REAPER Update Summary Guide

Main changes, versions 6.69 to 6.73

This document has been produced primarily for the benefit of those users who have a printed, hard copy User Guide.

It reproduces in each case sections which are either new or which have changed significantly. Relatively minor tweaks and twiddles are not included here. The "litmus test" that has been applied is whether these changes seem likely to have, or might possibly have, any significant impact on your way of working.

This document is intended to help keep your documentation up to date. You can print off those pages which are relevant to you, file them, and make a mark or annotation in your hard copy guide to that effect.

This Update Summary Guide will itself be updated regularly with future new releases.

Summary of Contents

Version 6.69

Startup – option to suppress scanning new/updated VST plugins.
Project settings – options to define default number of track channels and parent send channels.
Media explorer preview – shift+mousewheel can be used to horizontally scroll during zoomed preview.
Region/marker manager – optional to display take markers outside visible part of media item.
Render – optional rendering stems pre-fader supported.
Render – option to write output render stats for each rendered file.
Preferences: Media import preferences separated from general Media preferences.
MIDI device settings: option to exclude SPP data when sending clock to device.

Version 6.70

Mouse modifier contexts now listed in alphabetical order.
Render option added to render only those track channels that are sent to parent.
Various actions added for stem rendering, including to render multichannel (parent only) stems.

Version 6.71

REAPER now recognises CLAP plug-ins.
Options to autobypass FX instances on silence.
Automation: changing FX parameter envelope colors..

Version 6.72

Track and track parameter grouping
New section: Media item with track group edits.
Track manager enhancements
Action list revisions.
Various FX and FX chain option changes.

Version 6.73

Multichannel parent-child relationships.

REAPER User Guide

Main changes, version 6.69

October 2022

This document reproduces those sections of the User Guide that are either new or have important modifications.

Any minor tweaks and twiddles are not included here, but are listed on page 13 of the main document.

Additional option added to bypass scanning new/updated VST plugins on startup.

REAPER Startup Tips

By default, REAPER opens with the last used project. As you will see in Chapter 22 (Preferences, General), you can disable this behavior. Also, you can use hot keys when starting REAPER to override the default behavior.

Action	Booster Key(s)
Open REAPER without loading last project.	**Shift** (while starting REAPER)
Open REAPER without loading any default project template.	**Ctrl Shift** (while starting REAPER)
Open REAPER without scanning new/updated VST plugins.	**Ctrl** (while starting REAPER).

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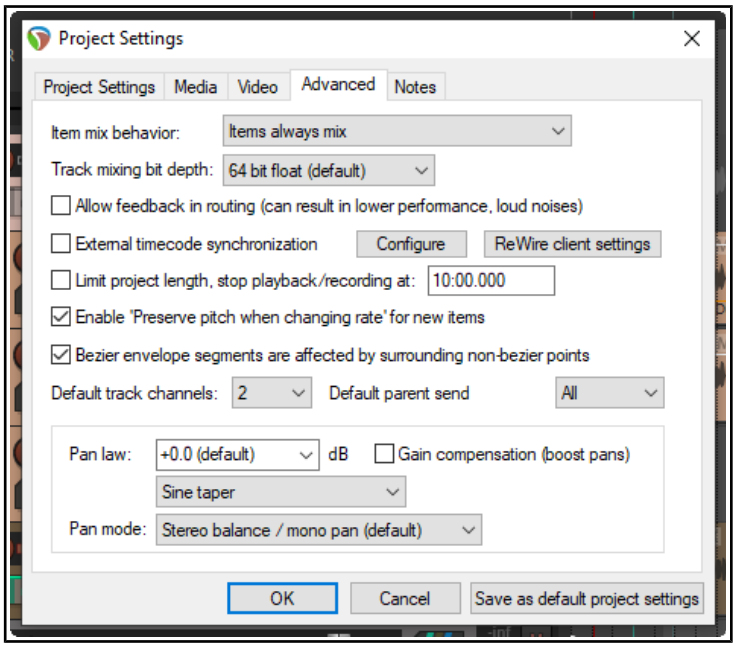
Section 4.6

Reaper Startup Tips

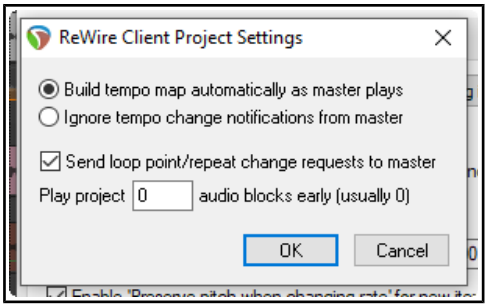
Additional option added to use Shift+ Mousewheel up/dpwn for horizontal scroll in zoomed preview window. Note that Shift drag left/right is also available.

Page 32

Project Settings: Advanced



- **Item Mix Behavior.** Determines behavior when one media item is placed on top of another. Options are for enclosed items to replace enclosing items, items always to be mixed, or for the newer item to replace older item.
- Track mixing depth. If unsure, leave at the default setting.
- The option to allow **feedback in routing**. Feedback routing can in some instances be useful, but can risk damaging audio equipment. *If in any doubt, do not select this option.*
- The option to **synchronize** project with an external device timecode.
- Rewire client settings. These are shown below right.
- There are options to limit **project length** and r**ecording time**, also to set the default state for **Preserve pitch when changing rate**.
- Option to **prevent bezier envelope segments being affected by surrounding non-bezier points.**
- Default number of **track channels** and **parent send channels** for new projects.
- Specifying a **default pan law** for your tracks. The pan law determines how the relative track volume behaves when that track is panned more or less to one side or the other. **Gain compensation boost** can be enabled or disabled. Pan laws are discussed in more depth later in Chapter 2.
- Default track pan mode. You have choice of pan modes, some mono, some stereo. See Chapter 11.



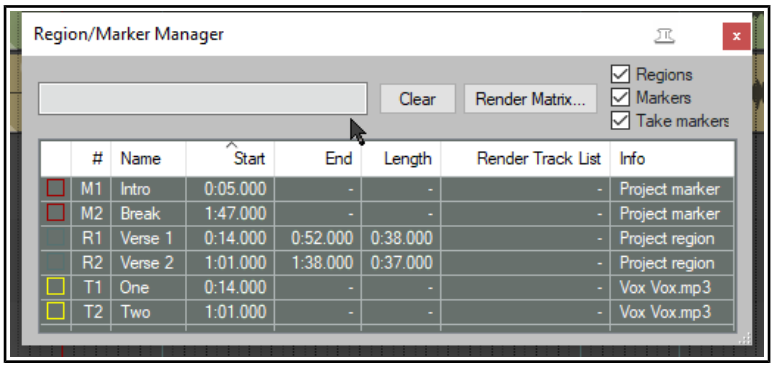
Pages 162-163
Section 9.9

The Region/Marker Manager

By default, take markers outside the visible part of the medi item are not show. There is an option on the context menu to display these.

The Region/Marker Manager

The **View, Region/Marker Manager** command toggles this display, used to manage regions and markers (including take markers).



This manager organises markers and regions using its buttons, its controls and its context menu (displayed by right-clicking on its title bar or in its background area.) This includes options that can later be used within the **Region Render Matrix** for rendering.

For additional options for the display of region names and numbers on the ruler, see **Ruler Layout Options**.

To do this ...	... you do this
Select which region/marker types to display	Use check boxes in top right corner of R/M Manager window.
Choose which columns to show/hide	Right click on any column header, select from list.
Sort rows by any column header	Click on column header, twice to reverse sort order.
Change column order	Drag header(s) left or right.
Edit marker/region name	Double click on name.
Zoom to region in arrange view	Double click region number.
Display take markers outside visible media item	Select command from Region/Marker Manager context (right click) menu. By default these are not displayed.
Go to marker in arrange view	Double-click marker number.
Select several markers/regions	Click on first name, then Ctrl click on others to build selection.
Delete markers/regions (but not the media items within them)	Make selection, press **Delete**.
Change region/marker color	Click in small color box in first column, use color picker.
Change marker name	Double click on marker name, enter new name.
Change marker/region start/end time or length	Double click on current value, enter new value.
Filter marker region list using filter box above the table. See also **Using Search Filters**	Type text string– e.g. *verse* to list only markers/regions containing that text string. Supports boolean search, e.g. *lead* OR *break* finds names including either of those strings.
Find marker/region in manager from the ruler	Right-click on marker/region name on ruler, choose **Select in Region/Marker Manager.**
Specify tracks to be included when region is rendered	Build selection of tracks in arrange view, then select region, click in **Render Track List** cell, and choose **Render only selected tracks**, *or* click in the region's **Render Track List** cell and select tracks from menu list, or **All Tracks**.
Add tracks to region render list	Select from the region's **Render Track List** dropdown.
Renumber markers, regions in timeline order	Select command from the Region/Marker Manager context (right click) menu.
List markers and regions separately	Enable this option from the manager's drop down menu.

To do this ...	... you do this
Import regions/markers from .CSV or .TXT file	Choose either to merge or import from context menu.
Add/remove child tracks to render list with parent	Enable this option in the context menu.
Export regions/markers to file	Choose this command from context menu.
Dock R/M Manager in the docker	Choose this command from the context menu.
Seek playback when selecting marker or region	Enable this option in context menu.
Automatically play region thru then repeat or stop when selecting region	Enable this option in context menu.

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Section 9.9

Rendering a Project

New options available to render stems pre-fader and save outfile stats for individual file to render_stats.html.

Rendering A Project

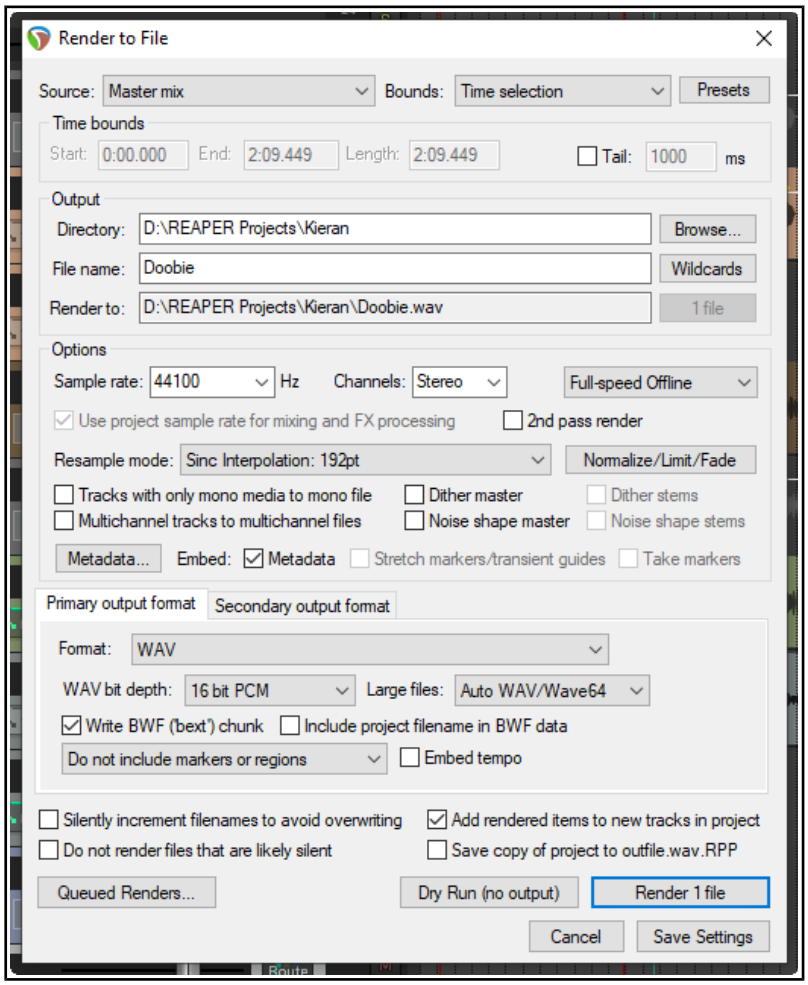
As you'll find out before the end of this chapter, the **File, Render...** command has several uses. One is for rendering a complete project down to a single stereo file.

When you have finished your recording and edits, added FX and automation, arranged all your tracks …. now you want to produce an end product for distribution.

If you're aiming for an audio CD, you will need one 16-bit stereo wave file for each song on the CD.

If you're distributing thru the web, then probably you will need stereo MP3 files. Regardless of format, each project will ultimately need to be rendered down to one file.

To do this, use the **File, Render** command (**Ctrl Alt R**). The dialog box (right) shows the various options. You must specify a directory and file name: if you wish, use the **Browse** button for either or both of these. Your other choices will depend on the ultimate destination of your material. A summary of **Render to File** dialog box options follows below.



