of objects when using this option.

Variable uses target User or Global Variable values or expression that have been stored. Use this when another part of your show decides which master should be controlled.

The plugin follows grandMA3's variable hierarchy, processing User Variable before Global Variables

When moving a wide range of targets, the plugin is capped to move 15 Faders by default. This cap can be lowered to 5 or raised to 30. You can check the Fade Engine Limit in Plugin Settings. The plugin reports when a selection exceeds the limit and only processes the allowed number of targets.



Values and Fade Times

Value Input

Use Value Input to enter a Fader destination value. GroupMaster and PlaybackMaster use a percentage-style value from 0 to 100; SpeedMaster uses BPM; TimingMaster uses seconds.

The Mode picker control beside some input fields defines how the input value is to be interpreted. Check the selected mode whenever you switch between a fixed Fader value and a variable value.

Variable Input

Use the option 'Variable Input' to enter the name of a User or Global Variable. The value of the defined Variable is used as the Fader's destination value when the command runs. For example, a Global Variable called TrackBPM containing 128 can provide the destination speed for a SpeedMaster, resulting in the SpeedMaster's Fader value ending at 128BPM.

A Speed Master and a variable can share the same name 'TrackBPM'. Select the master in the target picker and choose Variable Input for its Value. The Fader Master's name identifies what object to move; the variable value provides the Speed Master's destination value.

Enable **Preview Variables** to see resolved variable values in the preview. Treat these as a check of the current values: the variable may change before a stored command is run.

Fade Time

There are two options available for Fade Time input. Value and Variable input. The mode can be changed using the Mode picker control.

The value for Fade defines the duration of the Fader's move. Enter 2 or 2s for a two-second fade. A Fade of 0 changes the value immediately. The native timing suffix buttons in the calculator popups behave the same as a native grandMA3 time input calculator.

The option **Variable Input** for the Fade value will define the duration of a Fader's move time from the defined Variable name. User Variable values will take priority over Global Variables, when the same Variable name exists for both User and Global Variables. The option TimingMaster uses the current time value of a defined Timing Master. This allows you to adjust a move duration from a Time Master instead of editing the Fader Master command string.

Curve Paths

Curves

Curves allow you to adjust the attack and decay of a Fader's move path over the Fade time. There are 4 curve options to choose from:

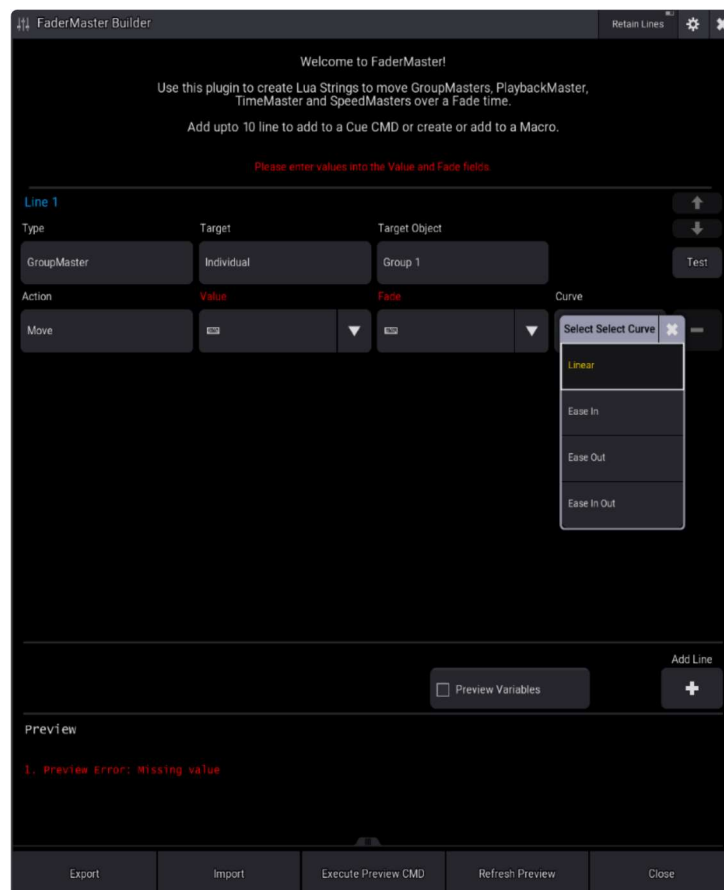
Linear changes the value evenly through the fade.

