

Sound Design Spotting List System

This *Google Sheets*, *Docs* and *Reaper Render Matrix* system is designed to assist in organizing and tracking sound design for projects, while adhering to *UCS* file naming standards.

The system consists of a single *Google Sheet* and can be used to produce multiple *Google Docs*

[Ben Harding](#)

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Dependencies

Google Account: To access Google Sheets and Docs, you need a Google account.

Google Sheets: The system is built on top of Google Sheets, which is a cloud-based spreadsheet program that allows users to create and edit spreadsheets online.

Google Docs: The system also uses Google Docs, which is a cloud-based word processor that allows users to create and edit documents online.

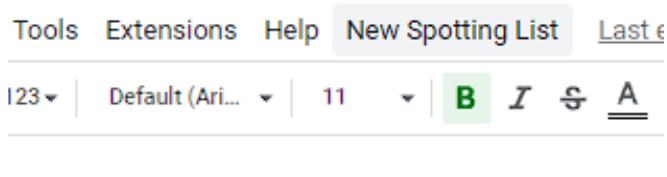
Google Drive: Both Google Sheets and Docs are stored in Google Drive, which is a cloud-based storage system for Google's suite of productivity tools.

Google Apps Script: The system uses Google Apps Script, a JavaScript-based scripting language that allows users to automate tasks and extend the functionality of Google Sheets and Docs.

Cockos Reaper: The system is made to be used in conjunction with Cockos Reaper.

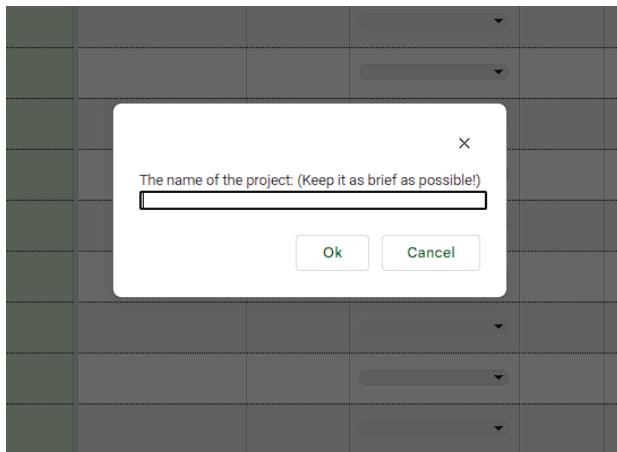
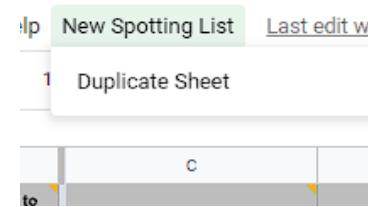
Google Sheets

The Google Sheet is the central hub of the system. This [sheet](#) is used to generate a UCS approved File name for your sounds. Follow the prompts on the sheet and create a new editable spotting list.



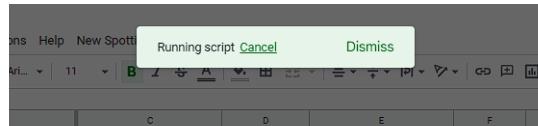
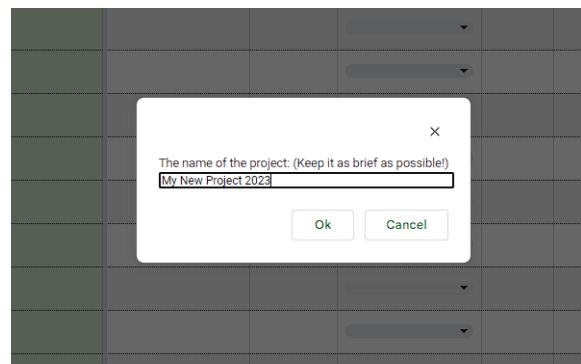
Rather than duplicating the sheet from the bottom tabs, click the “**New Spotting List**” from the new GUI menu at the top of the sheet.

From the drop down, click “**Duplicate Sheet**”.



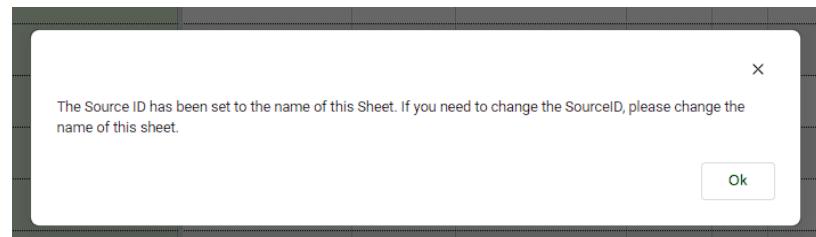
You will be prompted to enter the name of the project you are working on.

The name you enter will be used as the **SourceID** and the name of the newly created sheet. (*In order to adhere to UCS standard naming conventions this name cannot contain underscores (_)* and will prompt you to try again if you contain underscores in your project name)



The next section could take a few seconds so be patient.

You will receive a prompt explaining that the name of the sheet is now the **SourceID**. If at any time you wish to change the **SourceID**, you can change cell **P2** and the rest of the sheet should update immediately.