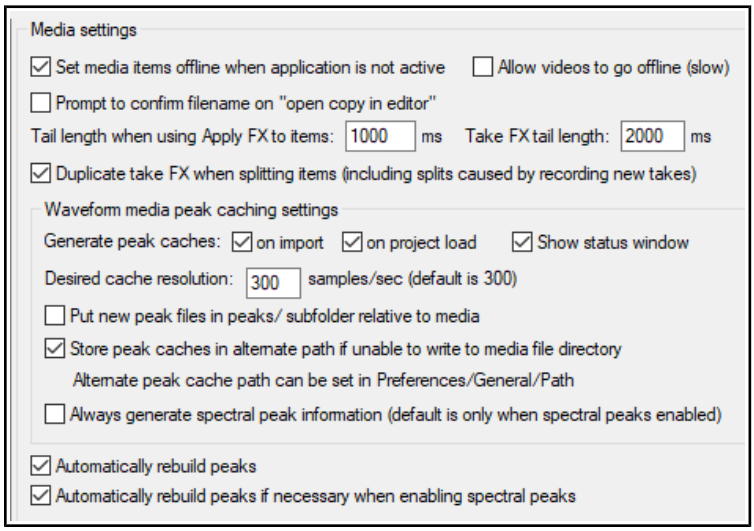
Option	Explanation
Source **(see also summary table at end of this chapter).**	**Master mix** mixes all media to a single file, **stems** sends selected tracks to separate files, or choose **both** (more later in this chapter). Other options are **region render matrix** (see later in this chapter) or **selected tracks** or **media items** or **razor edit areas** (optionally **via the master**).
Bounds: options vary according to Source (e.g. bounds options for Master Mix bounds are shown here on right)	Select **custom time range** (enter in edit boxes), **Entire project**, **Time selection** (made in arrange view), **Custom time range** (enter start and end times in dialog) or **Project regions** (selected in Region/Marker Manager or Region Render Matrix). For **Entire project**, markers named =START and =END (if present) will be used to define start and end of project for rendering.
Bounds: project markers/selected markers	Choosing **project markers** causes a separate item to be rendered from each project marker to the next. Choosing **selected markers** causes a separate item to be rendered between each selected marker and the next marker.
Presets button	Displays a menu of options to saves settings as a preset, or load, rename or delete a previously saved preset. These can include **Bounds and output** settings only, **Options and format** settings only, or **All settings**.

Option	Explanation
Directory and **File name**	Any directory specified in Preferences will be used by default. Otherwise, type in a directory of your choosing or use the **Browse** button. *See Preferences (General, Paths and Keyboards) for more about relative and absolute paths* Use **Wildcards** to include in the filename data such as track name or number, project file name, and/or date/time stamps (Chapter 21.2.1).
Sample Rate	Select a value in the range 8000 to 192000, depending on output format and other factors. Some examples follow in the table after this one.
Channels	Choose **mono**, **stereo** or select a number for **multichannel** output.
On or Off-Line Speed (see also note below table)	Full-speed (default) for fastest rendering. Others include 1 x offline, online (play mix while rendering), online (idle) and offline x 1 (idle). Idle assigns a lower system priority to the render thread, freeing PC resources for other tasks.
Use project sample rate...	If enabled the project sample rate will be used for mixing and FX/synth processing. If in doubt, leave this enabled.
2nd pass render	Audio plays once before rendering, so that FX tails (e.g. reverb) are applied.
Normalize/Limit/Fade	**Normalize** to **RMS-I**, **LUFS-I, True Peak, Peak**, **LUFS-M max** or **LUFS-S max** to a target level or **Brickwall limit** to **Peak** or **True Peak**. Optionally, only normalize files that are too loud. **Fades** can be applied (in and/or out) of a length and shape that you specify.
Resample mode	Various options allow trade off between speed and quality. Default is 192.
Use project rate	Enabled this automatically uses project sample rate for mixing/processing.
Tracks with only mono media ...	Enabling this ensures that mono channel rendering will automatically be applied to tracks where all media items are mono or with a mono Item Setting.
Multichannel tracks...	These can be rendered to multichannel files. An example follows shortly.
Dither, Noise shaping (master mix and/or stems)	Not available with all output formats, commonly used when rendering 24 bit (or higher) audio material to 16-bit WAV format for audio CD. Creates a smoother transition to the lower sample rate in the rendering process.
Render stems prefader	This option is available if the source option includes stems.
Metadata	Click this button to embed metadata in the rendered file – see Chapter 21.2.2.
Primary/Secondary output format	Select the primary format for rendering your material (or choose dry run, no output). You may also choose a secondary format, for example, to render two separate files, one in WAV and the other in (say) MP3 format. Choose WAV, AIFF, CAF, audio CD image, DDP, FLAC, MP3, OGG Vorbis, OGG Opus, video (Ffmpeg/libav encoder), video (GIF), or WavPack lossless compression.
Format specific options	Other options depend on the format, e.g., for WAV or AIFF files, bit depth, for FLAC encoding depth and data compression level, for MP3 bitrate mode (e.g., variable or constant) and the actual bitrate, and so on. For WAV files, you may embed markers and/or regions as cues in the output file(s), and/or project tempo. The option **Include project filename in BWF description** is also available for WAV format: it associates rendered files with the source project – see Chapter 12.
Silently increment filenames...	Prevents you from accidentally overwriting an existing file: an incremental number (001, 002, etc.) will be added if an existing file name is used.
Embed tempo	This option is available for WAV and AIF files only. See section **Embedding Transient Information when Rendering** for detailed explanation.
Do not render ...	Optionally, do not render files that appear to be silent.
Add rendered items to new tracks...	If enabled, this option causes your rendered file(s) to be added to the project as new tracks.
Save copy of project to outfile.wav.RPP	Tells REAPER to make a time and date stamped copy of your project file, preserving all settings exactly as they are at the time of rendering.

Option	Explanation
Save outfile stats	Creates html file with separate stats for each rendered file.
Queued renders	Add to or open render queue for rendering.
Render x files or **Dry Run** (see screenshot below)	Choose render to render one or more files, according to your options. Choose dry run to "test" render without actually rendering any files. Values (as appropriate) for Norm, Peak, Clip, RMS, Lrange and LUFS are displayed as the file is rendered. Click **Info** button for further analysis.
Delay queued render to allow samples to load	Resolves problems that can be caused when samples (especially large samples) need to be loaded before rendering.
Save settings	Saves the render settings without rendering any files.

Media import preferences now separated from general Media preferences.

Media Preferences



The **Media** page of the **Options, Preferences** window lets you customize your Media settings.

General Media Settings

Options to **Set media items off line when application is not active** and to **Allow videos to go offline.**

Toggle option to **Prompt to confirm filename on "open copy in editor"**.

Set tail length when FX applied to items and takes.

Duplicate take FX when splitting: Determines whether any existing FX in an item's FX chain are automatically copied to new items that are created when the original item is split.

Waveform media peak cache settings

Generate peak caches: You can determine if you want peak caches generated **on import**,and/or **on project load**, also whether to **Show status window**. .

Desired cache resolution: Determines the precision to be used.

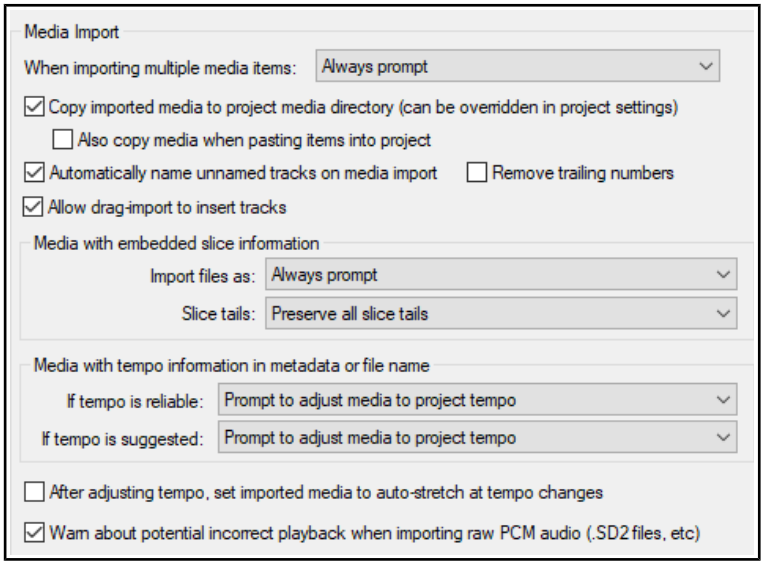
Options to **Put new peak files in peaks/subfolders relative to media** and **Store peak caches in alternate path if unable yo write to media file directory**.

Option to **Always generate spectral peak information**.

Option to **Automatically rebuild peaks**.

Option to **Automatically rebuild peaks if necessary when enabling spectral peaks**.

Media, Import Preferences



When inserting multiple media items: You can choose whether the **default behavior** should be to **insert as separate tracks**, to **insert sequentially in a single track**, for **REAPER to determine which appears the more appropriate**, or whether you wish **to be prompted each time**.

Copy imported media items to project media directory: helps you to keep together files that belong together.

Whether to use the media file name to **Automatically name unnamed tracks on media import** and whether to **Remove trailing numbers.**

Whether to **Allow drag import to insert tracks** (see chapter 4.7).

Other **Media Import** options include how you wish to deal with **embedded slice information**, in particular how to **import files** and how to handle **slice tails**.

Options for importing **media with tempo information in metadata or file name** are determined by whether or not the tempo is reliable or suggested. There are options **After adjusting tempo, set imported media to auto-stretch at tempo changes** and to **Warn about potential playback when importing raw PCM audio**.

Synching to an External Device

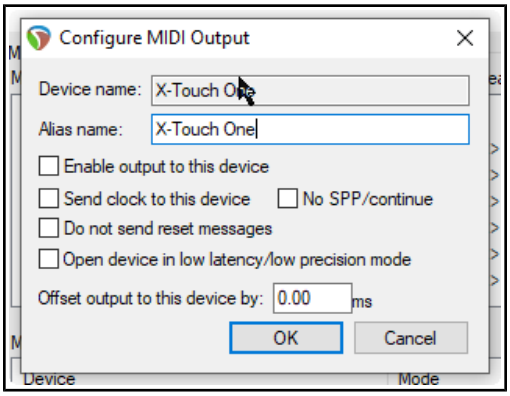
MIDI device output settings now has separate option whether to include SPP data when sending clock to device.

Sending Clock/SPP from REAPER to an external MIDI Device

To send Clock/SPP data from REAPER to an external MIDI device, you need first to have enabled the feature under **Options, Preferences, MIDI Devices**. Then ...

Double-click on the MIDI output device name to open the Configure MIDI Output dialog box, **and select the option Send clock to this device.**

There is an option to **exclude song position pointer data (SPP**) from the MIDI clock signals. There is also an option to **Open device in low latency/low precision mode**.



REAPER User Guide

Main changes, version 6.70

November 2022

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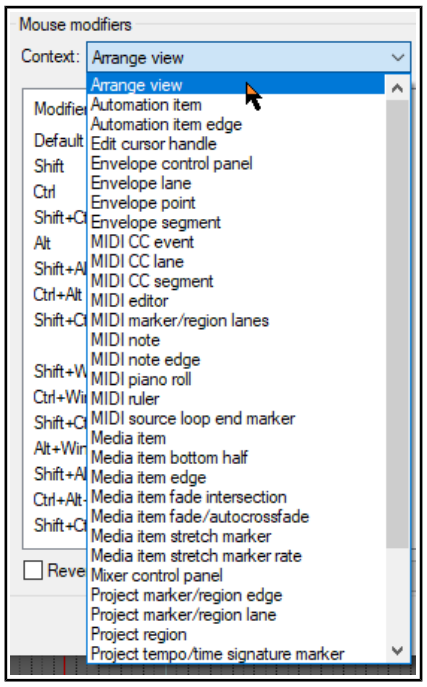
Page 288
Section 15.19

Mouse Modifier contexts now listed alphabetically

We've come across the mouse modifiers page of REAPER's preferences settings several times already. This page is where you can change any of REAPER's default mouse modifier controls and also add more of your own. Some pointers to keep in mind:

- **Modifier keys**. Windows users can use any of these modifier keys, in any combination, for any mousewheel action: **Shift**, **Ctrl**, **Alt**, **Win**

  Mac users may use any of these modifier keys, in any combination: **Shift**, **Command**, **Option**, **Control**
- **Contexts**. The Contexts drop down list on the Mouse Modifiers page of your preferences window lists the contexts in which you could use your mouse and for which you could need modifiers (see right). When you select an item from this list, current mouse assignments for that context are displayed.



For most contexts you will find a number of variations, depending upon the exact kind of mouse action being undertaken. For example, separate mouse modifiers can be applied to media items depending on whether the mouse action being applied is a simple left click (which by default selects the item), left drag (which by default moves the item) or a double-click (which by default opens MIDI items in the MIDI editor, or displays media item properties for audio items). Some contexts (e.g. Arrange view) also make middle button mouse actions available.