Ease In starts slowly and accelerates.

Ease Out starts faster and slows towards the end.

Ease In Out starts and ends slowly, with a faster change in the middle.

The curve changes how the Fader's value progresses over the duration of the Fade time, not the Fade duration. Linear is the default option. Try the other curves when you want a different feel to the Fader's move path.



Fader Master Actions

Move

The option 'Move' will move the target Fader from its current position to the defined Value over the defined Fade time. Use this for a planned change, such as bringing a Group Master down or changing a Speed Master to the next Song tempo, for example.

Capture Before Move

The option 'Capture Before Move' stores the defined Fader or Faders' current fader value before starting the move to the defined Values. This is helpful should you need to return to stored fader position later. This is helpful for managing Key Light values when using Group Masters as the intensity control.

Capture

The option 'Capture' stores the current fader value of the defined Faders without moving the target. Value and Fade are not required for this option. Captured values are held in Global Variables for later Restore actions.

Restore

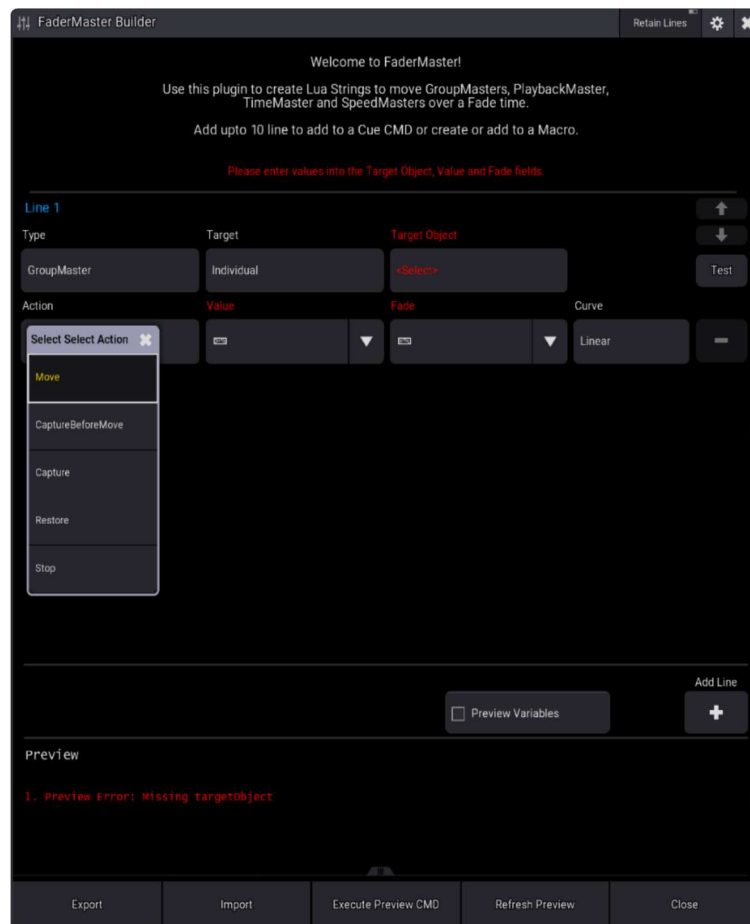
The option 'Restore' returns the targeted Faders to a previously stored 'Capture' or 'Capture Before Move' value using the stored values as the destination Value and can execute this over the chosen Fade time. A captured value is required before a Restore is executed. The 'Restore' option does not have Value field. If no captured value exists, the plugin will report a warning.

Upon a successful Restore, previously stored Capture values will be cleared from the Global Variables. Values must be captured again before another Restore action is executed. Avoid renaming target objects between Capture and Restore moves. Doing so will result in mismatch errors.

Stop

The action option 'Stop' will stop any current Fader Master moves that are in progress for the defined target. This action will halt Faders at their current position; this action does not return it to its starting value. Value and Fade values are not required for this action.

In the Fader Master plugin Settings, there is an option to create a 'Stop Fader Master Fades' Macro for stopping active plugin fades instantly. This is useful when you need a readily available stop control.