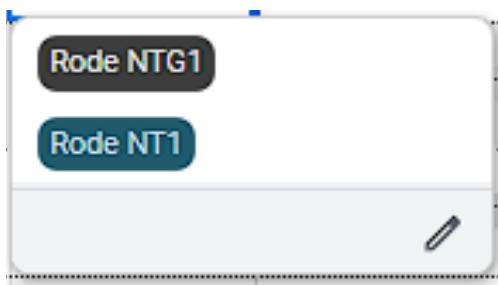
Once the function is finished running you will be presented with your new spotting list. You will be able to edit every cell in this sheet though you shouldn't edit any cell that is coloured.

To be more specific **DO NOT** enter values into Cells in columns **B, F, G, H, I or P**.

Dropdown Menus

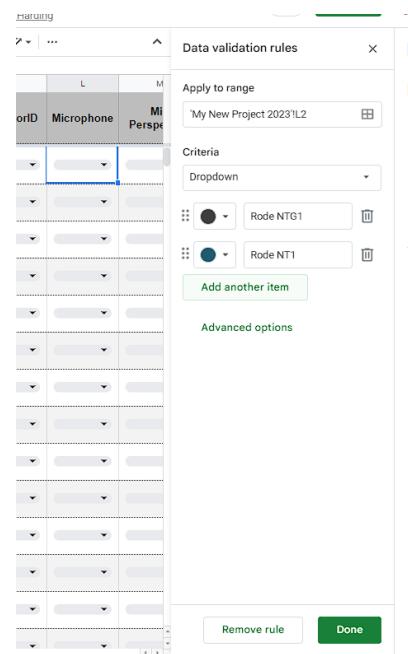
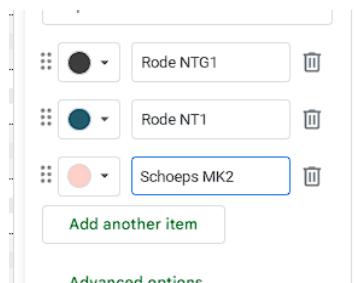
	K	L	M	N
I	CreatorID	Microphone	Mic Perspective	Recording Medium
		Rode NTG1		
		Rode NT1		

Many of the cells are populated with dropdown options to help with consistency in naming and speed.



If you wish to make an addition to any dropdown menu you can click on the pencil in the bottom right of the drop down menu.

This will make this screen pop up on the right of the sheet. Here you can add any options you would like.

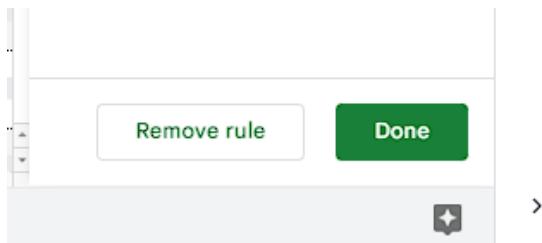
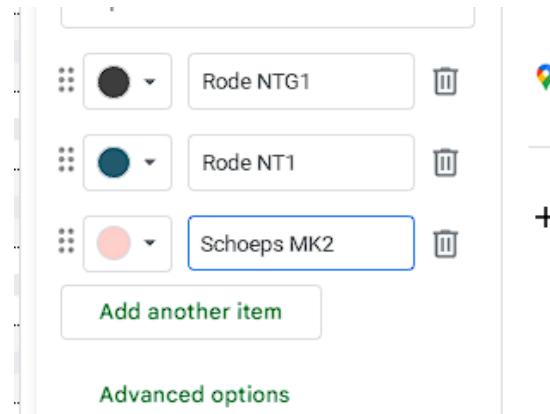




Click on the **Add another item** button.

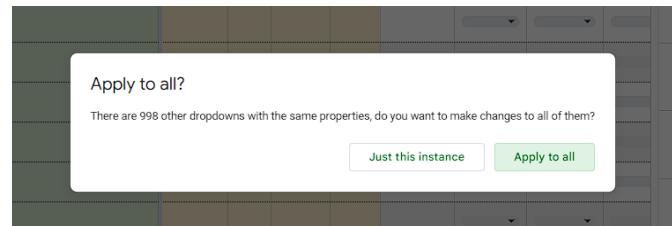
And enter your additional option.

Any options you add will not appear on the main template and therefore please email ben@papermountain.games with any additional microphones you wish to add to the template and I will be happy to add them.



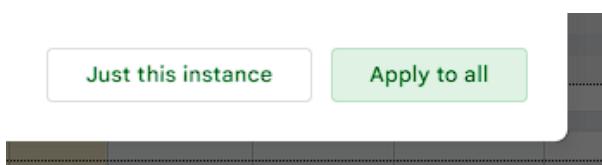
Once you are happy with your options click done at the bottom right of the pop up.

Now you will be prompted and asked if you would like to make changes to all of the dropdowns in this column in the same way.