You aren't going to learn all of these at once, and some of them you may never need. For example, if you never do any work with MIDI then the various MIDI contexts are unlikely to be important to you. Take the time to identify those which you are likely to use the most and think about how you can improve them. The procedure for customizing REAPER's mouse modifiers is as follows:

Page 391
Section 21.3

Render: option added to render only those track channels that are sent to parent

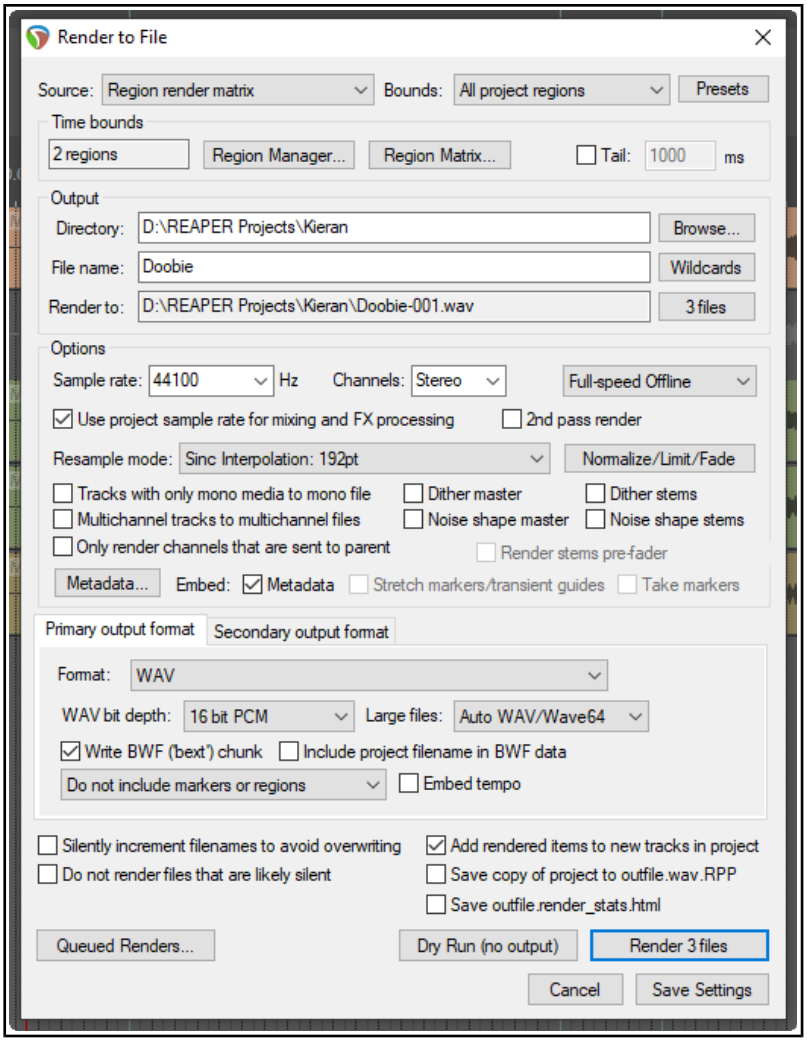
As you'll find out before the end of this chapter, the **File, Render...** command has several uses. One is for rendering a complete project down to a single stereo file.

When you have finished your recording and edits, added FX and automation, arranged all your tracks …. now you want to produce an end product for distribution.

If you're aiming for an audio CD, you will need one 16-bit stereo wave file for each song on the CD.

If you're distributing thru the web, then probably you will need stereo MP3 files. Regardless of format, each project will ultimately need to be rendered down to one file.

Use the File, Render command (Ctrl Alt R). The dialog box (right) shows the various options. You must specify a directory and file name: if you wish, use the Browse button for either or both of these. Your other choices will depend on the ultimate destination of your material. A summary of Render to File dialog box options follows below.



Page 404
Section 21.3

Actions added for stem rendering, including to render multichannel (parent only) stems.

Stem Render Actions

REAPER's Actions List includes several actions that can be used to accommodate particular requirements when stem rendering. To browse all these actions, search the Actions List for the text string *stem render*.

For example there are actions for:

- 2nd pass rendering: these ensure that REAPER will play the render area through a second time before rendering: this ensures that effects such as reverb tails are included in the rendered item.
- Rendering selected area of tracks to mono, stereo or multichannel, including other options, such as to mono, stereo or multichannel.
- Rendering selected area of tracks to multichannel (parent send only) stem track

REAPER User Guide

Main changes, version 6.71

November 2022

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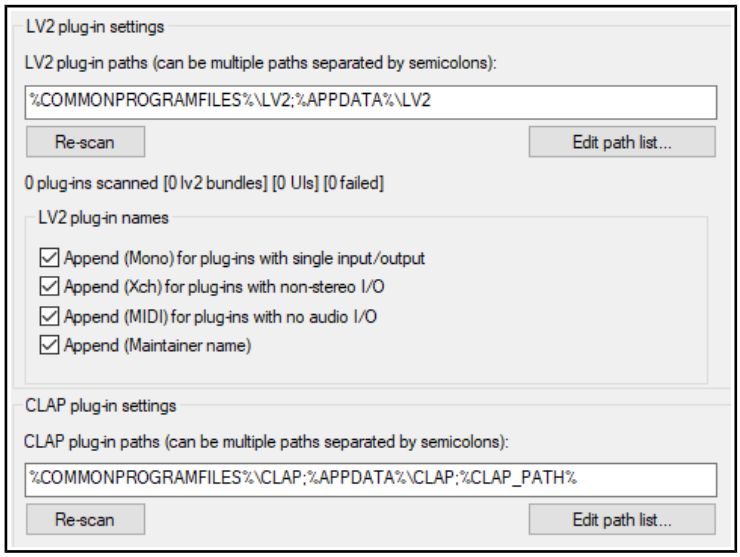
Page 425
Section 22.10.3

REAPER now recognises CLAP plug-ins.

Plug-ins, LV2/CLAP

Options are available to determine LV2 plugin paths, to re-scan for LV2 plug-ins, and to determine how REAPER is to handle LV2 plug-in names (shown right).

For CLAP plug-ins you are able to determine the path list and to re-scan.



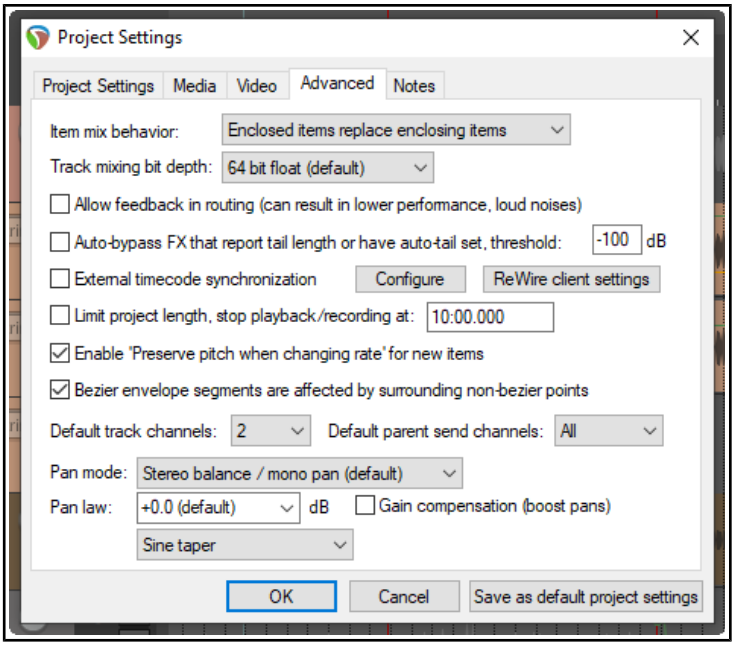
Pages 31, 113, 205
Sections 2.3, 6.5, 12.6

Options to set FX instances to bypass on silence.

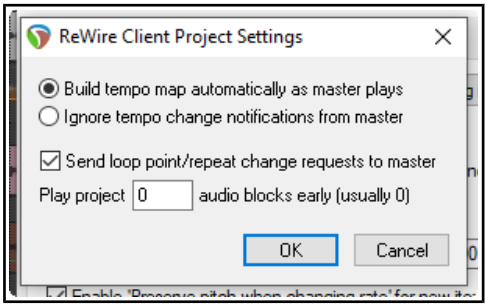
Section 2.3
Page 31 – Project Settings: Advanced

New option to auto-bypass FX that report tail length less than a specified threshold.

Project Settings: Advanced



- **Item Mix Behavior.** Determines behavior when one media item is placed on top of another. Options are for enclosed items to replace enclosing items, items always to be mixed, or for the newer item to replace older item.
- **Track mixing depth**. If unsure, leave at the default setting.
- The option to allow **feedback in routing**. Feedback routing can in some instances be useful, but can risk damage to audio equipment. *If in doubt, do not select this option.*
- **Auto-bypass FX that report tail length or have autotail set …**
- **… threshold**. Establishes dB floor below which a FX where this option has been enabled should be bypassed.
- The option to **synchronize** project with an external device timecode.
- **Rewire client settings**. These are shown on the right.

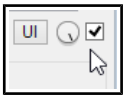


- There are options to limit **project length** and r**ecording time**, also to set the default state for **Preserve pitch when changing rate**.
- Option to **prevent bezier envelope segments being affected by surrounding non-bezier points.**
- Default number of **track channels** and **parent send channels** for new projects.
- Specifying a **default pan law** for your tracks. The pan law determines how the relative track volume behaves when that track is panned more or less to one side or the other. **Gain compensation boost** can be enabled or disabled. Pan laws are discussed in more depth later in Chapter 2.
- **Default track pan mode**. You have choice of pan modes, some mono, some stereo. See Chapter 11.

Section 2.3
Page 113 – Project Settings: Advanced

New option to auto-bypass FX individual FX instances on silence.

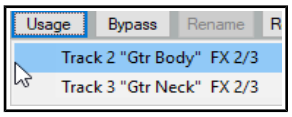
This new option is included near the end of the table, shown with light gray shaded background in the table below:

In order to do this …	You need to do this …
Restore original FX default settings	Click on down arrow (next to **+** button) to display preset list. Choose **Reset to factory default**. Click on **+**, choose **Save preset as default**.
FX Wet/Dry mix and FX bypass	The rotary Wet/Dry mix button (to the right of the **UI** button) controls how much of the wet signal (i.e. with FX) is mixed in with the dry (i.e. pre FX) signal. The default is 100% wet. The checkbox to its immediate right can be used to bypass the FX altogether. 
Auto-bypass plug-in on silence	Right click on plug-in name (left column) and select this option from menu. This, for example, can be used to prevent a reverb tail during a silent passage. The silence threshold is defined in advanced project settings.
Back up FX chains and presets	These can be backed up and restored using the export/import configuration buttons in REAPER's Preferences (General settings). See Chapter 22 for more information about importing and exporting configuration setting
FX Chain Options	The FX chain window menu includes the **Options** command. Several of these are quite technically advanced. They are discussed at the end of the **REAPER Plug-ins in Action** chapter.

Section 12.67
Page 205 – FX Bay/FX Parameter Bay

New option to auto-bypass FX on silence for individual FX instance(s).

Shown with light gray shaded background in table below:

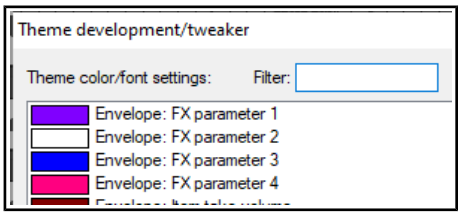
In order to do this …	… you do this
Show FX performance stats	Right click on any column header, select **Performance**.
Sort by any column header	Click column header (twice for reverse sort).
Add FX from FX Bay to track or media item in project	*Either…* Select track or media item in Arrange view, right-click on plug-in name in FX Bay, choose **Insert into project** *Or…* Drag and drop plug-in from FX Bay to track panel or media item.
Open FX browser window	Click on the **FX Browser** button.
Add FX to the FX Bay	Drag and drop from FX Browser.
Locate and open FX window for any FX instance	Right click on track name in the Track column then click on the required instance (or select plug-in and click the **Usage** button). 
Toggle any FX to bypass or offline	Select the FX then choose **Bypass** or **Offline** from the right-click menu, *or* use the **Bypass** button (Shift-click for **Offline**.
Assign a preset to an FX (see note below table)	Right-click in the Preset column for the FX and select from the menu.
Manage any FX parameter	Right-click on FX name, choose **FX parameters** then **FX parameters list**, then select feature (e.g. Show in track controls or track envelope), then select parameter from list.
Toggle auto-bypass on silence for FX instance	Right-click on plug-in name, select **Auto-bypass plug-in on silence** from context menu. The silence threshold is set in project settings.
Change FX instance preset	Right-click in the Preset column for the FX and select from the menu.
Replace one FX with another project bay FX	Right-click on FX name, choose **Replace in project** then select from the flyout menu of FX. You can replace all instances or a single instance.
Locate FX on hard drive	This information is displayed in the **Path** column.

