

TCHELPER

Manual
Version: 3.4

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1. Introduction

1.1. What is TCHelper for?

Welcome to the TCHelper Manual, your comprehensive guide to mastering timecode show creation and management with TCHelper. This innovative plugin integrates seamlessly with Reaper and the GrandMA3 lighting console, leveraging OSC (Open Sound Control) to streamline your workflow and enhance productivity. Whether you're programming complex lighting sequences or managing live updates, TCHelper is designed to simplify the process, saving you valuable time and effort.

With TCHelper, you can:

- Create and edit timecode shows directly within Reaper.
- Send data effortlessly to the GrandMA3 console via OSC.
- Utilize live updates for real-time adjustments during programming.
- Manage cues, tracks, and sequences with precision and ease.

This manual will guide you step-by-step through installation, setup, and operation of TCHelper. From configuring Reaper to connecting your console, creating shows, and troubleshooting common issues, you'll find everything you need to unlock the full potential of this powerful tool.

Let TCHelper transform your workflow into an efficient and intuitive experience giving you more time to focus on creativity and performance.

2. Installation MacOS

2.1. Run TCHelper installation app

Follow the installation process of the app

- Load the correct reackpack version for your system
- Wait until the install app wants you to start reaper
- Start reaper and click „okay“ to all macOS messages
- Close reaper and open preferences/security and allow reackpack to be opened
- Start reaper again and allow reackpack to be opened (twice)

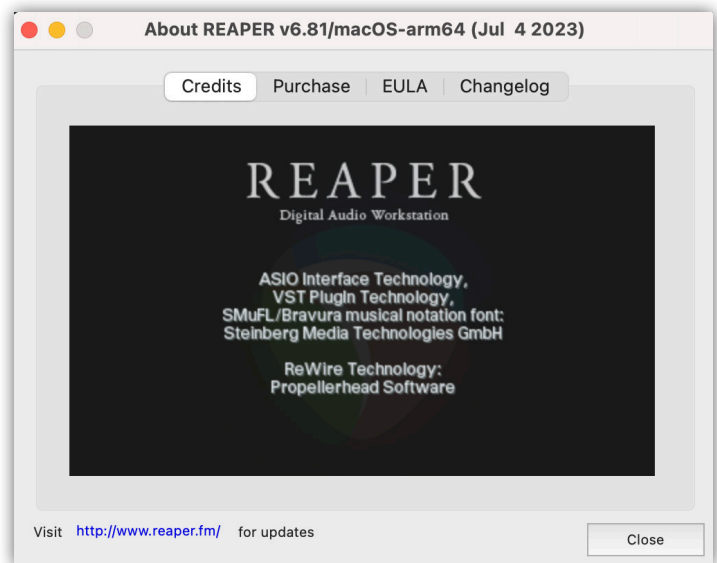
2.2. Run TCHelper installation plugin in reaper

- When reaper is up and running open the actions dialog
 - > click actions -> open „Show action list..“
- Add TCHelper.lua to reaper
 - > click „New action...“ -> select the TCHelper_install.lua from your scripts folder
- Run the TCHelper_install.lua
- Wait until the download and install is complete and restart reaper
- TCHelper is installed

3. Installation on Windows

3.1. Check Reaper Software Version

Windows: Help > About REAPER
(Software Version in Header)




About Reaper Window

3.2. Install ReaPack




- Go to page: <https://reapack.com>
- Load matching ReaPack Version
(If you don't find your version, update Reaper)
- Follow these steps to install ReaPack:
 - Start Reaper
 - Options > Show REAPER resource path in explorer/finder.
 - Put the downloaded file in the UserPlugins subdirectory
 - Restart REAPER. Done!

For further questions refer to the Reapack manual:
<https://reapack.com/user-guide>


Downloads





macOS

-  [x86 32-bit](#) (2.07 MB)
-  [x86 64-bit](#) (2.16 MB)
-  [ARM 64-bit](#) (2.03 MB)


Requires REAPER 5.1+ (6.04 or later recommended).
macOS 10.9 or later (x86), macOS 11.0 or later (ARM).







Windows

-  [32-bit](#) (2.03 MB)
-  [64-bit](#) (2.47 MB)

Requires REAPER 4.7+ (5.12 or later recommended).
Windows Vista or later (or Wine 1.8+ on Linux).



Linux (beta)

-  [x86 32-bit](#) (1.96 MB)
-  [x86 64-bit](#) (1.92 MB)
-  [ARM 32-bit](#) (1.28 MB)
-  [ARM 64-bit](#) (1.79 MB)