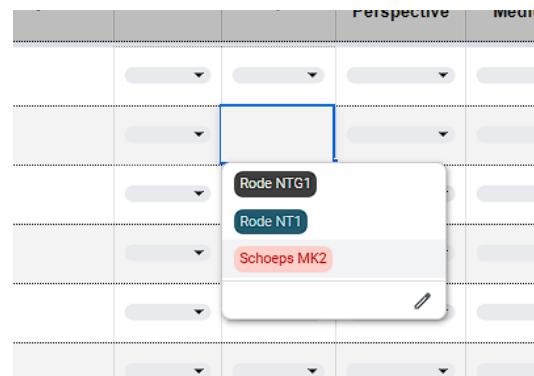


I recommend clicking **Apply to all**.

Bare in mind that any additions will, again, just be on your sheet.



Once clicked the dropdown option should be added and available for selection.



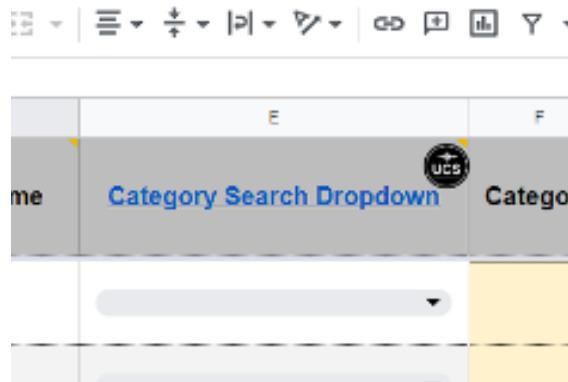
Searching for Category

C	D	E	F	G
Description	FXName	Category Search Dropdown	Category	Category
E2				
AIR→BLOW→AIRBlow→AIR				
AIR→BURST→AIRBurst→AIR				
AIR→HISS→AIRHiss→AIR				
AIR→MISC→AIRMisc→AIR				
AIR→SUCTION→AIRSuck→AIR				
AIR→DOOR→AERODoor→AERO				
AIR→HELICOPTER→AEROHeli→AERO				
AIR→INTERIOR→AEROInt→AERO				
AIR→JET→AEROJet→AERO				
AIR→MECHANISM→AEROMech→AERO				
AIR→MILITARY→AEROMil→AERO				
AIR→MISC→AEROMisc→AERO				
AIR→PROP→AEROProp→AERO				
AIR→RADIO CONTROLLED→AERORadio→AERO				
AIR→ROCKET→AERORcket→AERO				
AIR→BELL→ALRMBell→ALRM				
AIR→BUZZER→ALRMBuzz→ALRM				
AIR→CLOCK→ALRMClock→ALRM				
AIR→ELECTRONIC→ALRMFlec→ALRM				
AIR→MISC→ALRMMisc→ALRM				
AIR→SIREN→ALRMSiren→ALRM				

In the **Category Search Dropdown**, I've found the best way to select the appropriate category is to search for keywords.

Familiarity with the UCS system is integral to the selection of the appropriate category for each sound. Here is a link to the UCS standard category descriptions [v.8.2](#).

There is a link in the heading to the UCS category and subcategory descriptions if you need reference.



The recommended search method is to type a keyword for your sound into the search bar.

Here I searched for “Wood” and was presented with some options based on that search query.

With this method we can get all of the wood categories but also some options where wood is the subcategory like “Musical→Woodwind...” etc.

E	F	G	H	I
Search Dropdown	Category	Sub Cat	CATID	CAT short
wood				
	DOORS→WOOD→DOOR	Wood		
	DRAWERS→WOOD→DRWR	Wood		
	MUSICAL→WOODWIND→MUSCWind	Woodwind		
	RAIN→WOOD→RAIN	Wood		
	WINDOWS→WOOD→WNDW	Wood		
	WOOD→BREAK→WOODBrk	Wood		
	WOOD→CRASH & DEBRIS→WOODCrsh	Wood		
	WOOD→FRICTION→WOODFric	Wood		
	WOOD→HANDLE→WOODHandl	Wood		
	WOOD→IMPACT→WOODImpt	Wood		
	WOOD→MISC→WOODMisc	Wood		
	WOOD→MOVEMENT→WOODMvmt	Wood		
	WOOD→TONAL→WOODTonl	Wood		

	Search Dropdown	Category	Sub Cat	CATID	CAT short	Key
	MUSICAL→WOOD...	MUSICAL	WOOD WIND	MUSCWind	MUSC	

This option is then parsed out and attributed to the file name.

As you can see once all the options are filled the file name is generated in the B column. This file name has been concatenated in the B column cell

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Short Hand Name	FileName	Description	FXName	Category Search Dropdown	Category	Sub Cat	CATID	CAT short	Key Words	CreatorID	Microphone	Mic Perspective	Recording Medium	Location	SourceID	Recording Type	Sample Rate	Bit Depth	File Type
Flute aggressive blow	MUSCWind Flute blowing percussive and aggressive Ben Harding My New Project 2023 Mono 48kHz 16-bit Rode NTG1 MED-INT	The sound of a flute being blown aggressively in a percussive manner	Flute blowing percussive and aggressive	MUSICAL--WOODWIND--...	MUSICAL	WOOD WIND	MUSCWind	MUSC	Flute Wood. Blow Hard.	Ben Harding	Rode NTG1	MED-INT	Focusrite Clarett+ 2Pre	London, United Kingdom	My New Project 2023	Mono	48000 Hz	16-bit	FLAC