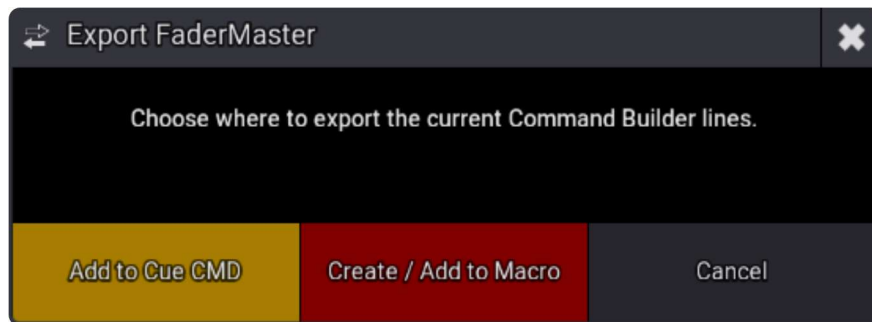
Capture and Restore Example

1. Select Type 'GroupMaster' and define a Group Master
2. Select the Action 'CaptureBeforeMove'
3. Set Value to 30 and Fade to 2s
4. Ensure the targeted Group Master is at 100 and Assign it to a Fader
5. Run the Widget line using 'Test'
6. Export these Fader Master settings to a Macro
7. Reopen the Fader Master plugin. In the new Widget line set the Type to 'GroupMaster' and define the same Group Master
8. Set the Action to Restore
9. Set a Fade of 3s to return to the captured level
10. Run the Widget line using 'Test'
11. Export these Fader Master settings to a new Macro

If a new FaderMaser move is executed while a fader is 'in-flight', the latest execution will supersede a previous FaderMaste fade on that fader. Avoid overlapping commands for the same target unless the new command is intended to take over.

Exporting Your Commands

Fader Master gives you the option to Export the builder commands into your show. You have the option to Export to a Macro or to a Cue's Command cell inside a Sequence.

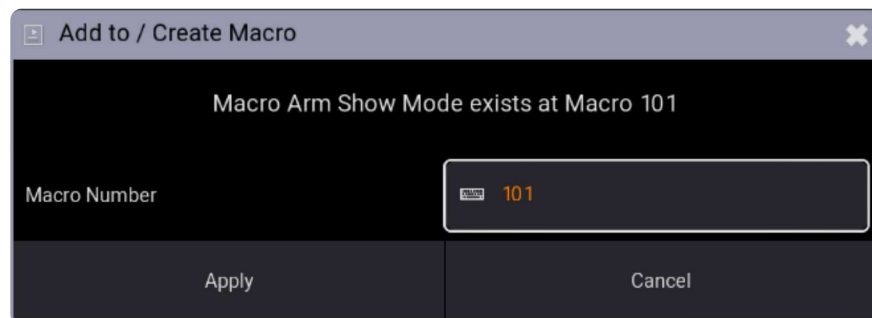


Create or Add to a Macro

Fader Master gives you the option to Export the Fader Master Widget lines to Macros.

Use the Export button and choose **Create / Add to Macro**.

Enter the destination Macro number you wish to add the Fader Master command string to.



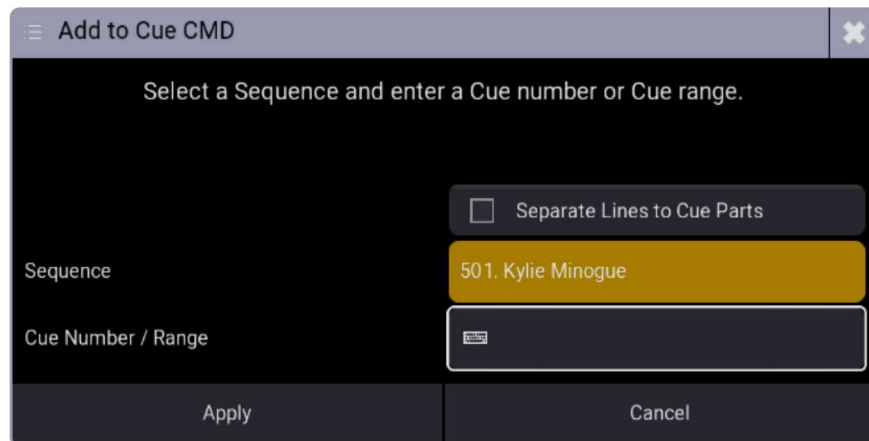
For a new Macro, enter a name or accept the suggested name. For an existing Macro, use the merge dialog to choose the line after which the Fader Master lines should be inserted.