Note: The same FX name will occur more than once in the plug-in name list if there are any instances where that FX has been assigned a preset..

Section 18.31
Page 351 – Changing FX Parameter Envelope Colors

New section: subsequent sections in this chapter are renumbered, e.g. the previous 18.31 now becomes 18.32.

The **Theme Development Tweaker** (Chapter 12) can be used to change the color of any envelopes. Open the Actions List and run the Theme tweak/development window action.



Customised colors can be selected for standard track and item envelopes (such as volume, pan, mute). In addition, up to four customised colors are available for FX parameter envelopes: these are labelled within the tweaker FX parameter1, FX parameter 2, FX parameter 3 and FX parameter 4.

These colors are applied to your FX parameter envelopes in groups of four. For example, if you have six FX parameters automated on a track:

- The FX parameter 1 color will be applied to the first and fifth parameter.
- The FX parameter 2 color will be applied to the second and sixth parameter.
- The FX parameter 3 color will be applied to the third parameter.
- The FX parameter 4 color will be applied to the fourth parameter.

REAPER User Guide

Main changes, version 6.72

December 2022

This document reproduces those sections of the User Guide that are either new or have important modifications.

Any minor tweaks and twiddles are not included here, but are listed on page 13 of the main document.

Pages 102 - 105
Section 5.16

The most important change is the addition to the track grouping matrix (formerly called the grouping matrix) of a column Media/razor edits. When enabled, this allows for all media items in a group to be linked for editing (e.g. copying, moving). Equivalent changes have also been made to the track grouping dialog.

Minor changes include an option to show or hide group flags, the ability to right click over a track name to display that track's grouping dialog, and a button to open the new Track Group Manager.

Track and Track Parameter Grouping

Note: As well as conventional grouping, REAPER supports VCA (Voltage Controlled Amplifier) grouping. To help avoid confusion, VCA grouping will be considered as a separate topic later in this chapter.

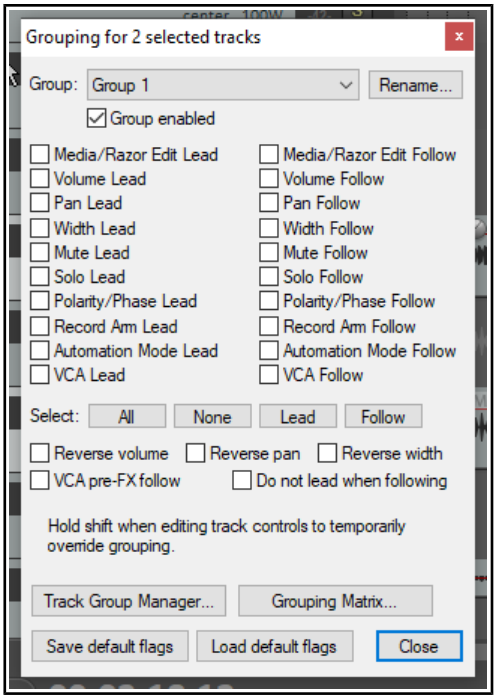
By using track and parameter grouping you are able to define relationships between different tracks and their controls so that when you make a change to one control in the group, changes are also made to other tracks. The nature of these relationships can vary from being quite simple to rather complex. Here are some examples.

- You might have two tracks that you wish to keep at a constant volume relative to each other. In this case, you could ensure that whenever one is faded up or down then so is the other.
- You might have two tracks that need to be panned opposite each other. In this case, you can ensure that when one is panned in one direction, the other is automatically panned in the other.
- You might have two or more tracks that you wish to be always soled or muted together.

In a moment, we'll work thru some examples. There are two main ways to create and manage your groups. This can be done either using the **Track Control Panel** or the **Track Grouping Matrix**. Here is an overview of both methods.

Method 1 uses the Grouping dialog box (shown right), which can be accessed from the Track Control Panel, the Mixer Control Panel. The method is as follows:

- In the TCP or MCP, select the tracks whose parameters you wish to group. Right-click over any track number in the group and choose **Track grouping** then **Track grouping parameters** from the menu (or press **Shift G**).
- When the Grouping window is displayed (see right) specify those parameters that you want to group. Optionally, you can change the group name from its default, which will be Group 1, Group 2, etc. Click on **Close** when finished.
- Make sure that the option **Track grouping enabled** on the TCP or MCP menu is selected (ticked).



You can use this same method later to make changes to your grouped parameter definitions.

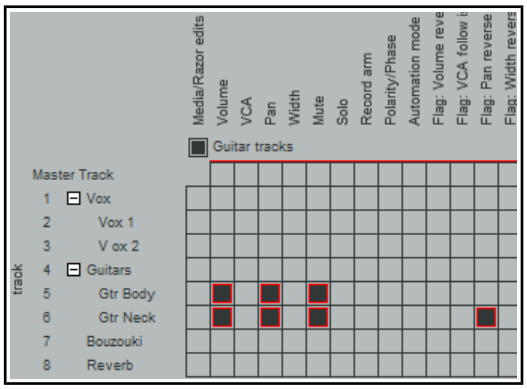
This interface might appear strange at first. For this reason, it may be easier, especially at first, to use the second method. Method 2 uses the **Track Grouping Matrix**.

The track grouping matrix, which can be docked, can be used to manage up to 64 different groups. To display this, choose the **View** command, then **Track Grouping Matrix**, or press **Ctrl Alt G**. We can create a special project file for our examples. You can then group any selection of tracks that you like: in this example, we will be working with the two guitar tracks enclosed within the track folder. Note that you do not need to place tracks in a folder in order to be able to group them.

First, you should note that track grouping globally is turned on and off using the **Track, Track grouping enabled** command. When this is ticked, grouping is enabled. This command can be used to temporarily disable track grouping without the need for you to redefine or modify your groups.

Basic Track Grouping

Example



Open the sample file **All Through The Night FOLDER**. Save it as **All Through The Night GROUPS1**. Use the **View**, **Grouping Matrix** command to display the matrix..

Each column except the first represents a control that can be grouped - volume, pan, mute, solo, etc. Each row represents a project track. Clicking inside the grid defines the tracks and parameters to be linked. In this example:

- The volume controls of the two guitar tracks are linked. Raising or lowering either volume control will automatically do the same to the other.
- The mute controls are linked. Muting either guitar track will automatically mute both.
- The pan controls are also linked – but note that for one of these tracks the pan reverse option is also enabled. This will ensure that when one of these tracks is panned, the other will also be panned – but in the opposite direction!

Notes:

1. The TCP shows colored ribbons for grouped parameters (see left). The **Appearance, Track Control Panel** preferences page includes an option to change this to edge lines or none.
2. To temporarily over-ride the grouping, you should hold **Shift** while adjusting the parameter of any one group member.
3. You can right click on any track name in the matrix to open the track grouping window for that track.
4. Notice the first Grouping Matrix column, headed **Media/Razor Edits**. This is a more complex topic and deals with matters such as the group editing of media items within a track group or across several groups. This will be explained in Chapter 7, **Managing and Editing Media Items**. The **Track Group Manager**, accessed by a button located above the matrix, will also be discussed and explained in that context.

Track Grouping Matrix Basic Controls

In order to do this ...	Using the Track Grouping Matrix
Display Help window	Click on the **?** Button (top left corner of window).
Define the tracks in a new group	Display the Track Grouping Matrix. Select at least one parameter (such as Pan) for each track in the group.
Adjust all linked faders for a group	In Mixer or Track Arrange view, adjust the fader for any one track in the group.
Adjust the fader for only one track in a group containing linked faders	In Mixer or Track Arrange view, hold **Shift** while adjusting the single fader.
Define a pan or volume relationship as reverse for a track within a group	In the track row, click on the intersection cell for **Pan Reverse** or **Volume Reverse**.
Change an existing toggle parameter relationship (such as Solo, Mute or Record Arm) into a reverse one	In Mixer view, hold **Shift** while clicking on the appropriate button (such as Solo or Mute) for the individual track. Use **Shift** again to restore the positive relationship.
Display grouping window settings for an individual track	Right click over the track name in the track grouping matrix.
Link more parameters for tracks in an existing group	Click on the intersection cells where the required parameter column meets the track rows.
Add another track to an existing group	Click on intersection cell where the required parameter column meets the row for the track that is being added.
Remove a track from an existing group	Click once, twice or three times on the appropriate intersection cell until it shows blank. If more than one parameter is linked, do this for each parameter.
Enable/Disable group	Click in the group's Enable/Disable box.

In order to do this ...	Using the Track Grouping Matrix
Select all tracks in a group	Click on the group name.
Ensure automation mode of follow tracks automatically follows that of lead	Use the **Automation Mode** column of for tracks in the group.
Fine tune behavior of groups which share common tracks.	Use the **Flag: Do not lead when following** settings to ensure, for example, that a track which is a lead in group 1 and a follow in group 2 will not act as a lead in group 1 when being a follow in group 2.

Lead and Follow Group Relationships

Each parameter that is included in a grouped relationship can take one of three states – Lead/Follow (the default), Lead only, or Follow only. The different ways in which this affects that parameter's behavior are:

- A Lead/Follow item can control other Lead/Follow and Follow only items, but not Lead only items. It can itself be controlled by other Lead/Follow and Lead only items. This is the default type, indicated in the matrix by solid black.
- A Lead only item can control other Lead/Follow and Follow only items, but not Lead only items. It cannot be controlled by any other item. This is represented in the matrix by the letter L.
- A Follow only item cannot control any other item, but can itself be controlled by Lead/Follow items and Lead only items. This is represented in the matrix by the letter F.

In the previous exercise, all items within our group had Lead/Follow status. This meant, for example, that when you adjusted the panning or the volume on either of the two guitar tracks, the equivalent parameter on the other guitar track would move according to the defined relationship. This happened regardless of which of the two tracks you used to make the adjustment. Let's now look at some different scenarios.

Example

This example illustrates a relatively simple case of how track parameters can be flexibly linked. Again, use the file **All Through The Night GROUPS1**.

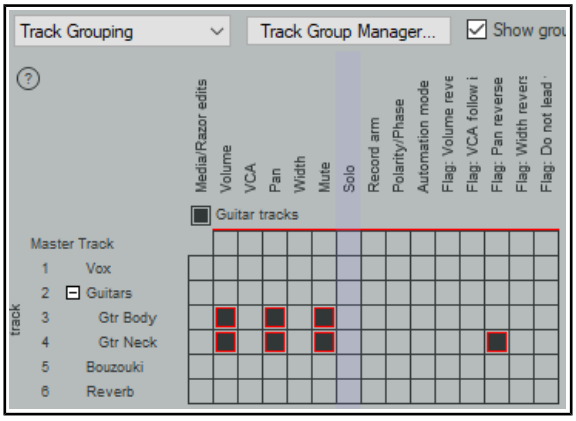
The Guitars folder and the Bouzouki track solo controls have been linked, Guitar as lead, the Bouzouki as follow.

Click twice on the Guitars/Solo cell to set it to lead, three times on the Bouzouki/Solo to set it to follow only. A fourth click would clear the cell altogethe7r.

You will now find that if you solo the Guitars folder, the Bazouki track will also be soloed.

If you unsolo this and then solo the Bouzouki track, however, you will hear only the Bouzouki track.

Save the file as **All Through The Night GROUPS 1A**.