The second part of this logic CONCATENATES the cells together inserting an underscore (_) to divide section. There is a null check before this which checks if there is any input in any of the selected fields (excluding P column as this has input by default as it is the SourceID). This null check is not necessary but can save on some time on opening the the sheet and looks better.

```
=IF(AND(H2="",D2="",K2="",Q2="",R2="",S2="",L2="",M2=""), "", CONCATENATE(H2,"_",D2,"_",K2,"_",P2,"_",Q2,"_",R2,"_",S2,"_",L2,"_",M2))
```

If you wanted to add more cells you would simply add them to the null check and then add them to the concatenate function including the “_”.

You could also change the order of the concatenation though The UCS model expects a certain format primarily starting with the CATID.

If you wanted to add more columns of data about your recordings you could also add them easily enough by the same logic.

Exporting Track Names

	A	B	C
1	Short Hand Name	FileName	Send to Docs
2	Flute aggressive blow	MUSCWind_Flute blowing percussive and aggressive_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT	The sound of a flute being blown aggressively in a percussive manner Flute
3	Fire being ignited	FIREign_Fire being ignited by petrol_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode	Fire igniting under a cauldron with gass on it to fuel the flame Fire
4	Magic water bubbles for potion	MAGEbub_Potion magic bubbles water_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode	Potion taking bubbles and aciddy sizzle Pibu
5	Footsteps of a witch on wood	FEETHm_Footsteps Wood Heels Creaky_Ben Harding_My New Project 2023_Mono_96000Hz_24-bit_Rode	Footsteps of a witch on wood Foc Heel
6	Big Impact for slamming body	FGHTBF_BodyFall impact death collapse_Ben Harding_My New Project	Bodyfall for impact on death Bod de
7			

After you get a prompt saying File Created you will be redirected to a newly created Google Doc. The name of the Doc will be the Name of the SourceID with the addition of “PRINT”

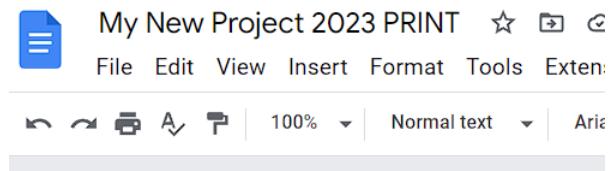
My Drive > Sound Design Spotting

The Google Docs file is a simple text file, There may not be a need to export such a file if you don't desire this type of organization.

For my own personal use I will appreciate the ability to look back on these files so I've decided to do it this way.

DO NOT make any additions to the fill.

Once you have come up with some track names you can send them to a Google Doc via the Button in the cell B1 “Send to Docs”.



The file Will write the Google Docs to a subfolder in the root of your Google Drive called “Sound Design Spotting”. If there is no folder called “Sound Design Spotting” then the action will though an error (*Exception: Cannot retrieve the next object: iterator has reached the end.*)

This document was created on: 3/18/2023, 4:31:02 PM

Here is a link to the custom reaper script: [Click here \(if needed\)](#)

Copied 5 cells from My New Project 2023 sheet:

```
***
MUSCWind_Flute blowing percussive and aggressive_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT
FIREign_Fire being ignited by petrol_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_FAR-EXT
MAGEbub_Potion magic bubbles water_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT
FEETHm_Footsteps Wood Heels Creaky_Ben Harding_My New Project 2023_Mono_96000Hz_24-bit_Rode NTG1_CLOSE-INT
FGHTBF_BodyFall impact death collapse_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_MED-INT
```

In this file you will see a few details at the top of the page.

The time and date, a link to the appropriate Reaper script should you not have access already, an exact number of tracks that were successfully printed and then the tracks that begin with a “***”

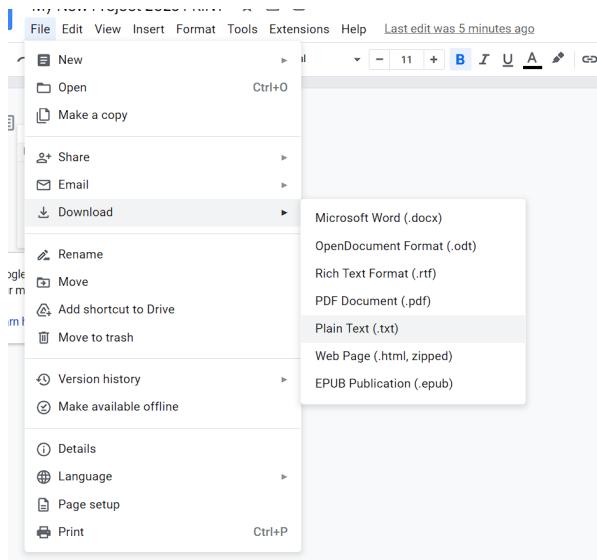
This “***” is used as a marker when parsing the .txt file into tracks in Reaper in the next steps. It's important that we don't add anything to this line.