Review the existing Macro before adding commands, particularly if its other lines also control Fader masters. After applying, run the Macro and check the finished result.

Add to Cue CMD

Fader Master also provides the ability to Export Fader Master Widget lines to a Cue's Command cell in Sequences. Use the Export button and choose **Add to Cue CMD**. Select the Sequence and enter a Cue number or Cue range to add the Widget lines to the Cue's Command values.



The Cue Command field will now contain Fader Master command strings that will run when the Cue is triggered.

Fader Master places its generated Lua command here so the Fader Master fader move can be part of your Sequence's playback.

When you choose to Apply the Fader Master command strings to a Cue, the plugin will check the targeted destination Cue. The process checks whether the Cue exists and whether its Command field already contains commands. Some options will be presented in a dialog for you to make a decision on what the plugin should do.

If the destination Cue or Cue Part exists, and the Command field is empty, the Fader Master will write the command strings to the Cue's Command cell, and no action is required from the User.

If the destination Cue or Cue Part exists, but the Cue's command cell already contains Command syntax, you will be prompted to make a choice.

Append Existing CMD – This will add the Fader Master command string at the end of the existing command syntax, separated with ';'.

Overwrite CMD – This will overwrite any existing Command values in the destination Cue.

Separate Lines to Cue Parts

This option will separate Fader Master Widget line command strings into separate Cue Parts. The same prompts for existing Cue Parts will be presented when Cue Part Command cells have existing values. New Cue Parts will be added without a prompt. Be sure to inspect the Cue Part Command fields after applying.

This option is helpful for separating multiple Fader Master command strings making it easier to identify and edit within one Cue. Use the normal Cue CMD export when a combined command is preferred.

Fader Master Playback

The generated commands created by Fader Master call Fader Master Lua functions. Removing the Fader Master plugin will cause any Fader Master fader moves to stop working. The generated commands require the Fader Master plugin to be present in the show file. For replaying Fader Master moves, it is not necessary to have a valid licence connected to the console, the Fader Master moves will still execute, but access to the Fader Master builder will be blocked without a valid licence.

When moving work to another show or system, include the plugin as well as the Macros and Sequences that use it, and test them before using the Fader Master fader moves in a live show setting.

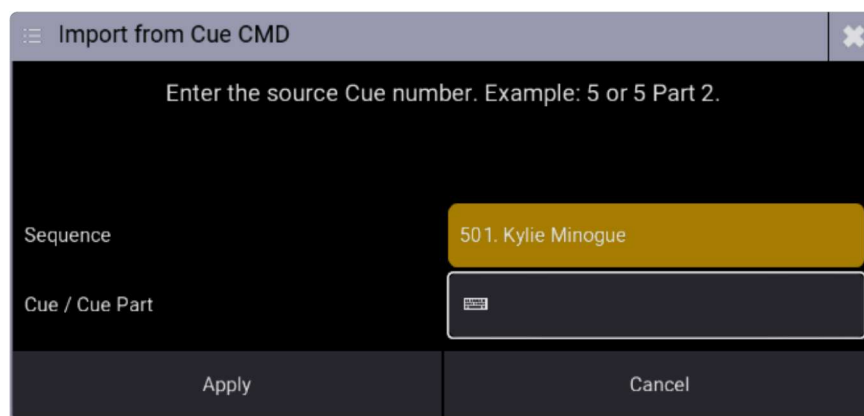
Importing Existing Fader Master commands

Import Existing Commands

It is possible to Import existing Fader Master commands from a Macro or a Cue Command that contain valid Fader Master command strings, back into the Fader Master builder. Choose the Macro number, or choose a Sequence and the Cue or Cue Part source to load previously stored Fader Master commands into the Builder Widgets to easily edit or update them.

Import is useful when you need to change a destination value, fade or target without editing the Lua function calls in the Command fields by hand. Fader Master recognises supported Fader Master function calls; unrelated commands are not converted into Builder Widgets.

Imported lines start at the first incomplete builder line, or after the existing lines when space is available. Check the result before applying changes. The builder holds a maximum of 10 lines. A warning prompt will report when all imported lines do not fit.



Plugin Settings

Fade Engine Limit

This option in the Plugin's Settings window allows you to choose to cap the number of faders moved in one action by 5, 10, 15 or 30 faders. The default limit is set to 15 faders. This limits the number of targets processed by a broad selection, such as a Page, Tag or Wildcard. It is separate from the builder limit of 10 command lines.