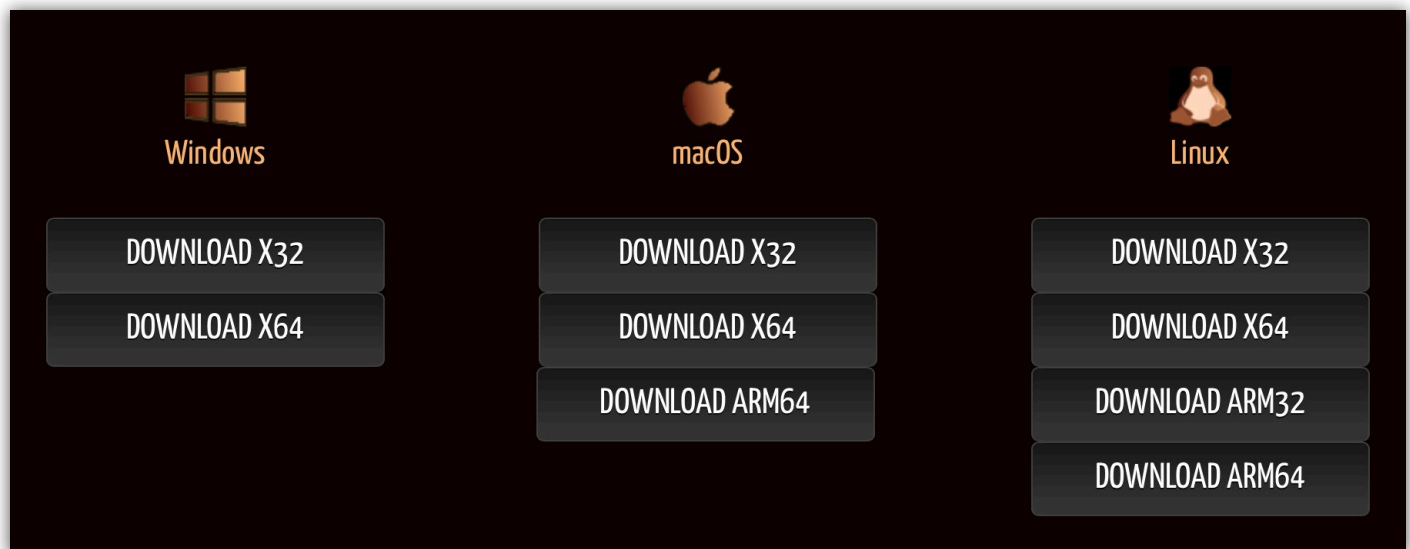
Requires REAPER 5.20+ (6.04 or later recommended).
libcurl, libstdc++ for GCC 7.1+, libxml2 2.6+,
OpenSSL 1.1, 3 or compatible and SQLite3.

Latest stable release: [ReaPack v1.2.4.3](#) released on 2023-03-03

Reapack Downloads

3.3. Install SWS Extensions

- Go to: <https://www.sws-extension.org>
- run downloaded SWS install file
- restart Reaper



SWS Downloads

3.4. Install TC Helper and Components

- Start Reaper
- Click Actions in the Menu Bar > show action List
- Click New Action > Load ReaScript
- Open the TCHelper install.lua
- Filter in the Actions Window for TCHelper install
- Run TCHelper install.lua
- Restart Reaper

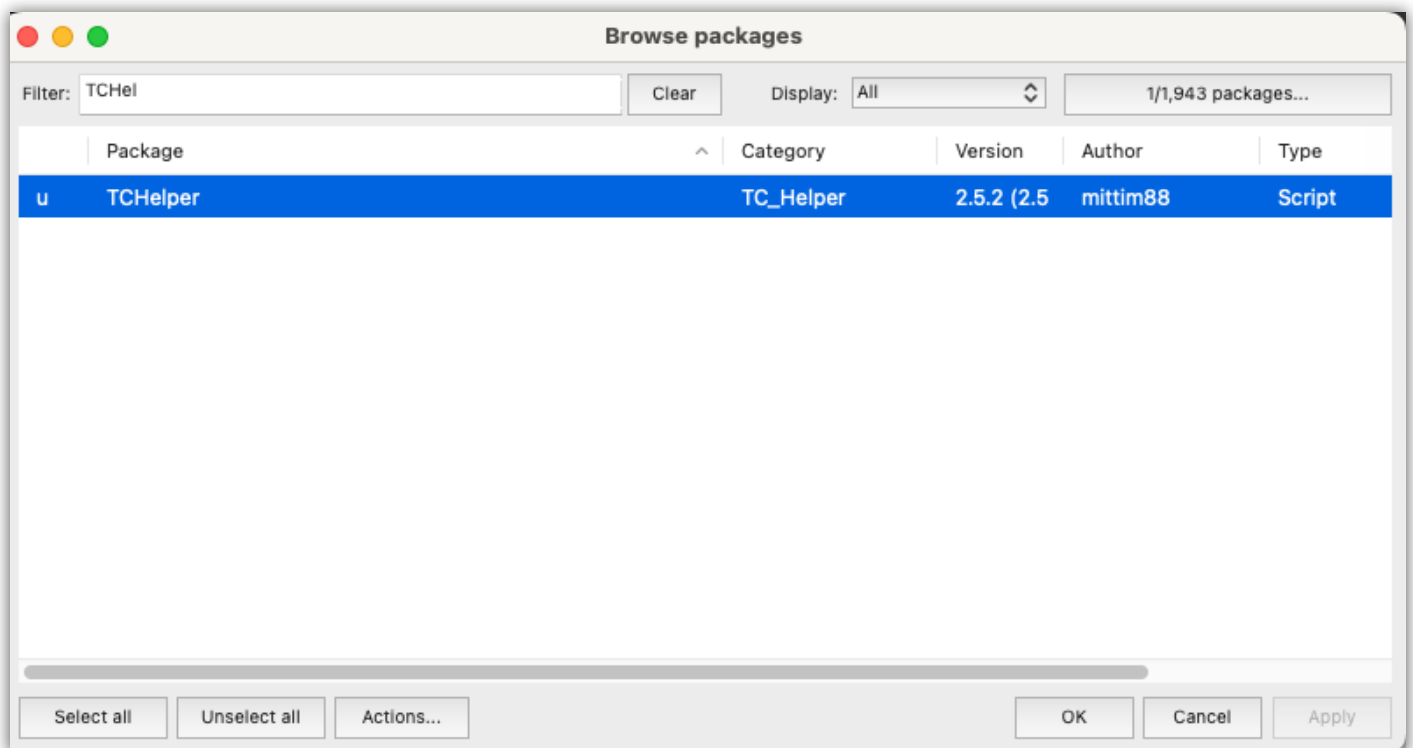
4. Configure Reaper for TCHelper

4.1. Add Shortcuts

- Click „Actions“ in the Menue Bar -> Show action list
- Click „Import KeyMap“ -> „Import shortcuts/custom actions, import all sections“
- Open the „TCHelper_Actions.ReaperKeyMap“
- Filter in the actions dialag for TCHelper
- Set the fresh imported shortcuts scope global+ by:
 - Select the first TCHelper custom shortcut
 - Doubleclick the assigned shortcut (down left in the actions dialog)
 - Set Scope to: „Global“