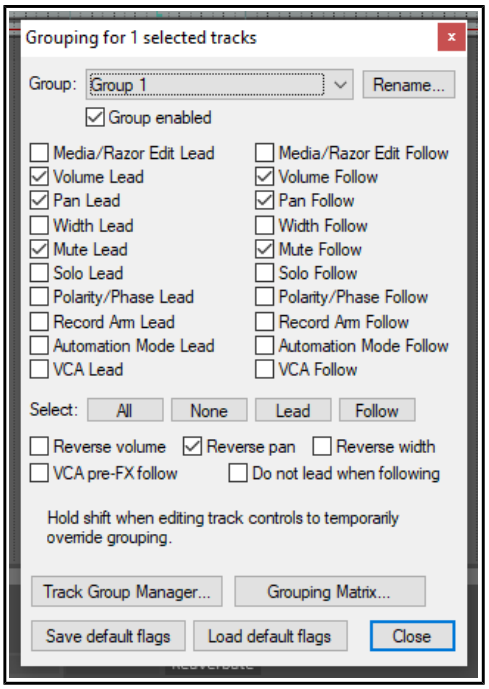


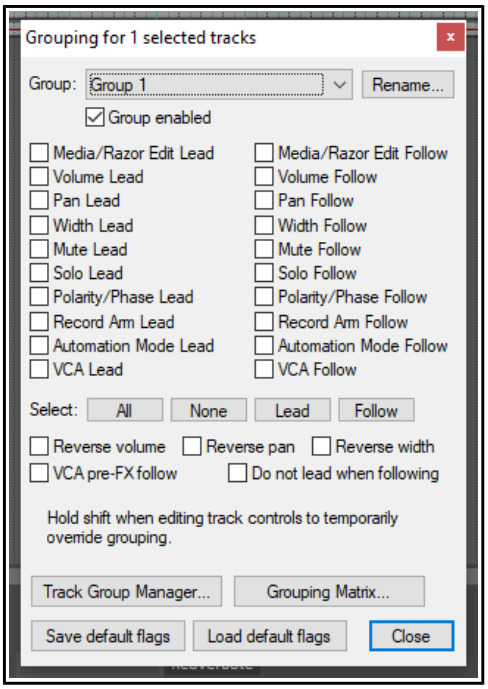
Track Grouping Window

The Track Grouping window displays all group information about the various parameters for any selected track or selection of tracks. Most commonly (and most usefully) it makes sense to use it with individual tracks, one track at a time. Again, this will be more readily understood if you work thru an example.

Example

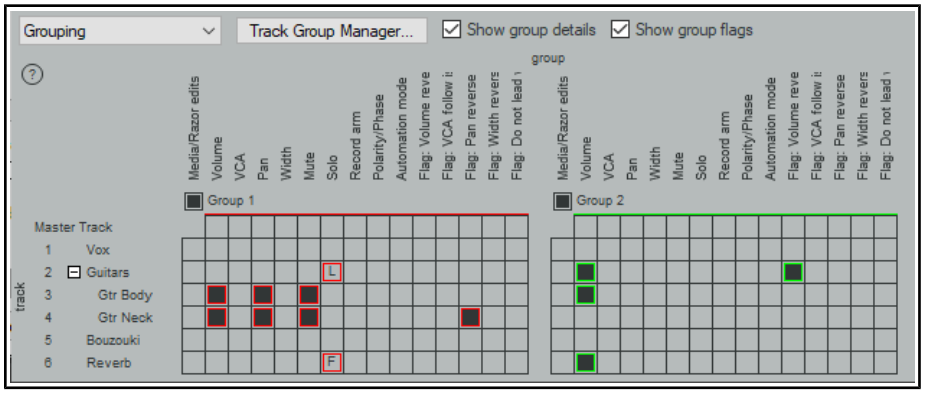
Open the project file **All Through The Night GROUPS1A.RPP.** Select the **Gtr Neck** track in the TCP. Either right-click over the track number and choose **Track Grouping Parameters ...** from the context menu, or press **Shift G**. This causes the Grouping window for the selected track to be displayed (see below left).

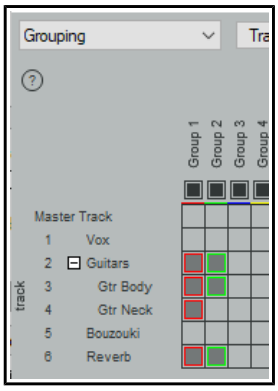




In the TCP, select the Bouzouki track. The display in the Grouping window changes (above right), to show the currently grouped parameters for the bouzouki. In this dialog box, click and select **Mute Lead.** This is confirmed by the display in the track grouping matrix.

You can define up to 64 groups in a project file. The actions list includes actions to select all tracks in any of these groups. In the example below, a second group has been added, to help when adjusting the balance between the volume of the vocal track and the various instruments.





Note: The first of the two check boxes above the matrix allows you to toggle on (above left) or off (right) the option to **Show group details**. The second allows you to show or hide the **Group flags** columns.

Track Grouping Window Basic Controls

In order to do this ...	Using the Track Control Panel
Define the tracks in a new group	Select the tracks in the Track Control Panel, press **Shift G** then select at least one parameter.
Name a group	Press **Shift G**, select the required group number and click on **Rename**.
Adjust all linked faders for a group	Adjust the fader for any one track in the group.
Adjust the fader for only one track in a group containing linked faders	Hold **Shift** while adjusting the single fader.
Define a pan or volume relationship as reverse for a track within a group	Select track in the TCP and press **Shift G**. Click on **Reverse Volume** or **Reverse Pan** as required.

Change an existing toggle parameter relationship (such as Solo, Mute or Record Arm) into a reverse one	Hold **Shift** while clicking on the appropriate button (such as Solo or Mute) for the individual track.
Link more parameters for tracks in an existing group	Open the Grouping dialog box for the group and select the required parameters.
Reset a track's volume, pan or width to its default value and adjust settings for other group members accordingly	Double-click on the volume, pan or width value displayed in the track panel.
Add another track to an existing group	Select the track in the Track Control Panel and press **Shift G**. Display the drop down group list and select the required group. Select the required parameters.
Remove a track from an existing group	Select the track in the TCP and press **Shift G** Unselect all selected items except **Group enabled**
Enable/Disable group	Press **Shift G**, select the group from the drop down list then click in the **Group enabled** box.

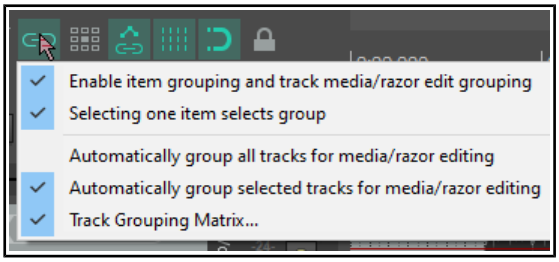
Tip: When playing back a song, you may from time to time wish to reset your VU Peaks without needing to stop and restart playback. To clear one peak, simply click on the peak number shown at the right hand end of the VU meter in the TCP or top of the VU in the MCP. To clear all peaks, hold down the **Control** key while you do this.

Page 124 (Extra pages)
Section 7.3

This is a new section, covering media editing and razor editing of items on tracks grouped for this purpose in the track grouping matrix.
This section includes a description of the revised and expanded options on the grouping toolbar on REAPER's default toolbar.
An important aspect of this section is the new track group manager, used to assist you when working with tracks which have been grouped for media editing purposes.

Media Item Editing with Track Group Items

In Chapter 5 we looked at track grouping, including the track grouping matrix. That section covered grouping and linking track controls, such as volume, pan and mute status. In this section we will be looking at grouping not track controls but media items within and across the tracks, so that a selection of such items can be edited together. For example, you might want to move or copy together a selection of items across several tracks, or to adjust the item volume handle for a selection of items on different tracks.



Track item grouping behavior can in part be managed via the item and track media grouping tool on the main toolbar. Right-clicking over this toolbar displays the menu shown above.

The Item and Track Media/Razor Edit Grouping Toolbar

This section requires you to have a basic working knowledge of both Track Grouping and Editing Media Items
It first deals with how to define and use sometimes complex group selections. These are likely to be temporary groupings for a specific task, such as copying the selection to one or more places in the same project file.
It then explains how to group a number of items across tracks permanently so that (for example) when one item is moved they all move together, or that razor edits can be easily applied to all group members.

You should familiarise yourself with these grouping toolbar options/commands and their meaning:

Enable item grouping and track media/razor edit grouping: this needs to be set to on whenever you wish to group items for any reason. **Alt Shift G** is a nifty way to toggle it on and off.

Selecting one item selects group: With this option on you can select all items in a group (defined in the track grouping matrix) by clicking on any one item in the group.

Automatically group all tracks for media/razor editing: With this option on, any razor editing time selection that you make will automatically include media items in all tracks.

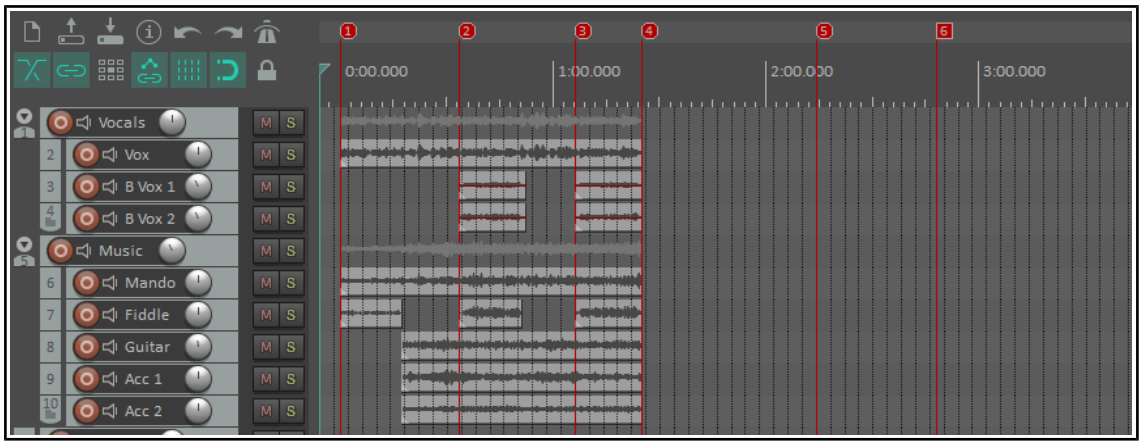
Automatically group selected tracks for media/razor editing: With this option on, razor edits or other media editing activity will automatically include all currently selected tracks, including those tracks included in any active track grouping matrix group or groups.

Track grouping matrix ...: This toggle option will open the track grouping matrix if it is not already open, or close it if it is currently open.

We're now going to look at a relatively simple example, without yet employing either the **Track Group Matrix** or another useful tool, the **Track Group Manager**. After that, we'll go on to examine some of the extra benefits available from also using these tools. The examples chosen in this section are solely for the purpose of illustrating how these features can be used and have no other significance.

Note 1: In the examples that follow, which specific instruments/voices are contained in which tracks is not important. The examples have been constructed solely for the purpose of illustration.

Note 2: For convenience and for illustration purposes, this model uses markers and **snap to marker** has been enabled. This is not essential.



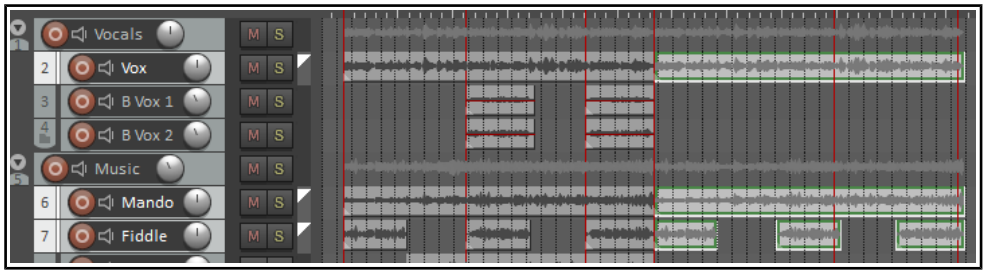
For these examples, we would need to ensure that all group toolbar toggle options except **Automatically group all tracks for media/razor editing** are enabled.

Examples

For the examples that follow, make sure that **Automatically group selected tracks for media/razor editing i**s enabled (on the grouping tool).

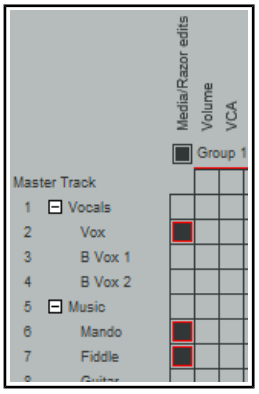
In this example, we want to copy the contents of tracks 2, 6 and 7 to continue to build the song.

1. In the track control panel, we select tracks 2, 6 and 7 (left click track 2, then Ctrl left click tracks 6 and 7). White flags will be displayed to indicate which tracks are selected (as shown below).
2. We now simply use Ctrl left drag to drag the media item on track 2 to the right to copy them all to their respective required positions (shown below).

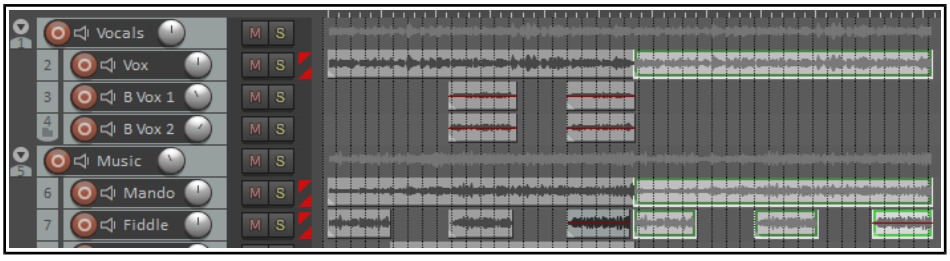


However, what if we regularly need to need to perform media editing tasks on these three tracks together? You don't want to be constantly redefining the track selection – especially if you are working with many more tracks, ten, twenty or more.