Retain Lines

Retain Lines keeps the current builder content after applying it. Enable Retain Lines On by Default in Settings if you regularly export the same set of lines to more than one destination. You are able to toggle on and off 'Retain Lines' in the Builder UI in the Title Bar.

Macro Labels Notes and Tags

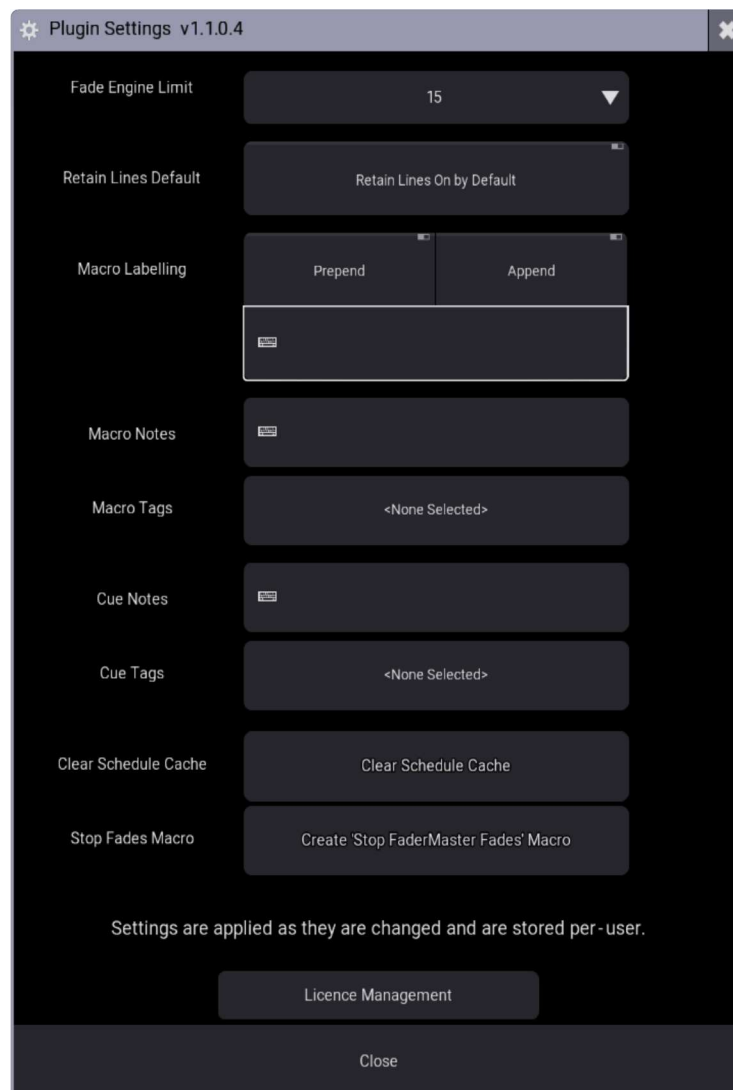
The Macro labelling controls let you prepend or append your chosen text to the label of the Macro's created by Fader Master. Macro Notes and Macro Tags help identify generated work in the show. Cue Notes and Cue Tags provide equivalent organisation for Cue exports.

Clear Schedule Cache

This clears the plugin's cached schedules and runtime fade state. Use it when troubleshooting cached execution states or if you are experiencing lag or unexpected results. For a normal stop during operation, use the Stop action or the Stop Fader Master Fades Macro.

Settings and Licence Management

Settings take effect as they are changed and are stored per-user. Open Licence Management from the Settings window to check activation and manage Device Licences on console for Fader Master.



Helpful Checks

No Matching Faders Found

Check the master type, target mode and target name. Select the target again from the picker where possible. For Page or Tag targeting, confirm the relevant executor assignment or Tag exists. Check capitalisation when using Wildcard mode.

A Speed Master can share its name with a Global Variable. Use the target picker for the master and Variable Input when you want the variable to provide a value.

Invalid Value or Fade Time

Check the field mode and units. Use BPM for a Speed Master value and seconds for Fade. A variable must exist and contain a suitable value. To use a named Timing Master for the fade duration, select TimingMaster mode.

A Restore Does Not Run

Check that you captured the same target and that its name has not changed. A previous successful Restore may already have cleared the capture. Create a new capture before repeating the operation.