5. Update TCHelper

- Start Reaper
- Click Extensions in the Menue Bar > Reapack > Manage repositories
- Right Click „mittim88_ReaScript_Repository“ > Refresh > OK
- Start TCHelper
- Click in menu bar of TCHelper: Menu - Update
- Right Click TCHelper > Update to version XX
- Click Apply
- Restart Reaper
- Done



Update in Package Browser

6. Window Overview

6.1. Main Overview

1: Track Area

Here are your Tracks displayed. A track is a timecode track AND a cue list in MA3.

2: Cue Area

In this Area you see your mediaitems. A mediaitem is a timecode event AND a cue in your MA3 (a media item will be called cue in this manual). You can move and resize the items and the start and end time will be sent to the console.

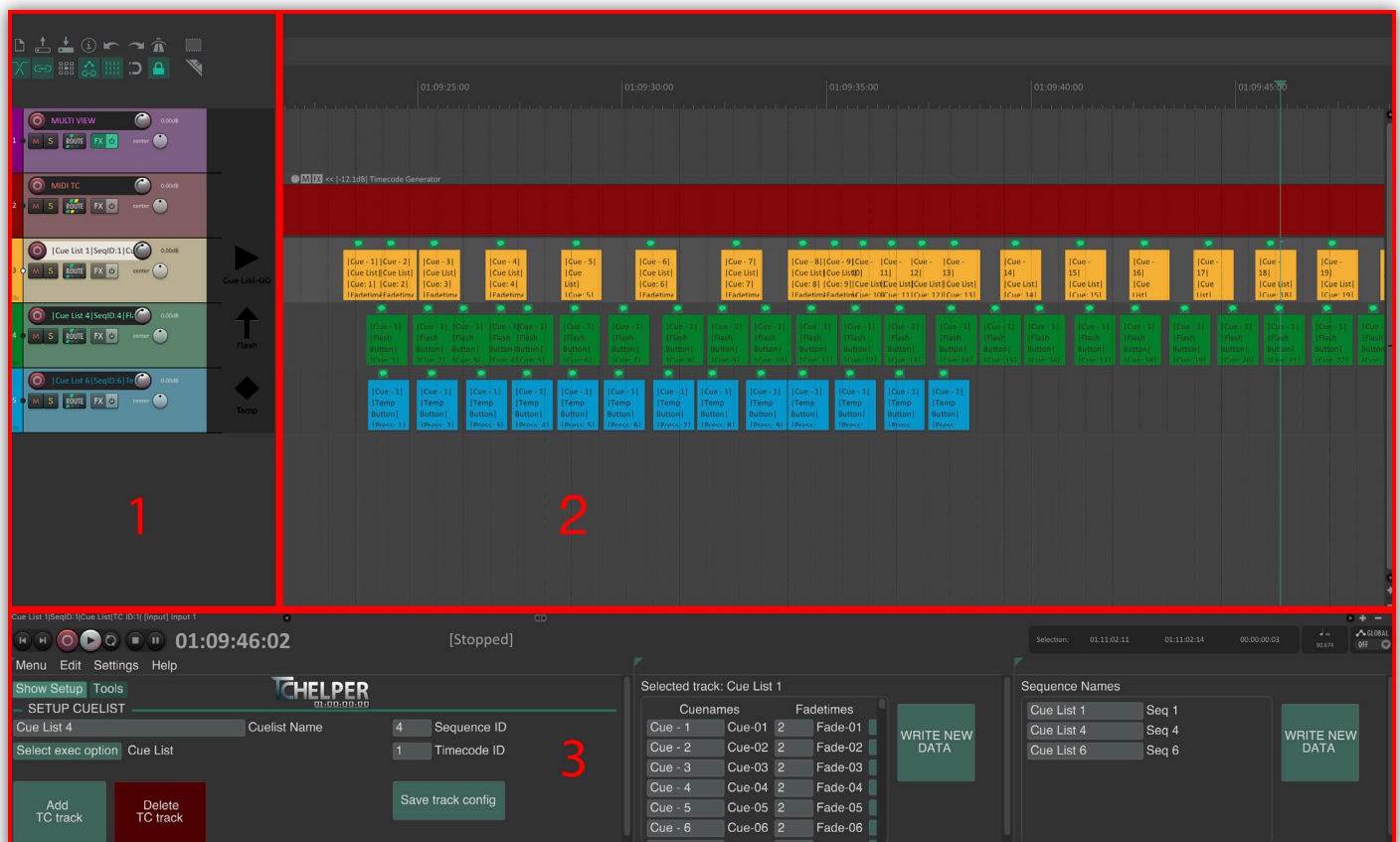
3: TCHelper Area

Top Menu Bar:

Menu: Main info menu
Edit: Options to edit cues and sequences
Settings: Network options

This is the area where you control the TCHelper. There are 2 Tabs:

Show Setup: In this Tab you add tracks and cues.
Tools: Here you find some selection tools.