This document was created on: 3/18/2023, 4:31:02 PM

Here is a link to the custom reaper script: [Click here \(if needed\)](#)

Copied 5 cells from My New Project 2023 sheet:

MUSCWind_Flute blowing percussive and aggressive_Ben Harding_2023 Mono 48000Hz 16-bit Rode NTG1 MED-INT

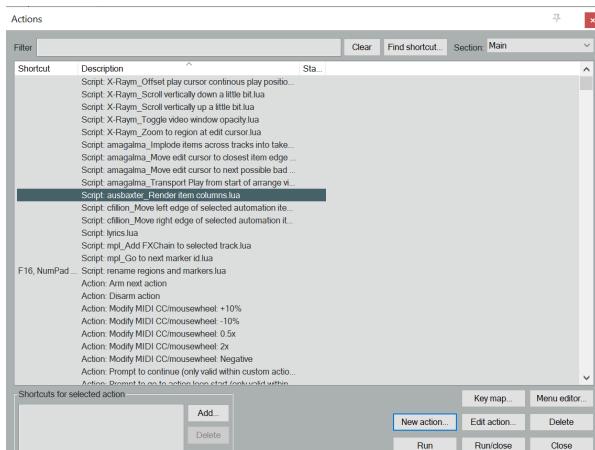
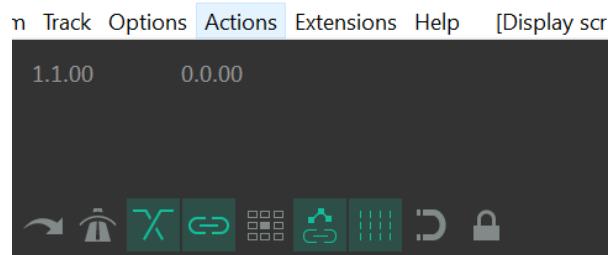


The only thing we need to do here is download a .txt file

Reaper/ ReaScripts

If you haven't already you can download [this .lua Reascript](#). This script will be the link between Reaper and our txt file. It will parse the file into separate tracks naming each one appropriately based on the **File Names** provided in the Google Sheet.

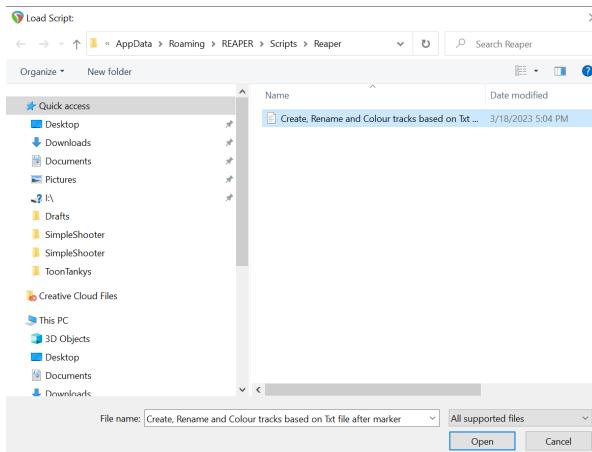
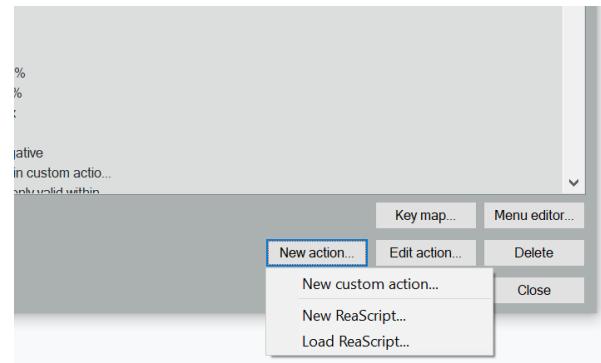
Now that you've downloaded the .txt file you can open Reaper and go to the **Actions** menu at the top of the window.



The Actions window will open.

Here is where all of your custom actions are.

We want to load the same file that we downloaded above so first click “**New Action**” then “**Load ReaScript**”.

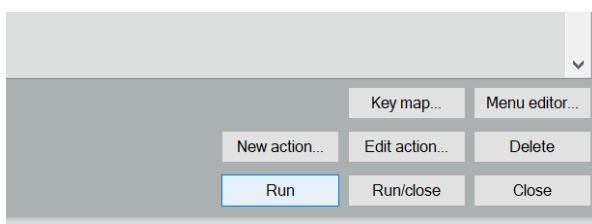
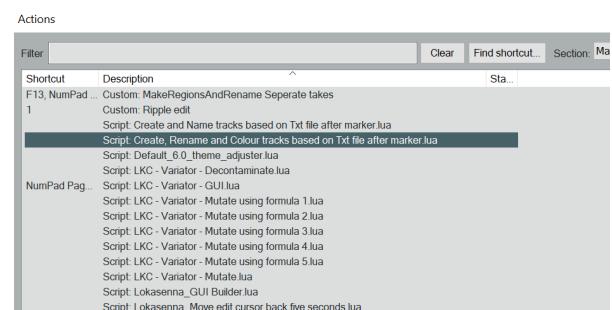


You should see the new action highlighted in the Actions window.