Only Some Targets Move

Check the Fade Engine Limit and any warning messages. A Page move may skip targets already at the requested value. Duplicate assignments of the same master are not intended to produce duplicate moves.

Licence Warning

A missing or invalid licence produces an advisory card after a command-line move finishes. Open the plugin to activate or check Licence Management. Keep the licensed USB connected when using a USB Licence.

For Users Working with Lua

The builder is the simplest way to generate commands. If you already use Lua commands, this example moves TrackBPM to 120 BPM over two seconds with a Linear curve:

```
Lua 'FaderMove("SpeedMaster", "TrackBPM", 120, 2, "Linear")'
```

Use an explicit variable reference, such as "\$TrackBPM", when you intend to read a variable in a Lua argument. Keep the master name literal when it identifies the target. Check the generated preview when building more complex commands.

Device Licence Registration

Device Licences allow Matt Jones LD plugins to be registered to eligible MA Lighting grandMA3 hardware.

There are two ways to complete Device Licence registration and deregistration. In both instances, a connection to the internet and the Matt Jones LD Licence server is required.

Console Connected to Internet

Device Licence registration / deregistration and verification can be completed when a eligible console is connected directly to a wired Internet connection. This will allow the Licence registration/deregistration to be completed on the console directly.

You will be required to manually enter the Device Licence Key when prompted.

Via onPC Connected in Session with a Console

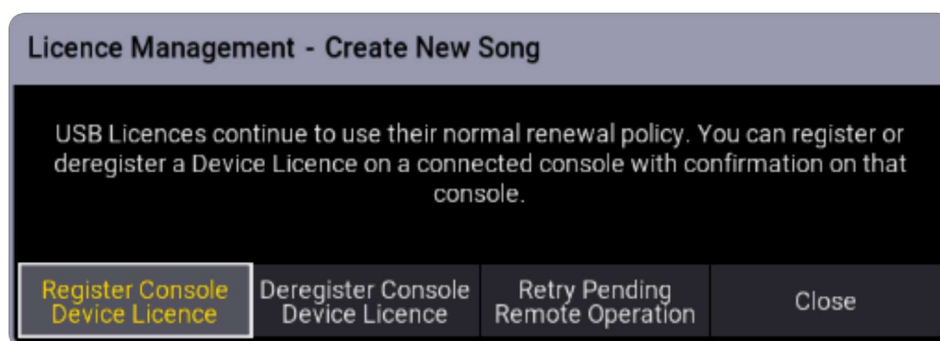
It is possible to perform a Device Licence registration / deregistration via grandMA3 onPC with an Internet connection, connected in a Session to the console you wish to register or deregister.

The Console and onPC stations need to be in a connected grandMA3 session, sharing the same show file.

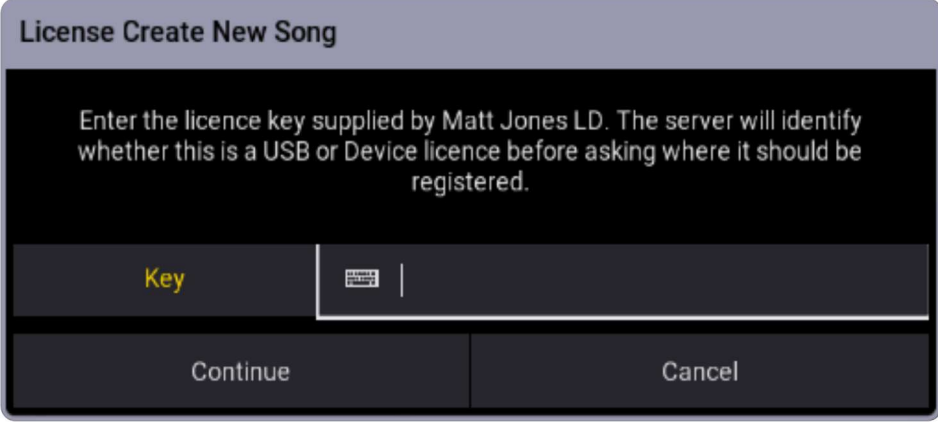
It is **not** required to have a valid USB Licence to perform a Device Licence registration or deregistration.

To initiate a Device Licence registration, open the Plugin from the onPC station.

If you have a USB Licence connected, navigate to the Plugin Settings in the Plugin's Title Bar. In the Settings window, open Licence Management. You will be prompted with the following options. The name of the Plugin in the title bar will change depending on the Plugin you are performing the Device Licence registration for.