Reaper main Window with running TC Helper

6.2. Show Setup

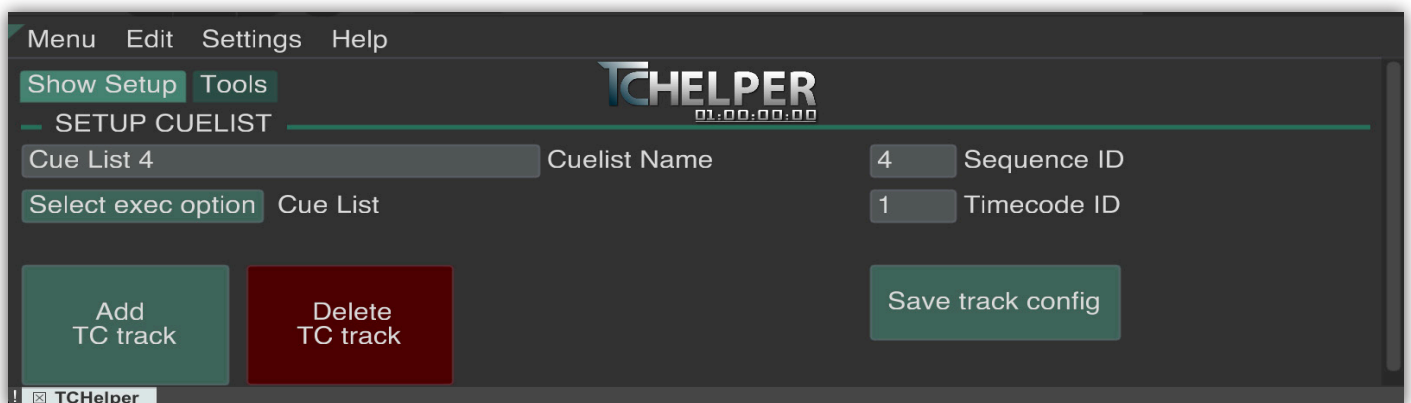
This tab has two states.

1. Track Window
2. Cue Window

When you click in the Track area it is possible to add a new track to your show.

1. Cuelist Window:

<u>Cuelist Name:</u>	Name of the cuelist, you can choose your own name or take the template name.
<u>Select Exec Option:</u>	The selection will be used to set the button option.
GO:	Sets up a simple GO cuelist with multiple cues
temp,flash:	Sets up a cuelist with one cue which will be pressed of a specified time.
<u>Sequence ID:</u>	Defines the sequence number where the Sequence will be stored.
<u>Timecode ID:</u>	Defines the timecode show number where the show will be stored.
<u>Buttons:</u>	
<u>Add TC Track:</u>	Adds a Track/Seq to the Project.
<u>Delete TC Track:</u>	Deletes a Track/Seq of the Project (If you are working in live update the Seq and TC Track is deleted immediately without confirmation in Console).
<u>Save Track Config:</u>	Saves the Sequence ID and Timecode ID input as a „Base“ for the Sequence and Timecode Pool ID Count



TC Helper Track Window

2. Cue Window

When you click in the cue area it is possible to add and modify cues in your show.

Cue Name: Set the name for each cue.

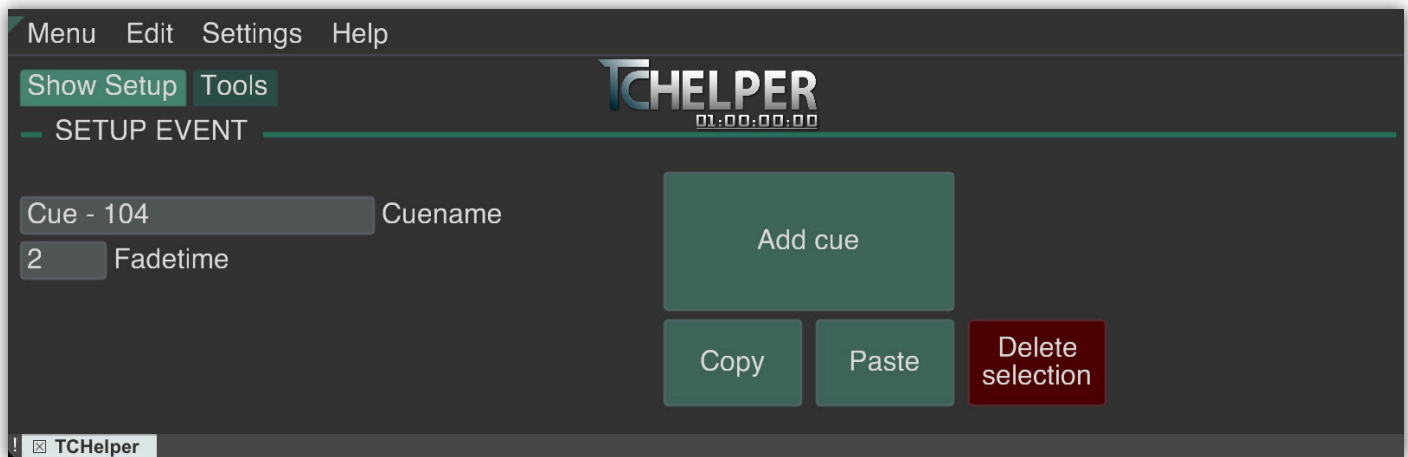
Fadetime: Sets the In-fadetime for each cue.

Cue Nr: Displays the current cue number (you can ignore it and use it just to display the total cue ammount).