When the file explorer opens, find the recently downloaded file:

“Create, Rename and Colour tracks based on Txt file after marker.lua” 3 KB

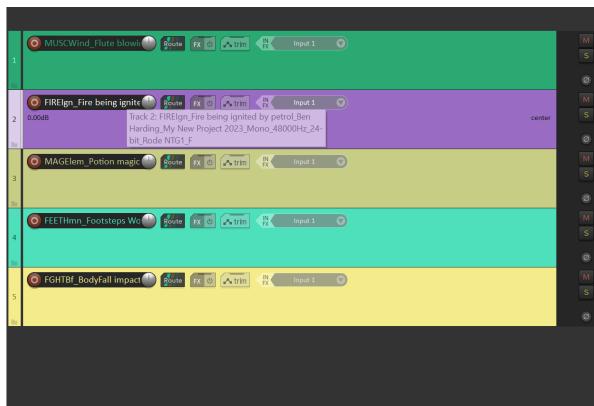
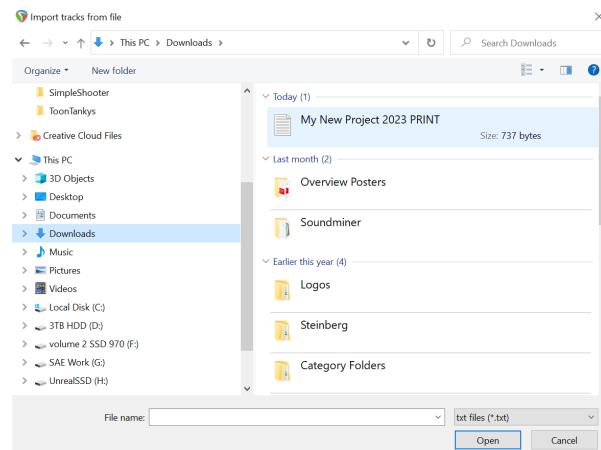
and click open.



From here with the new Action selected you can run the action by pressing the “**Run**” button situated to the bottom right of the window.

You can also bind the action to a key, for more info click [here](#).

Once triggered this action should take you to a file explorer window. Find the previously downloaded Google Doc and click open in the bottom right corner of the file explorer.

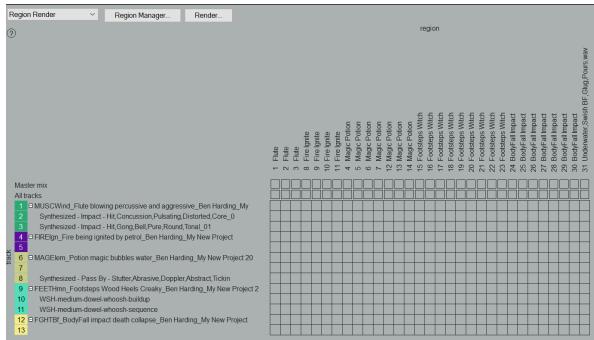


You should see all your track names written out as they were in the Google Sheet.

Region Render Matrix

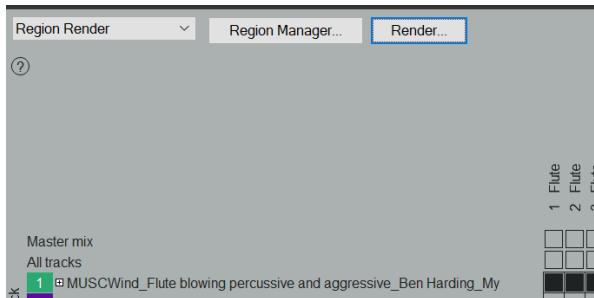
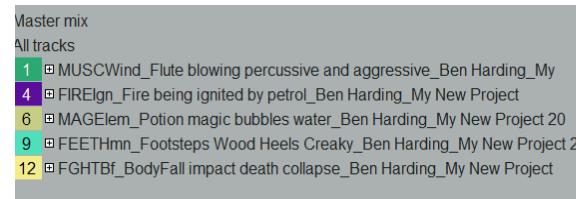
You can use this system in conjunction with the Reaper Render Matrix to save a lot of time on file naming and organization.

Here I have children tracks that get summed through the named track. My individually edited sounds are flagged using the region system.



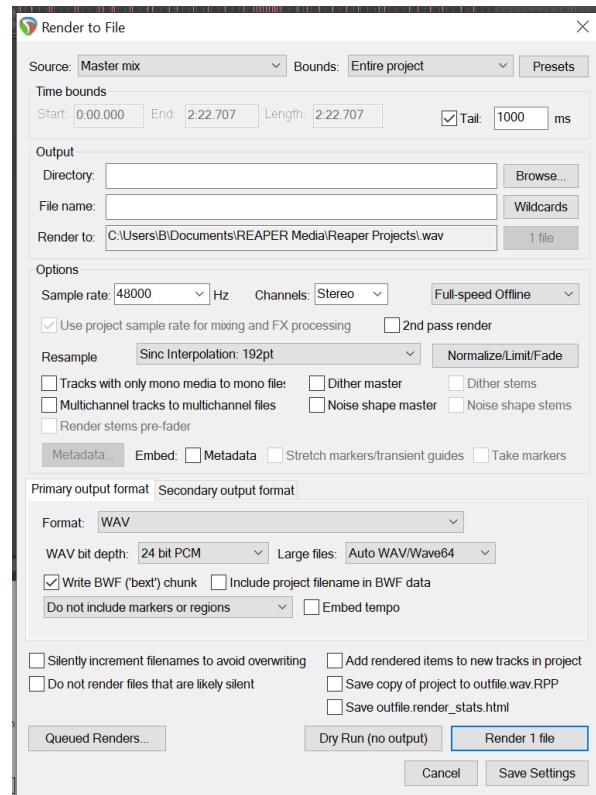
You can collapse the children into the parent track for simplicity's sake by pressing the small “-” after the track number and before the track name. This leaves us with just the parent tracks on the left.