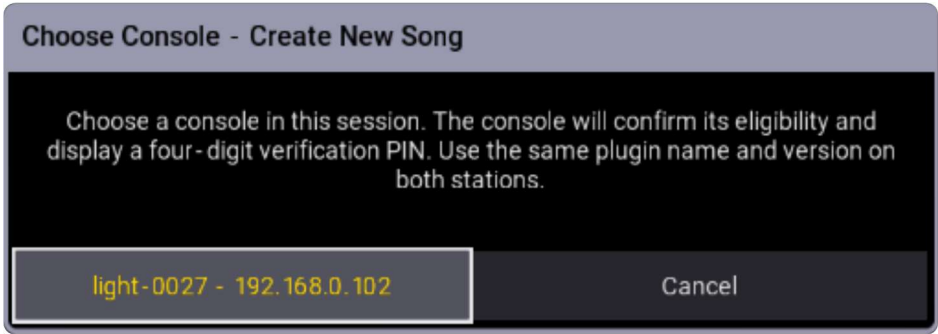
When Registering a Console, choose 'Register Console Device Licence'. You will be then prompted to enter your Device Licence Key.



The dialog box has a title bar 'License Create New Song'. The main text area contains the instruction: 'Enter the licence key supplied by Matt Jones LD. The server will identify whether this is a USB or Device licence before asking where it should be registered.' Below the text is a text input field with a yellow 'Key' label on the left and a small icon of a USB drive on the right. At the bottom are two buttons: 'Continue' and 'Cancel'.

The Licence Server will validate the provided Licence Key and verify that it is a Device Licence key. Entering a USB Licence Key will cause the Licence Server to reject the request and the process will be aborted.

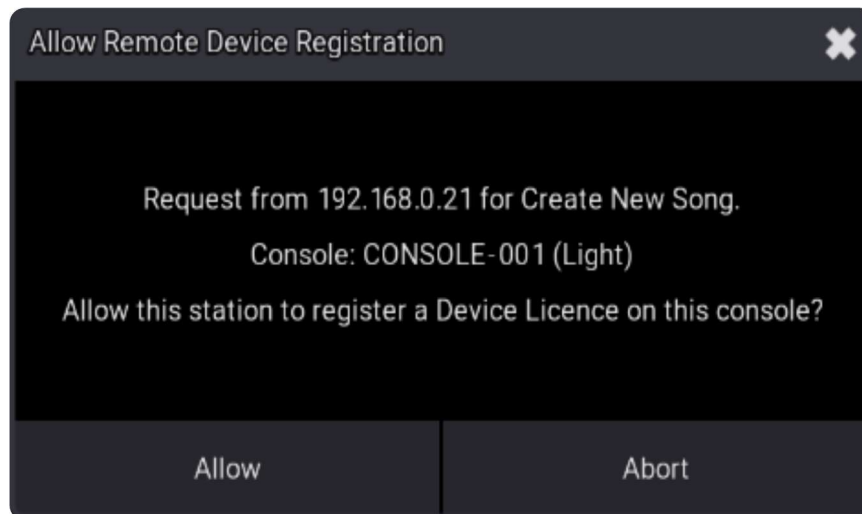
Once a valid Device Licence Key is entered, you will be presented with a list of available eligible consoles to assign the Device Licence Key to.



The dialog box has a title bar 'Choose Console - Create New Song'. The main text area contains the instruction: 'Choose a console in this session. The console will confirm its eligibility and display a four-digit verification PIN. Use the same plugin name and version on both stations.' Below the text is a text input field containing the text 'light-0027 - 192.168.0.102' and a 'Cancel' button.