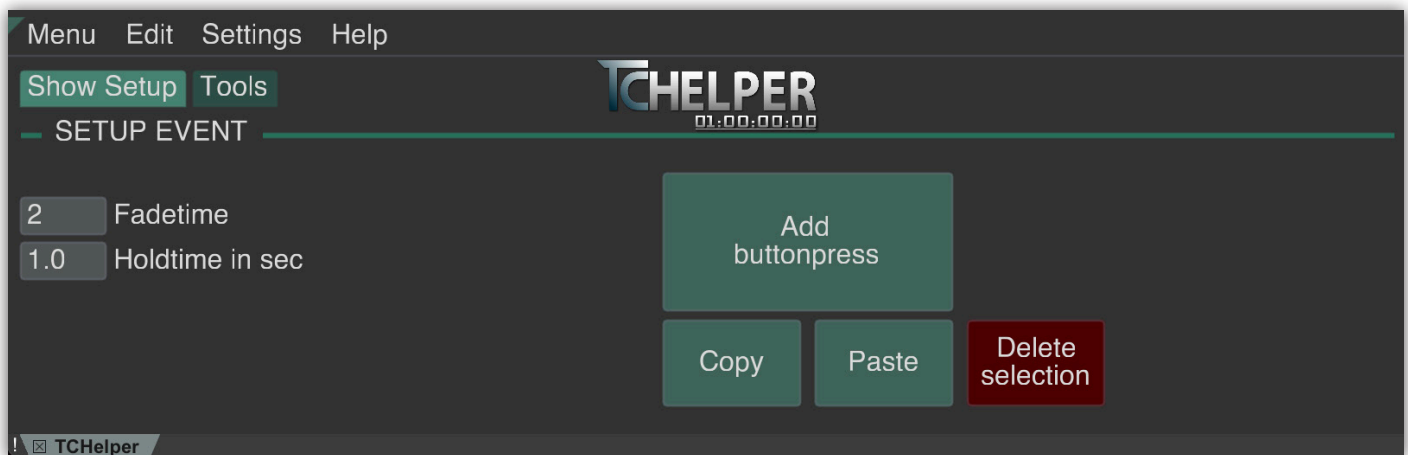
Add Cue: Adds a cue to the selected Track at the time of the edit marker. (It is possible to add tracks while playing back the project, just press play and the cue will be setted up at the play point).

Delete Selection: Deletes all selected Cues (If you're working in live update mode all selected cues will be delete immediately without confirmation in Console).

Add Button Press: Adds a button press to the selected track.



Cue window in GO+ cuelist mode

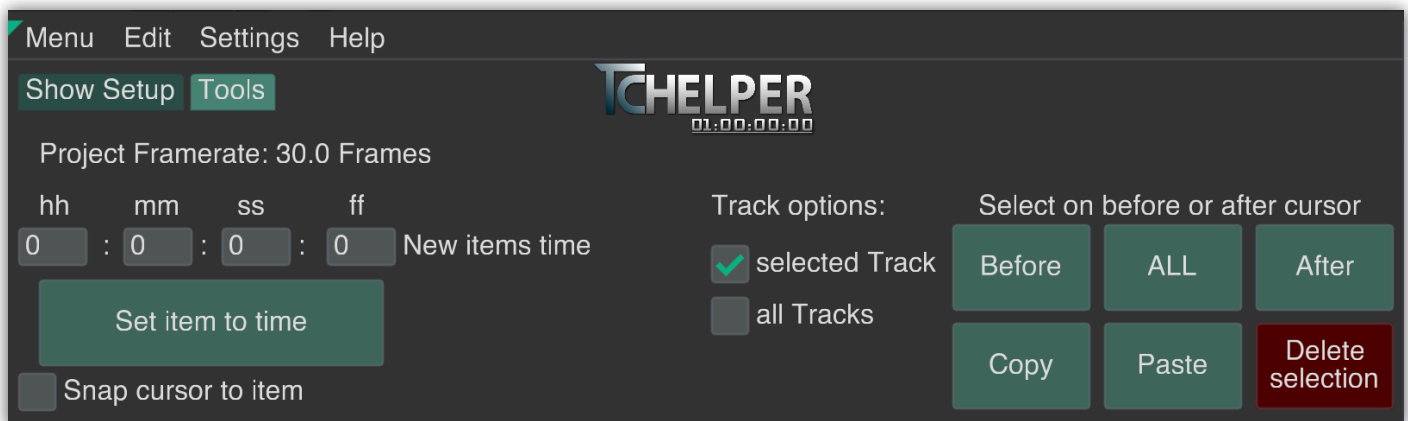


Cue window in Temp/Flash cuelist mode

6.3. Tools Window

Here you find Tools to select cues in the cue area and set the cursor at a defined time.

<u>New Items Time:</u>	Enter the time you want to move the actual selection to. (Make sure that in all inputs a number is written).
<u>Set Item to Time:</u>	Move the selection to the new time.
<u>Snap Cursor to Item:</u>	If activated the edit cursor will be set at the beginning of the selected Cue.
<u>Cue Data:</u>	Opens the Cue Data Window
<u>Before:</u>	Selects all items before the edit cursor in dependency of Track Option.
<u>All:</u>	Selects all items in dependency of Track Option.
<u>After:</u>	Selects all items after the edit cursor in dependency of Track Option.
<u>Track Option:</u>	Select on which track the cues will be selected.
all Tracks:	Selection will be set on all TCHelper tracks.
selected Track:	Selection will be set just on the selected track.



TC Helper Tools Window

6.4. Rename Cues Window

Click „Edit“ in the menu bar -> „Cues“

This window allows you to change the Cue naming and the fadetime of each cue.