This is the Render matrix. To the bottom left you can see all of our nest racks, above you can see our regions that separate our tracks

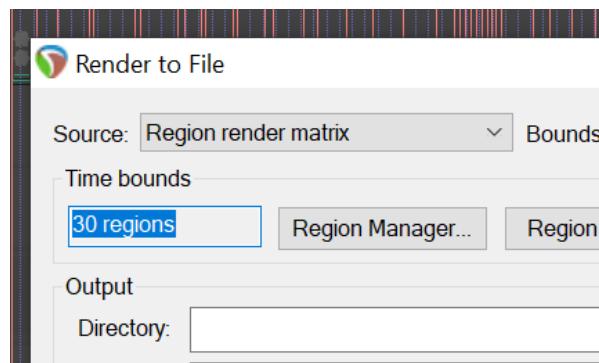
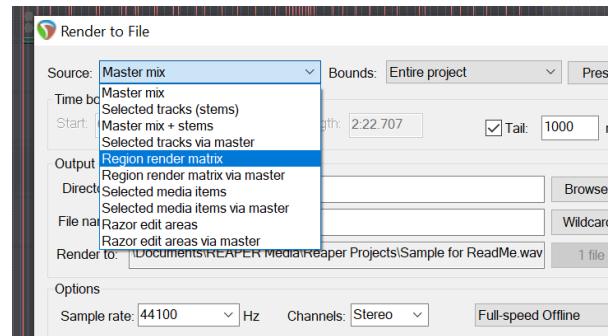


When you are finished in the matrix click on the **Render** button at the top left of the window.

This window should pop up. We need to change a few settings here in order to access the **Render Region Matrix** and correctly name our tracks.



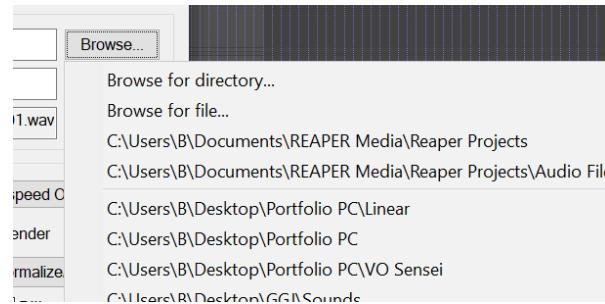
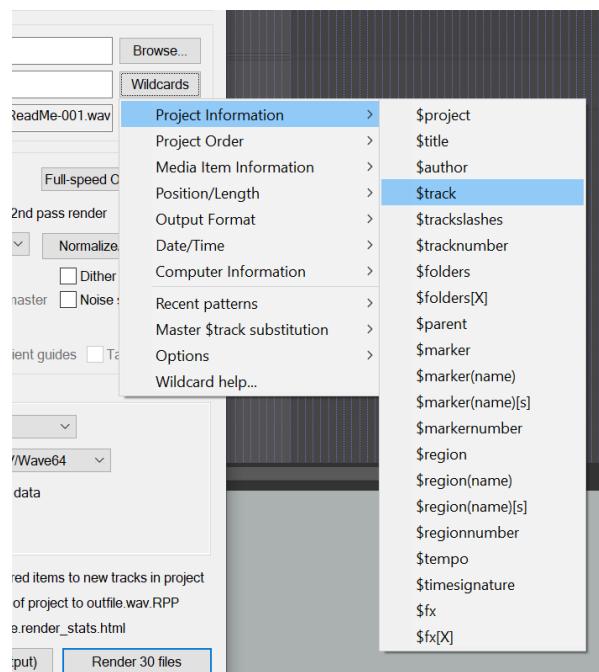
First off change the source to the **Render Region Matrix** option.



You should see this number change to account for each region in your session.