The answer lies in track grouping. Instead of what we have just done, we can do this:



1. To open the **Track Grouping Matrix** we can press **Ctrl Alt G**.
2. We group tracks 2, 6 and 7 and enable **Media/Razor edits** in the first column of this group. As shown here, both tracks are set to Lead/Follow (indicated by the solid black boxes). This will ensure that we can select media items on any of these tracks in order to edit the equivalent items on all tracks in the group.
3. Colored flags will now be displayed for each of these tracks, just inside the right hand edge of the track panel (shown below).
4. We left click on the item on track 2 – as long as **Automatically group selected tracks for media/razor editing i**s enabled then the items on tracks 6 and 7 are also selected.
5. Next we use Ctrl left drag to copy the required items.
6. We click anywhere in arrange view to clear the selection.
7. In this simple example we have just two tracks in our group, but remember that this could be a much larger number.



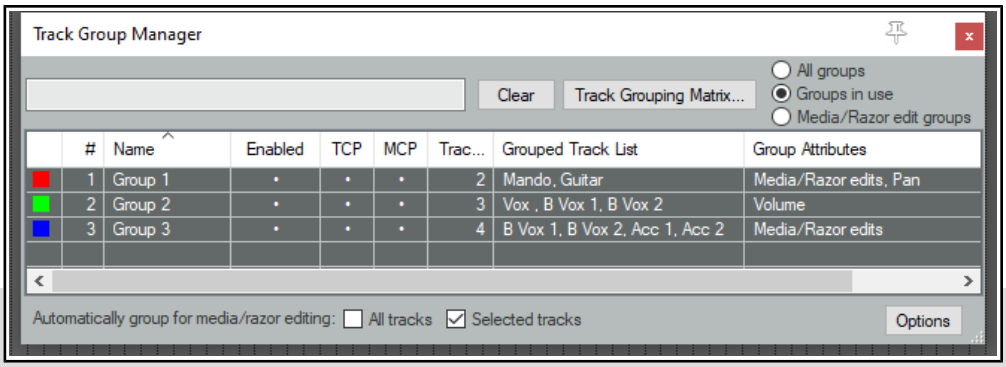
8. We might now encounter the opposite problem from that which we had before – i.e. we might now want to make changes to one media item only, without affecting the other items in the group. This can be done by temporarily disabling the group, in either the **Track Grouping Matrix** or the **Track Group Manager**.

Note: Items grouped for media/razor edits will behave as follows: mouse edits to lead items will affect follow items in the group whether or not they are selected: actions will affect only selected items.

The Track Group Manager

The Track Group Manager is opened from the **View** menu or from a button on the Grouping Matrix.

It lets you manage the behavior of the groups created in the Grouping Matrix.



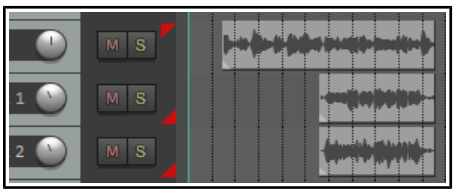
Tip: If you have any track(s) enabled for media/razor edits in more than one group then most likely only one of those groups should be enabled at any one time. Otherwise changes made to items on a track in one group could also affect items on other groups. You should also be wary of any hidden tracks that might be included in a group: group edits would include items on those tracks also!

Use this...	**To do this ...**
Filter Box (top left)	Filter list of groups, by group name, according to whatever text you input.
Clear button	Clear any current filter, makes all groups available.
Track Grouping Matrix button	Click to open and display the Track Grouping Matrix.
All groups, Groups in use or **Media/Razor edit groups**	Determine whether to list all groups, only those currently active/enabled, or only those where one or more tracks are active in the Media/Razor edits column.
1st Column	Click to set color, set a random color, or reset color to default.
Name column	Click once to select the group: double-click to rename it.
Enabled column	Toggle group status to enabled/disabled.
TCP	Specify whether to display these tracks in the track panel in arrange view.
MCP	Specify whether to display these tracks in the mixer panel in mixer view.
Tracks	Indicate number of tracks in each group.
Grouped track list	List all tracks in a group. Double click for menu to add tracks to, or remove tracks from, the group.
Group attributes	Indicate which controls/features are enabled for the group – e.g. Media/Razor edits, Volume, Pan, Mute, Solo. Double-click to open the **grouping window** to edit group characteristics.
Automatically group options	Toggle options to choose whether to automatically group for media/razor editing all tracks in the project, selected tracks only or no tracks. Can be used, for example, to temporarily group all tracks in a file. **Note:** When automatically group selected tracks is enabled, clicking a media item will change the selection only if that track is not already selected.
Options button	Display menu of toggle options to: Select tracks in group when selecting group Add/remove child tracks when adding/removing parent folder Show track dropdown list nested by folders Dock Track Group Manager window in docker
Sort group list	Double-click on any column header to sort list by that column.
Note: Changes to any group status, characteristics or features made here are automatically carried over to the Track Grouping Matrix and vice versa.	

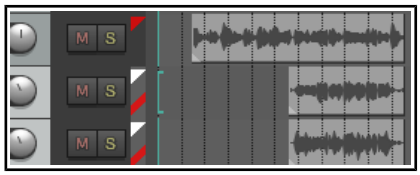
Lead/Follow Track Group Edits

When a track group enabled for media/razor edits includes different lead/follow relationships on different tracks then the following applies:

Changes made on items in a lead track will also be applied to the follow tracks. Changes made to a follow track will only be applied to items in other tracks if those tracks are also selected.



Consider this example (shown above right). Three tracks are grouped. The positioning of the red flags shows that the first of these (at the top of the track's panel) is lead only while the other two (at the bottom of the track's panel) are follow only. If we apply, say, a fadeout to an item in the leader track it will be applied to all three.



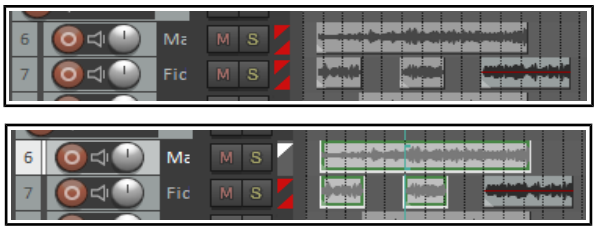
A fadeout applied to an item in the second or third track in the group would be applied to that one item only. However, if you first select both tracks, as shown by the white flags on the left, you could apply the fadeout to either follower track and it would still be applied to both.

Groups, Items and Mouse Modifiers

Where grouped tracks have grouping enabled for media/razor edits then editing actions made to an item in any one of those tracks will generally also be applied to appropriate items on the other group tracks. Appropriate items are those that start and finish within the time bounds of the selected item. Here's an example.

Example

Shown here are two tracks which have been grouped in the track grouping matrix, with the option for grouped media/razor edits enabled.



If we select the item on track 6, only the first two of the items on track 7 are also selected, because they are fully enclosed within the bounds of the selected item.

Note: Locked media items within a track group will not be included in track group edits. Lock settings enabled on the toolbar will also restrict track group editing options.

Media Editing Mouse Modifiers

Sometimes you will want a particular mouse editing action to behave differently from normal. Typically this might be to perform an editing action to one media item in a group without affecting other group members. Mouse modifiers can come to your aid. By using a booster key (or combination of booster keys), such as Shift or Control while performing a mouse action you will ensure that the mouse behaves differently in that one instance.

REAPER has literally hundreds of such modifiers, and many are discussed throughout this user guide. There's a general introduction later in this chapter. Below are listed some commonly used item editing examples. This list is not comprehensive. You can find more at **Options, Preferences, Editing Behavior, Mouse Modifiers.**

Media item, left click

Shift	Add items to selection
Ctrl	Toggle item selection
Alt	Select item ignoring grouping

Media item, double click

Shift	Set time selection to item
Ctrl	Set loop points to item

Arrange view, right drag

(default)	Marquee selected items
Shift	Marquee, add to selection
Alt	Select razor edit area
Shift Alt	Add to razor edit area

Razor edit edge, left drag

(default)	Move edges
Alt	Stretch areas

Track (background area), left drag

(default)	Select time range
Shift	Move time selection

Media item, fade/autocrossfade, left drag

(default)	Move fade, no snap
Ctrl	Move fade, no snap, ignore selection
Ctrl Alt **	Move fade no snap (relative edge edit)

Media item, left drag

Ctrl	Copy item
Alt	Move item contents

Razor edit area, left click

Shift	RemoveSplit media items at area edges
Ctrl	Move area forward without contents
Shift Ctrl	Move area backward without contents
Alt	Remove one area

Razor edit envelope area

(default)	Move or tilt envelope vertically
Ctrl	Expand or compress envelope range

Track (background area), left click

(default)	Deselect all items, move edit cursor
Shift	Extend time selection

** Allows a fade to be applied to a selection of items whose start and/or end points do not align. With track edit grouping this will only apply if the grouped item lines up with the start/end of the item being edited.

Note that there are many available actions and behaviors that by default are not assigned to any modifier. Double-click in the Preferences, Mouse Modifiers behavior column for any context modifier to explore these.

Track Grouping Actions

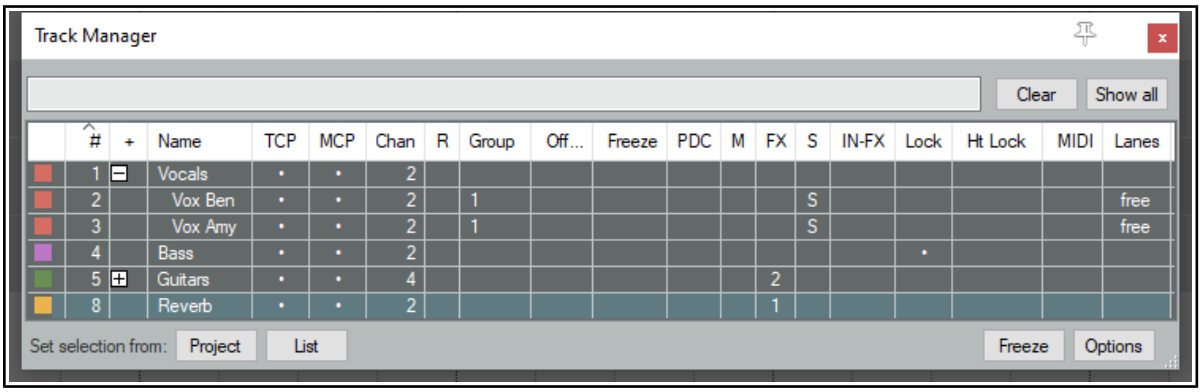
REAPER's **Actions List** includes several track grouping actions which you can access via the list, or for which you can create your own keyboard shortcuts, toolbar buttons, or menu items. Some examples are shown here:

Create new track media/razor editing group from selected tracks
Remove selected tracks from all track media/razor editing groups
Toggle all track grouping enabled
Set default mouse modifier action for "Razor edit area left click" to "Remove one area ignoring track grouping"

Pages 210-211 (previously pages 206 - 207)
Section 12.7

The Track Manager now supports setting track colors to random, selected, or default, and collapsing/expanding track folders. New group column: double-click to open track grouping dialog.

The Track Manager

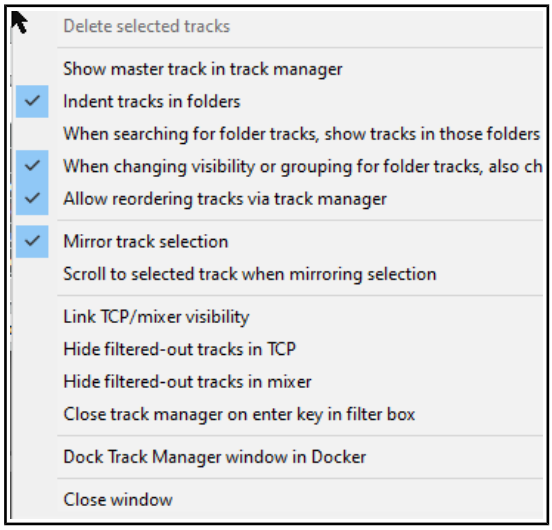


The **Track Manager** (**View, Track Manager**) gives you overview control of your tracks. It shows a grid similar to a spreadsheet or table. If the grid is empty, click on the **Show All** button (above right) to display the project's tracks.

The **Options** button menu (or right-click on title bar) includes **Mirror track selection**. (so that a track selection made in either the Track Manager or the TCP is also applied in the other) and, optionally, to **Scroll to selected track** in TCP and mixer.

There is an option **When changing visibility or grouping for folder tracks, also change tracks in those folders**.