Cuenames input:

Type in the new cue name

Fadetimes input:

Type in the new fadetime

jump (for each cue):

Click this button to jump to the desired cue in your reaper project

Write new data:

Saves the updated cue informations in your reaper timeline (and to your console if you use „live update“

▼ Cue Data

Selected track: Cue List 1

Cuenames		Fadetimes		
Cue - 1	Cue-01	2	Fade-01	jump 1
Cue - 2	Cue-02	2	Fade-02	jump 2
Cue - 3	Cue-03	2	Fade-03	jump 3
Cue - 4	Cue-04	2	Fade-04	jump 4
Cue - 5	Cue-05	2	Fade-05	jump 5
Cue - 6	Cue-06	2	Fade-06	jump 6
Cue - 7	Cue-07	2	Fade-07	jump 7
Cue - 8	Cue-08	2	Fade-08	jump 8
Cue - 9	Cue-09	2	Fade-09	jump 9
Cue - 10	Cue-10	2	Fade-10	jump 10
Cue - 11	Cue-11	2	Fade-11	jump 11
Cue - 12	Cue-12	2	Fade-12	jump 12
Cue - 13	Cue-13	2	Fade-13	jump 13
Cue - 14	Cue-14	2	Fade-14	jump 14
Cue - 15	Cue-15	2	Fade-15	jump 15

WRITE NEW DATA

Rename Cues Window

6.5. Rename Sequences

When this window is closed click „edit“ in the menu bar -> „Sequence“

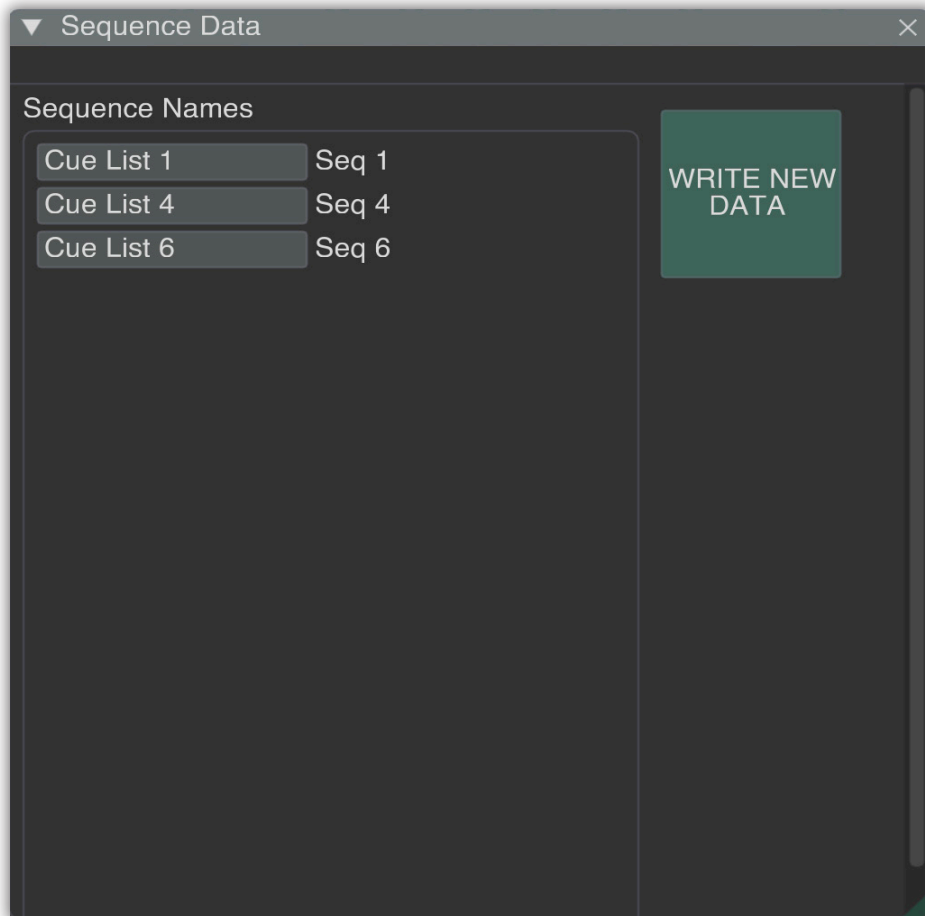
This window allows you to change the names of each sequence.

Sequence names input:

Type in the new cue name

Write new data:

Saves the updated sequence information in your reaper project (and in your console if you use live update)



Sequence Data Window

6.6. Connection Window

Click „Settings“ -> „Network“

IP:

The Consoles IP Address.

Port:

Setup the OSC Port (just choose the same on Consoles OSC Settings) Standard is 8000.

Prefix:

Setup a prefix that defines the reaper OSC Message (make sure on the Consoles OSC Settings is the same one setted up).

DataPool:

Setup your personal Data Pool.

Test Command:

A Test Message that you will see in the Commandline Monitor at the Console if the settings are correct. You can send that message on the TEST CONNECTION Button.

Save Network Config:

Saves all the inputs you made to connect TC Helper to your Console.

Load Network Config:

Loads the saved values in the input section.

Reset Config:

Resets the input values to default.

Host IP:	--Please Enter IP Address--
Port:	8000
Prefix:	reaper
DataPool:	default

Test Connection:

Sends the test command to the console to check if all settings are right.

Overwrite to Console:

This button sends the whole Reaper showproject to the console. ATTENTION if you hit this button when you have already programmed lights into your timecode show on the console the whole fixture data is gone. So make sure you save your showfile BEFORE overwriting everything.

Connect to GrandMA3 OnPC

Switches the IP Address to the internal loopback address (127.0.0.1) to use TC Helper with your GMA3 OnPC software. Press it twice to set the IP address back to your saved IP address.