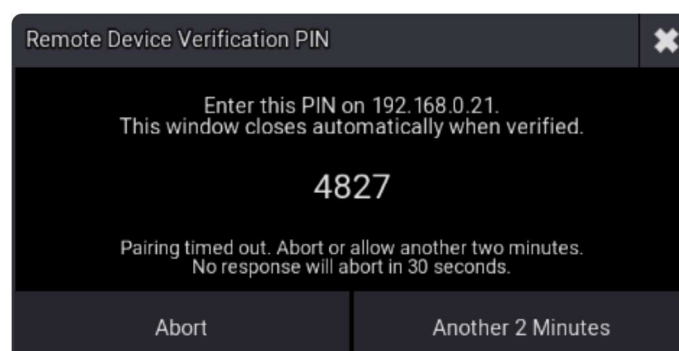
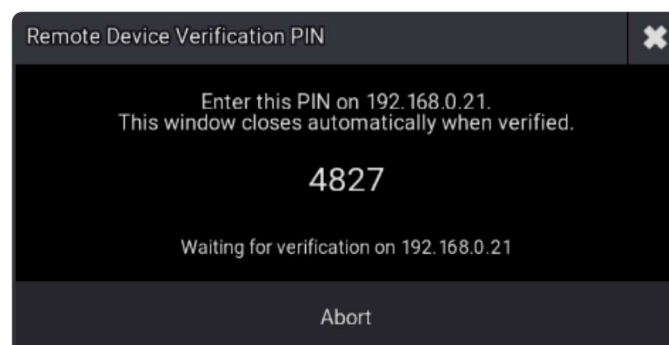
This dialog will display the console type, it's serial number and the station's IP address.

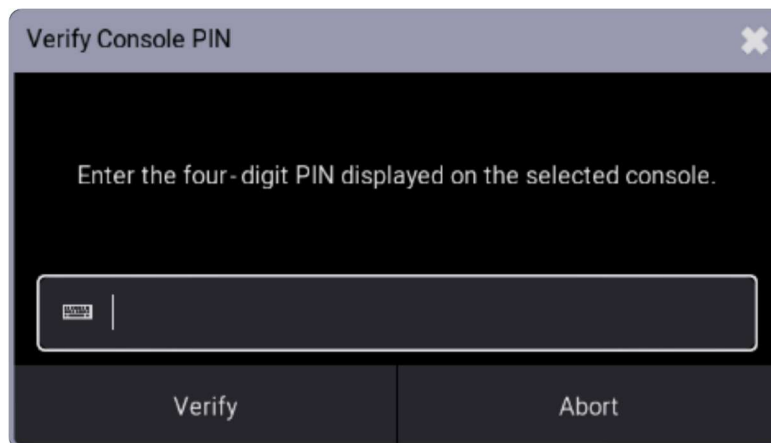
Once you select the Console, a popup will appear on the selected Console asking for permission to install the Device Licence.



This request dialog will remain only for 2 minutes. After 90 seconds, a new popup will appear, informing you that there is only 30 seconds remaining, and provide you the option to request a further 2 minutes. If no action is taken, the process will automatically be aborted, all dialogs will close and the registration of the Device Licence will be cancelled.

After you click Allow, a second popup will appear shortly after that provides a unique one time 4 digit Pin that you will need to input on the popup that will appear on the onPC station. This verifies the Device Licence install request and permits the Licence Server to initiate the Device Licence installation on the selected Console.

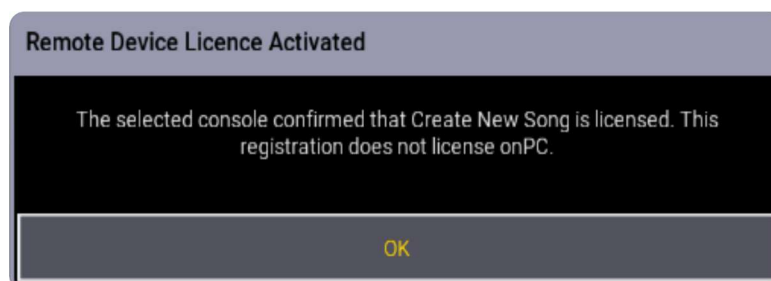




Once the Pin is correctly entered, the console will authorise the onPC station to perform the necessary validation checks with the Matt Jones LD server and will provide the authorisation to the console to install the Device Licence Key on that device.

An incorrect Pin will abort the process, and you will be required to restart the process.

When the onPC station has completed its authorisation checks with the server and console, and the console verifies that the Device Licence is successfully installed, you will be required to confirm your acceptance of the EULA. Once you do, a confirmation message will appear on the onPC station confirming the successful validation and installation of the Device Licence on the selected Console.



Device Deregistration

The process for deregistering a Device is much the same. You will be prompted to Allow the deregistration on the console, provide the Pin from the Console and input the Pin into the prompt on the onPC station.

Once Device deregistration is complete, you will receive a similar confirmation message confirming the Device Licence seat has been released and the Console no longer holds the Device Licence Key.