For projects with folders/child tracks the hierarchy is retained within the track manager. The option to **Indent tracks in folders** can be disabled from the **Options** menu. The other **Options** button menu items are explained in their context in the table below. The table also summarises what you are able to do within the track manager window.



To do this ...	**... you do this**
Change column order	Click and drag column header left or right.
Hide/Show columns	Right click on any header, deselect/select from list.
Expand/collapse folders	Click on the **+/- symbol** in the column headed **+**.
Adjust column width	Click and drag left or right on boundaries between column headers,
Filter the track list by name *See also the section Using Search Filters for advanced options.*	Type text in filter box: e.g." co" to list only those tracks whose name includes co. Supports use of NOT and OR filters: e.g. "bass OR gut" will find all tracks with either bass or gut as part of their track name. Use the appropriate **Options** menu commands to also **Hide filtered-out tracks in TCP** and/or **Hide filtered-out tracks in mixer**. The **Clear** button removes the filter. There are options in this menu **When searching for folder tracks make sure child tracks in those folders are shown** and to **Close track manager on enter key in filter box** from the **Options** menu.
Change TCP track order in track manager	Drag and drop tracks up or down. This can be disabled by disabling **Allow reordering tracks via track manager** from the context menu.
Delete track	Select track row and press **Delete**. You will be prompted to confirm this.
Show/hide Master	Toggle **Show master track in track manager** in **Options** button menu.

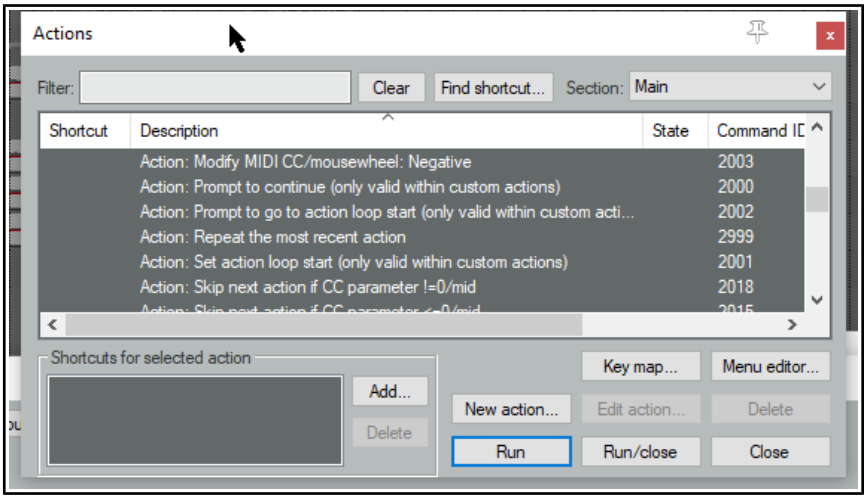
To do this …	… you do this
Set/change track color	Click on square in the first column, then **Set color** or **Set to random color**.
Show/hide tracks in TCP/MCP	Click in track row in TCP/MCP columns. You can use the toggle option (on the **Options** button) to **Link TCP/Mixer visibility** to synchronize track display. Supports "**Swipe**" (see last row of table).
Open track grouping dialog for any track	Double-click that track's cell in the **Group** column.
Scroll track into view	Double-click on track number in **#** column.
Open/show track FX chain	The **FX** column shows the number of FX in each track's FX chain. Double-click on that cell to open the FX chain for that track.
Add FX to track or open an FX window	Right click over the track's **FX cell** and use context menu.
Open/show track Input FX chain	The **IN-F** column shows the number of FX in each track's Input FX chain. Double-click on that cell to open the input FX chain for that track.
Monitor plug-in delay compensation	Any plug-in delay compensation used by a track's FX will be indicated (in ms) in the track's **PDC** cell. Clicking on this cell toggles track FX bypass.
Open a track's routing window	Double-click in the **Chan** (channels) column for that track.
Arm/unarm tracks for recording	Click in the **R** column for any track(s) to arm for recording. The letter R will be shown for armed tracks. Click again to unarm. Supports "**Swipe**" (below). Right click on any cell in this column to display record menu for that track.
Mute/unmute tracks	Click in the **M** column to toggle mute status. All the modifier keys used in the TCP can be used here – e.g. Ctrl Mute to unmute all. Right-click for TCP mute context menu – see Chapter 5. Also supports "**Swipe**" (see below).
Solo/unsolo tracks	Click in the **S** column to toggle solo status. All the modifier keys used in the TCP can be used here – e.g. Ctrl Alt Solo to solo exclusive. Right-click for TCP solo context menu – see Chapter 5. Also supports "**Swipe**" (see below).
Lock/unlock track controls	Click in the **Lock** column to toggle lock status. Locked tracks display a **+** sign. Supports "**Swipe**" (see last row of table).
Lock track height	Click in **HT Lock** column to toggle.
Manage MIDI items	Double-click a track's MIDI cell to open track MIDI items in new MIDI Editor. If item is already open, double-click to close. Right-click in cell for menu of options: **Open in new MIDI editor, Open in existing MIDI editor, Open in existing MIDI editor (clear editor first)** or **Remove from MIDI editor**. The third of these options removes from the MIDI editor any tracks/items already open before opening this one.
Lanes	The **Lanes** column indicates whether free item positioning is on or off.
Freeze/unfreeze tracks	Select track(s) in Track Manager window, then choose whichever action you wish from the **Freeze** button menu. See also Chapter 6.
Sort Track Manager list	Click on any column header. Click again to reverse sort order.
Manage track groups	The track manager will respect grouped track parameters (Chapter 5). As with the track grouping matrix, you can use **Shift** to temporarily over-ride these.
Swipe to toggle several adjacent tracks	For example, to arm several adjacent tracks for recording, or to mute several adjacent tracks, or to enable free item positioning on a series of adjacent tracks. Click and drag/sweep down the appropriate column.

In the example shown above this table, the **Guitars** folder is collapsed so that its child tracks (tracks 6 and 7) are not displayed. It has two FX and four channels. The **Bass** track is locked. All tracks are accessible in the TCP and MCP (although to access tracks 6 and 7 you would need to expand the folder). Both the **Vox Ben** and **Vox Amy** tracks are soloed. They are also FIPM enabled and are grouped as track group 1. The **Reverb** track has one FX.

Tip: You can use the **Screensets** window to save different sets of Track Manager settings as Track Views, any of which can be recalled in an instant. Screen sets are explained later in this chapter.

Pages 283-285, 290-291 (previously 279-281, 286-287)
Section 15.2, 15.3, 15.15, 15.16

Various mostly minor GUI and terminology changes in using the action list, creating custom actions, and importing scripts.

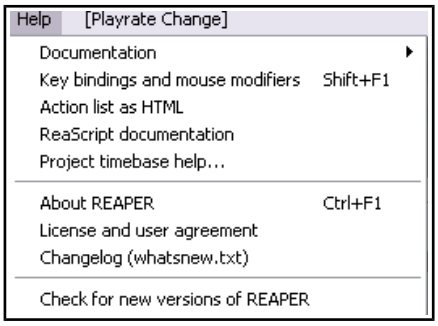


Actions List Essentials

The Actions List and its editor (shown right) are opened by choosing the **Actions** command from REAPER's main menu, then **Show action list...**, or simply by pressing the **?** Key. Before we look inside REAPER's Action List Editor to explore the world of shortcut keys, custom actions, control surface assignments and more, it's worth taking stock of a couple of useful resources that are available to you.

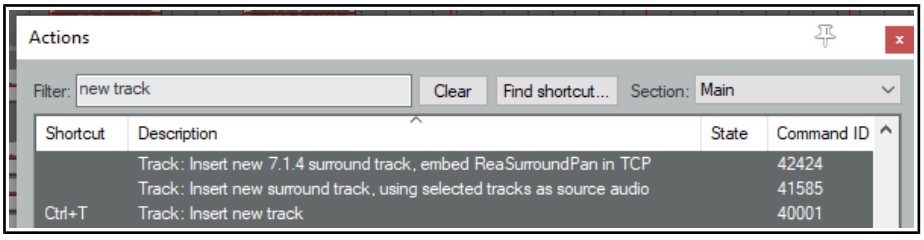
Help, Key bindings and mouse modifiers (from REAPER's main menu) opens your default web browser with a list of all current keyboard shortcut and mouse modifiers. This list is searchable and can be printed.

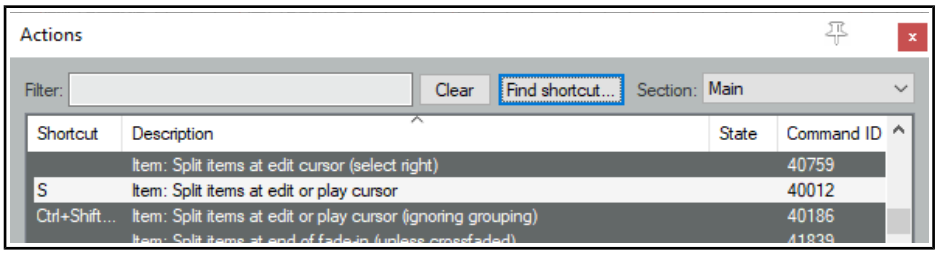
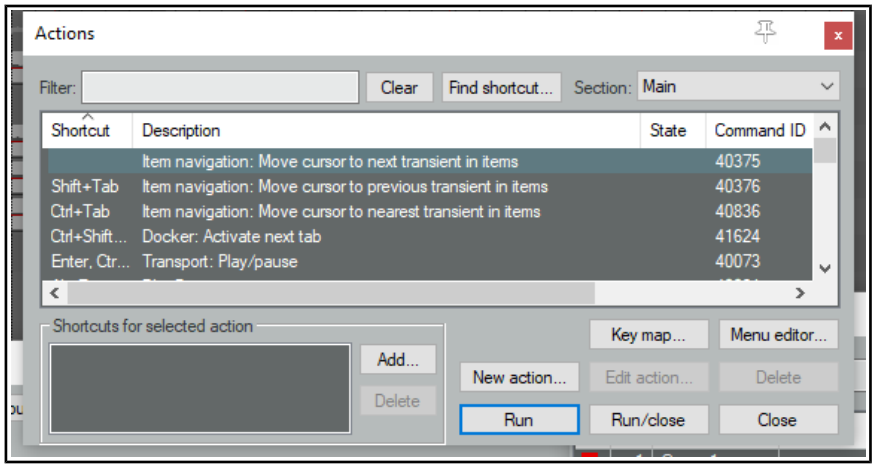
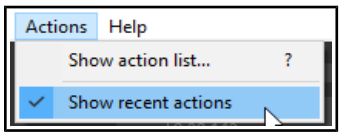
Choose **Action list as HTML** from REAPER's **Help** menu to open your default web browser with a list of all of REAPER's many available actions, any of which can be assigned to a keyboard shortcut and/or combined with other actions into your own custom actions. This list is also searchable and may be printed. This information is also contained within the Action List Editor itself, and this editor is searchable.

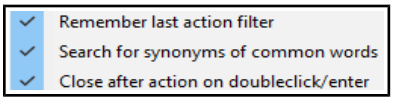


ReaScript documentation. Just what ReaScript is will be explained later in this chapter. In brief, ReaScript items can be used to add additional functionality to REAPER. A number of sample scripts can be found at, and downloaded from, **stash.reaper.fm/tag/Scripts.** They need to be placed inside the Scripts sub-folder within your REAPER applications data directory. They can then be selected and executed within REAPER's Actions list editor by clicking on the **Reascript Load** button.

The Action List Editor Environment

Item	Comments
Filter *See also section Using Search Filters for more advanced options.*	You can filter the list of displayed actions using any text string or strings that you like. For example, in this screen shot the list has been filtered to show only those actions that relate to new tracks:  Notice that one of these actions – **Track: Insert new track** – already has a shortcut (**Ctrl T)** assigned to it. Boolean search terms are supported. For example, you could search for any of these: **delete OR remove OR clear** **insert (item OR media)** (spaces before and after parentheses) **properties (take NOT channel)** (spaces before and after parentheses) Notice that where an existing keyboard shortcut exists it is shown to the left of the action. For example, the **!** Key is used to toggle the action **View: Expand selected track height, minimize others**.
Clear	The **Clear** button clears any current filter and restores all actions to the list.