Live Update to Console:

This Checkbox enables the seamless update of your Reaper project to the GrandMA3 software

▼

Connection Settings

×

--Enter Console IP--

Host IP

8000

Port

reaper

Prefix

default

DataPool

Echo --CONNECTION IS FINE--

Testcommand

☐

Live update to console

Save
Networkconfig

Load
Networkconfig

Reset
Config

Test
Connection

OVERWRITE TO CONSOLE

Connected to
GrandMA3 OnPC

TCHelper Connection Window

6.7. Shortcuts

Overview

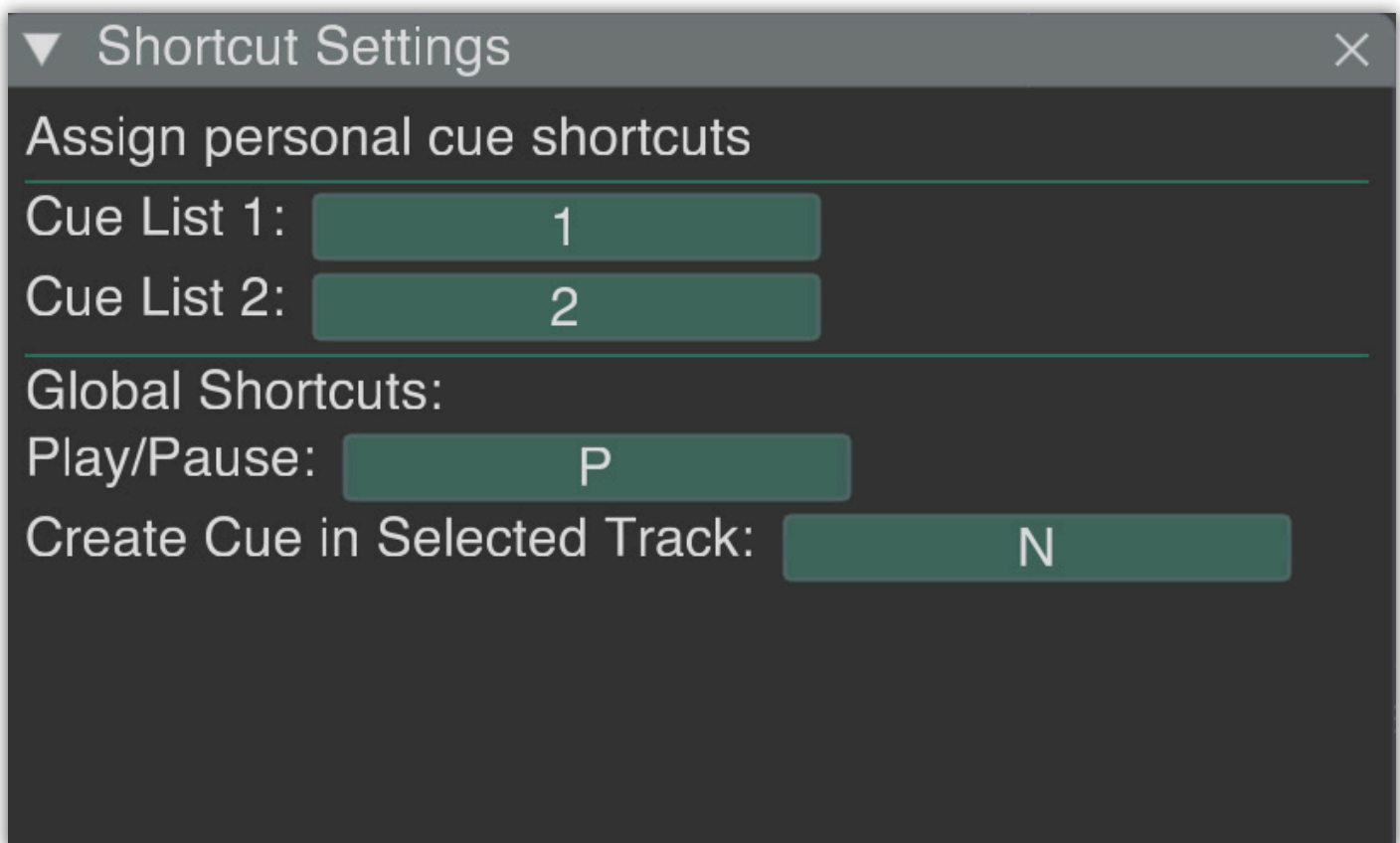
The shortcut function in TC Helper allows you to quickly trigger important actions using your keyboard. You can assign shortcuts to individual tracks (for example, to create cues on a specific track) as well as set global shortcuts for actions like Play/Pause or creating a cue in the selected track.

Assign a shortcut

To assign a shortcut, open the shortcut settings via Settings -> Shortcuts. Click on the button next to the desired track or action, then press the key you want to use. If the key is already assigned elsewhere, you will be notified and can choose a different one.

Good to know

Note: Shortcuts are only active when the TC Helper window is focused and no text field is being edited. This prevents accidental triggering while typing. To reactivate shortcuts, simply click back into the TC Helper window.

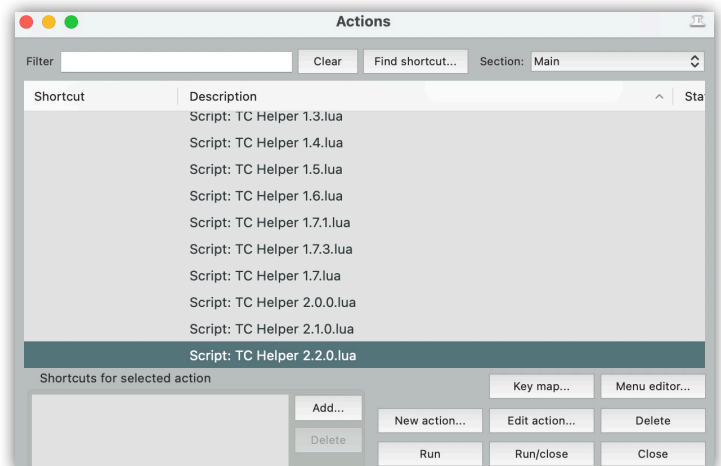


TCHelper Shortcut window

7. Setup TCHelper

7.1. Start TCHelper

- Actions > Show actionlist
- Select TCHelper
- Click Run



Reaper Actions window

7.2. Connect TCHelper with Console

You just need a Cat networkcable connected to your computer and to the first ethernet port of your console.