Item	Comments
Finding assigned shortcuts	The **Find shortcut...** button is used to see if a particular keyboard shortcut has already been assigned to any action. Click on this button and you are prompted to type a key or move a MIDI controller. We'll come to MIDI controllers later in this chapter. If the key is already in use, its assignment will be displayed (see below).  In this example above, we have searched to see if an assignment exists for the letter **s**. For this kind of search, you should only type in upper case if you really are searching for the combination of Shift with the letter. For example, in this case, a search for **Alt Shift S** would have produced **Item: Split item at play cursor**. You can also use the search filter to search more generally for existing shortcut assignments. For example, typing **alt+shift** in the filter box would list all shortcuts which include both the alt key and the shift key. This can be handy to help you establish (by elimination) which keyboard combinations are and are not currently in use.
Column headers/ Sort keys	The **State** column indicates for toggle actions whether their status is **on** or **off**. By default, actions are listed in alphabetical order of their description. You can click on the **Shortcut** column header to sort instead on current keyboard assignments with special characters and numbers at the top of the list (see below).  Click on the column header again to reverse the sort order. Click on Description to sort them back into alphabetical order.
Sections	The Action List is divided into a number of sections (or contexts). You can assign the same keys to different actions in different contexts – for example, in REAPER's Main section **S** is used to split an item. This can be assigned to a different action in, say, the MIDI Editor. This is explained in more detail below.
Run	An action can be executed within the action list regardless of whether it has shortcut keys. Select the action, then click the **Run** button.  If the toggle **Show recent actions** is enabled on REAPER's main **Actions** menu (right) then any actions executed during your current session will be added to REAPER's Action menu. Closing REAPER, clears these actions from the menu.

Item	Comments
Run/Close	This button is similar to the **Run** button, the main difference being that after running the selected action it closes the Actions window.
Close	This closes the Actions window.
Remember last action filter	When enabled (from the Action window right-click context menu) REAPER will apply your most recent filter next time the Actions window is opened, even in a future work session. 
Search for synonyms of common words	When enabled (from the Action window right-click context menu) REAPER will include common synonyms with your search filter. For example, a search for "display" would also find actions that include "show". If you wish to define your own synonyms you will need to customize a language pack with a section "actionlist_synonyms."
Show action IDs	This toggle option (from the right-click context menu) shows/hides a column displaying REAPER's action IDs.
General	The Action window exhibits the basic characteristics of other REAPER windows. For example, you can use the pin symbol (top right) to keep it on top, or you can dock it in the docker (from the right-click context menu).

Creating Custom Action Macros

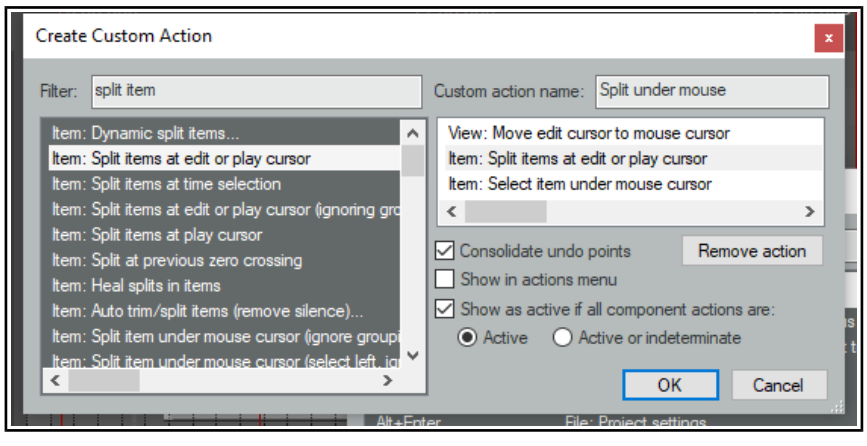
You can assign an entire sequence of actions to a single keyboard shortcut if you wish. In fact, there is no preset limit to the number of actions that you can assign to a single keystroke or keystroke combination. The process of assigning more than one action to a keystroke is known as creating a custom action, or macro.
As you browse the actions list, you might at first be somewhat puzzled at some of the items that are there. You might wonder, for example, why would anybody need an action for **Item: Select item under mouse cursor** when it is surely easier just to click on the item.
Often with actions like this, the answer is that the real power of these actions comes not from using them on their own, but in combination with other actions.

Managing Custom Actions (Macros) – Summary Table	
In order to do this …	**You do this …**
Create a new macro	Click on **New action…** button, the choose **New custom action**… Type a name for your macro.
Add actions to a macro	Drag and drop from action list, or double-click.
Change order of actions	Drag and drop up or down the list.
Remove action from macro	Select action in right hand action list, click on **Remove action**.
Add macro to main Actions menu	Enable the option **Show in actions menu**.
Consolidate macro into a single undo point	Enable the option **Consolidate undo points**.
Show macro as active when running (if added to a toolbar)	Enable the appropriate **Show as active** option in Create Custom Action dialog.
Save macro	Click on **OK**.
Assign shortcut key to a macro	Select the macro in the Action List. Click on **Add**.
Edit an existing macro	Select the macro in the Action List. Click on **Edit action**.
Run an existing macro	Use shortcut key (if assigned), or select the macro from REAPER's Actions menu (if this option is enabled), or select macro in Action List and click on **Run** option.
Delete an existing macro	Select the macro in the Action List. Click on **Delete**.

Here's a simple example. Normally, to split an item you need to select it, position the edit cursor at the required position, and then press S. Using a custom action, we can combine this sequence into a single keystroke.

Example

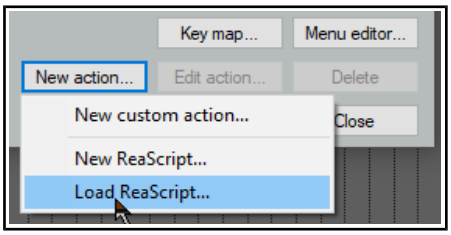
1. In the Actions List, click on the custom actions **New action…** button, then **New custom action**. This opens the **Create Custom Action** window (see below right). Type a name, such as **Split under mouse**.
2. In the list of actions in the left panel find **View: Move edit cursor to mouse cursor.** Double-click on this.
3. In the list of actions shown in the left panel. Find the action **Item: Select item under mouse cursor.** Double-click on this action.
4. In this list of actions double-click on **Item: Split items at edit or play cursor.**
5. Click on the option **Consolidate undo points** to enable it. Click on **OK** to return to the main Action List with your new custom action selected.
6. Click on **Add** and type lower case **c** to assign **c** to your macro. Click **OK**. **Close** the Actions List.



7. Hover your mouse over any media item and press lower case **C**. The item will be split at that point. One of the split items will still be selected. If you don't like this, you can edit the macro.
8. Open the Actions List Editor, find your macro **Split under mouse** and select it. Click on **Edit**. Add to the end of this macro the action **Item: Unselect (clear selection of) all items**. Click on **OK**.
9. Now test the macro again. This time it will split items without leaving anything selected.

This is just one example of a custom action macro in action. Think about other sequences of actions and commands that you use together … think actions, think macros! You'll also find plenty of ideas and inspiration on **The Useful Macro Thread** on REAPER's **Q&A, Tips, Tricks and How To** forum – at forum.cockos.com.

Importing and Loading Scripts



For more advanced custom programs which go beyond chaining together actions, you can import into REAPER custom scripts that you may have written or obtained (perhaps from the **Reaper Stash** at **https://stash.reaper.fm/tag/Custom-Actions**) and which add extra functionality to the program. Python, EEL and Lua scripts can all be imported. For Windows users, to access actions written in Python, Python will need to have been installed on your computer and ReaScript enabled on the Plug-ins, ReaScript page of Preferences.

Once you have downloaded and stored your required scripts on your hard drive, you can load them into REAPER by clicking first on the **New action** button, then **Load ReaScript**, then navigate to the appropriate directory, then select the required file(s) and click on **Open**.

The topic of writing scripts is outside the scope of this User Guide, although there is a brief introduction to ReaScript in Chapter 23. If you are interested in learning more you should visit the REAPER web site, and in particular: www.cockos.com/reaper/sdk/reascript/reascript.php

ReaScript documentation can also be opened from REAPER's Help menu.

Page 320 (previously page 316)
Section 12.7

Several FX and FX chain options and settings have been reorganised, as shown below.

FX and FX Chain Options

The various menus in the FX chain window menu make available a number of options and preferences:

Options menu	**Comments**
Auto float new FX windows	Causes a new window to be opened for any FX added to the chain.
Ignore FX keyboard shortcuts	Keyboard shortcuts are all passed through to the main window – e.g. pressing spacebar will start/stop playback.
FX plug-in settings ...	Opens the Plug-ins page of REAPER's preferences.
CPU utilization display	CPU utilization (in the performance meter and elsewhere) can be displayed as a percentage of the total capacity of all cores (e.g. 10% as 10% of all cores), or in terms of the number of cores being utilised (e.g. 0.2c as two tenths of one core).
Individual FX context menu	**Comments**
Build multichannel routing for output...	If the selected FX (e.g. MT PowerKit) outputs to multiple channels, the necessary tracks are created for you, along with all required routing.
Build 16 channels of routing to ...	For input to multitimbral instruments, 16 tracks will be created, each with MIDI routed on a separate channel.
FX Menu	**Comments**
Chain PDC mode	Option for plug-in delay compensation to be calculated and applied to the chain or to ignore plug-in delay.
Chain oversampling	Oversampling can increase the rate at which audio is sampled by a factor of typically 2x or 4x that at which it was recorded. This can have the effect of reducing unwanted noise, but is also CPU intensive. Options available are 88.2k/96k, 176.4k/192k, 352.8k/384k, or 705.6k/768k.
FX instance oversampling	
Force auto-bypass on silence for selected FX	This can be used, for example, to prevent a reverb tail during a silent passage. The silence threshold is defined in advanced project settings. Also available on the individual FX context menu.

Various Minor Changes

Page 115: Plug-in delay compensation options in the FX chain window are now available from the window's FX menu as well as from icontext menus of individual FX.

Page 166 (previously page 162): Region/marker manager – first column includes options to select a color, set a random color, or reset color to default.

Page 357 (previously 353): new action added to show envelopes window for last touched track or item.

Page 363 (previously 359): razor edits can now be applied to envelopes on the master track, except for tempo envelopes.

Page 402 (previously 398): Batch file/item converter – Channels dropdown now allows you to split stereo/multichannel items into multiple mono files.

Page 420 (previously 416): Media item positioning preferences now includes an option to arrange overlapping items in the order in which they were created.

REAPER User Guide

Main changes, version 6.73

December 2022

This document reproduces those sections of the User Guide that are either new or have important modifications.
Any minor tweaks and twiddles are not included here, but are listed on page 13 of the main document.

Page 338

Section 17.17

New section

Multichannel Parent Child Relationships

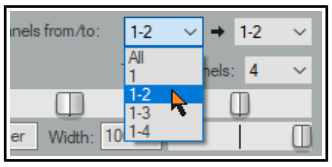
Parent-child track relationships can be defined in the track's routing window, opened by clicking on its Route button in the track panel.

By default, REAPER assumes that you require two channels (1-2) for new tracks, 2 channels (1-2) for the master, and that you require all channels (which in this example are 1 and 2, because that is all there are) to be sent from the track to the master (as shown above right). The first of the paired dropdowns determines the channels to be sent from the track to the master, the second to which master channels they are to be sent.

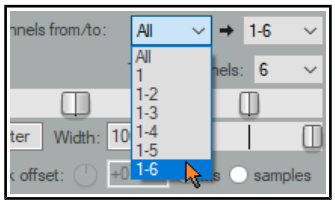
The exception is when the track is contained within a folder. In that case, instead of *Master send channels from/to* the dialog will display *Parent send channels from/to*, and the output will be directed to the folder track, not directly to the master.

There might be occasions when you will need more than two channels – for example when sidechaining, using parallel FX processing, or if you are producing output in surround sound format. In any such case, you will need to specify the number of track channels required and their relationship to their parent.

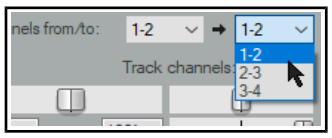
Example 1:
In this case the track has four channels (perhaps reserving channels 3-4 for sidechaining detector input), but only channels 1-2 are to go to the parent (master). We select 1-2 from the first dropdown, and from the second dropdown we select 1-2 as our destination channels in the master.



Example 2
This next example would be suitable for surround mixing in 5.1 format. The master has been defined as having six channels, as have the tracks. Hence, from the first dropdown we can select either All or 1-6 channels: 1-6 is automatically selected for the second dropdown, because once we have specified that we wish to send all 6 channels that becomes the only possible option.



Example 3
This final example is for a child track within a folder. The track itself has only 2 channels, but the folder has 4 (perhaps for manipulating FX within the folder's FX chain). Here we select All or 1-2 from the first dropdown: because this track has only two channels, in this case either of these will produce the same result. However, because the parent contains four channel, we must also specify the destination channels on the folder. If you do not make a selection, it will default to 1-2.



Tip 1: You can change the number of default channels for new tracks to any even number up to 64 on the Advanced page of Project Settings. Here you can also change the default number of parent send channels.

Tip 2: There is an option to **Allow snap grid/track envelope/routing windows to stay open** under Options, Preferences, General, Advanced UI/system tweaks. This prevents them from automatically closing when you click away from them.