If you are using OnPC then you just need to type in the internal loopback IP (127.0.0.1)

On TCHelper connection settings you just need to setup:

- IP Address
- Port (leave it as it is)
- Prefix

On MA3 software In&Out Settings you just need to add an OSC connection and set it up with following settings:

- matching IP address
- matching Port
- the chosen prefix
- enable input
- set receive: Yes
- set receive commands: Yes

When you did this setup just **start a session** and choose the right network interface.

To make sure everything is working fine Click the Test Connection button in the TCHelper Connection window.

If everything is correct you see the message in the Command Line History:

```
OK:Menu "MenuSelector"
OK:Menu "RemoteInputs"
OK:Echo - - "CONNECTION" "IS" "FINE" - -
```

Test Connection Message in MA3 Command Line History

8. Create a Show

8.1. Add Go+ Cuelist

- Open the Show Setup Window
- Click in the Track Area
- Select Exec Option: Cue List
- Type in the Cue List Name
- Choose where the Cuelist will be stored
- Choose where the Timecode show will be stored or updated
- Click Add TC Track

- Click in the Cue Area
- Define the Cuename and Fadetime
- Set the editcursor to the cue entry point (or press play and record the show)
- Click Add Cue (this works in playing back the tracks as well)

8.2. Add Flash/Temp Cuelist

- Open the Show Setup Window
 - Click in the Track Area
 - Select Exec Option: Flash or Temp
 - Type in the Cue List Name
 - Choose where the Cuelist will be stored
 - Choose where the Timecode show will be stored or updated
 - Click Add TC Track

 - Click in the Cue Area
 - Define the Cuename and Fadetime
 - Set the editcursor to the cue entry point (or press play and record the show)
- you will see that there will be just one cue in this cuelist. This cue will be flashed or temped.
- Click Add Cue (this works in playing back the tracks as well)

8.3. Send Data to Console

Switch to the connection window. When you send your data for the **first time** to the console you have to use the **Overwrite to Console button**. This button will send the current project data to the console.

Make sure that the cues and timecode events are setted up correctly in your console

When you start to modify and extend your timecode show. You can and should check the live update option.

9. Modify Tracks and Cues

9.1. Modify Tracks

It is possible to edit some of the Track Options that will be used to update the Cuelist informations at the console.

To modify cue list name it is recommended to use the „Sequence Data“ window.

9.2. Modify Cues

There are several options to modify the cue position and information.

-Timing:

Just click and drag the cue to the desired position. It is possible to select more than one cue and drag those selected cues.

-Flash/Temp Hold time:

On the Flash and Temp tracks the pressing time is displayed in the length of the media item. if you want to extend or cut the pressing time just drag the end of the mediaitem. This is even possible with a selection of cues.

-Name and Fadetime

To change the name or fadetime of the desired cue or cues use the „Cue Data“ window

-Copy/Paste Cues

If you wanna copy paste cues, just select them with selection tools or by clicking the choosen events. Click „copy“ - put the play marker at the time to paste those events and press „paste“ Please **do not** use the normal *system shortcut* for copy/paste.

-Delete Cues

To delete a cue, just select the cues with the selection tools or by clicking the choosen events in the reaper timeline and press „delete selection“.

Be aware that if you activated live update you **delete** the cue **directly** on your console!!!

Please **do not use** the normal *system shortcut* for deletion!!!

10. Tipps

10.1. Use live update

I recommend to use the live update option of TCHelper. This will fasten your workflow rapidly. Think of reaper as a master for the timecode show and the console as a slave.

10.2. Item lock

To prevent Cues switching to another track lock the Items in up/down movement:

-Rightclick the lock symbol on top of the track are and select: Items (prevent up/down movement) and activate the locking option.

10.3. Use TCHelper project template

To make your life easy TCHelper installed a reaper project template. In this template a multi-view for multiple video streams in one window, a midi timecode generator is already added to your reaper project.

Item lock is enabled as well

To use it open a new project by clicking: „File“ -> „Project Templates“ and select TCHelper Project

10.4. Set Cursor to Time

To set the cursor at a specified time, use the option in reaper:

Double click the watch and use the popup to setup the new cursortime

11. Known limitations

11.1. Updating from console to Reaper

It is not possible to send an existing timecode show from the console to Reaper. That is the reason why you should use TCHelper as a master and do all changes at the timecode show with TC Helper and live update.

11.2. Assigning Sequences to Executors

This version of TCHelper does NOT assign the sequences to an executor, but this will be added in later versions.

11.3. Moving Temp/Flash/Top Events

Take care if you move non Goto events. When you move across to each other this works fine in reaper but the timecode events (On and Off) may change there timing in the console's timecode show.

For Goto events this works fine. If you wanna swap events in a Goto cuelist this is possible without any problems.

12. Troubleshooting

12.1. Timecode Offset

When working with TCHelper and GrandMA3, it is essential **NOT** to use the timecode offset function in Reaper. The reason is simple: TCHelper is designed to send the exact timecode positions of your cues and events directly to the GrandMA3 console. If you apply a timecode offset in Reaper, all your cues will be shifted by that offset, which can cause inconsistencies and unexpected behavior in your timecode show on the console. Instead of using the TC offset you need to use the Reaper timeline to set the right timing for your events.

12.2. Errors

If errors crash reaper please send me the error message reaper will show you and tell me what you did until the error happened.

Feel free to send me an E-Mail: support@lichtwerk.info and i will have a look at it.

I tested the functions that I explained in this manual but it is very likely that you try some stuff I didn't thought about. So please be gentle ;)