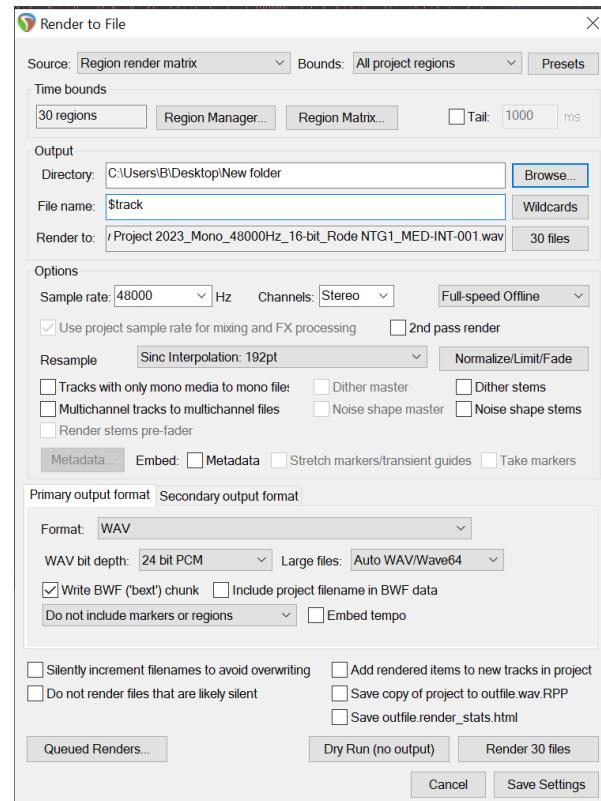
Make sure you use the **Wildcard** settings and select or manually input “\$track” into this field.

This will name the tracks based on the Track that is being rendered. For each Region in that track it will increment the name: 001, 002 etc.



Make sure you set up a directory of course.

And change any other appropriate settings depending on your desired outcome.



Name	#
FEETHmn_Footsteps Wood Heels Creaky_Ben Harding_My New Project 2023_Mono_96000Hz_24-bit_Rode NTG1_CLOSE-INT-001	
FEETHmn_Footsteps Wood Heels Creaky_Ben Harding_My New Project 2023_Mono_96000Hz_24-bit_Rode NTG1_CLOSE-INT-002	
FEETHmn_Footsteps Wood Heels Creaky_Ben Harding_My New Project 2023_Mono_96000Hz_24-bit_Rode NTG1_CLOSE-INT-003	
FEETHmn_Footsteps Wood Heels Creaky_Ben Harding_My New Project 2023_Mono_96000Hz_24-bit_Rode NTG1_CLOSE-INT-004	
FEETHmn_Footsteps Wood Heels Creaky_Ben Harding_My New Project 2023_Mono_96000Hz_24-bit_Rode NTG1_CLOSE-INT-005	
FEETHmn_Footsteps Wood Heels Creaky_Ben Harding_My New Project 2023_Mono_96000Hz_24-bit_Rode NTG1_CLOSE-INT-006	
FEETHmn_Footsteps Wood Heels Creaky_Ben Harding_My New Project 2023_Mono_96000Hz_24-bit_Rode NTG1_CLOSE-INT-007	
FEETHmn_Footsteps Wood Heels Creaky_Ben Harding_My New Project 2023_Mono_96000Hz_24-bit_Rode NTG1_CLOSE-INT-008	
FEETHmn_Footsteps Wood Heels Creaky_Ben Harding_My New Project 2023_Mono_96000Hz_24-bit_Rode NTG1_CLOSE-INT-009	
FHTB1_Bodyfall impact death collapse_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_MED-INT-001	
FHTB1_Bodyfall impact death collapse_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_MED-INT-002	
FHTB1_Bodyfall impact death collapse_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_MED-INT-003	
FHTB1_Bodyfall impact death collapse_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_MED-INT-004	
FHTB1_Bodyfall impact death collapse_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_MED-INT-005	
FHTB1_Bodyfall impact death collapse_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_MED-INT-006	
FHTB1_Bodyfall impact death collapse_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_MED-INT-007	
FIREign_Fire being ignited by petrol_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_FAR-EXT-001	
FIREign_Fire being ignited by petrol_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_FAR-EXT-002	
FIREign_Fire being ignited by petrol_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_FAR-EXT-003	
FIREign_Fire being ignited by petrol_Ben Harding_My New Project 2023_Mono_48000Hz_24-bit_Rode NTG1_FAR-EXT-004	
MAGGEm_Potion magic bubbles water_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT-001	
MAGGEm_Potion magic bubbles water_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT-002	
MAGGEm_Potion magic bubbles water_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT-003	
MAGGEm_Potion magic bubbles water_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT-004	
MAGGEm_Potion magic bubbles water_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT-005	
MAGGEm_Potion magic bubbles water_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT-006	
MAGGEm_Potion magic bubbles water_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT-007	
MUSCWInd_Flute blowing percussive and aggressive_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT-002	
MUSCWInd_Flute blowing percussive and aggressive_Ben Harding_My New Project 2023_Mono_48000Hz_16-bit_Rode NTG1_MED-INT-003	

This is how the files will look after the render.

Scripts

Google Scripts

[Link to Script](#)

[Link to heavily annotated version](#)

The **copyColumnToNewDoc()** function is designed to copy data from a specific column of the active sheet in a Google Spreadsheet and create a new Google Document in a designated folder with that copied data. It first gets the active sheet and the desired column range, filters out any empty or specific designated cells, and then creates a new document with a specific title. It then inserts the date and time at the beginning of the document and adds a link to a custom Reaper script. Finally, it copies the designated column data into the document and saves it to a designated folder.

The **onOpen()** function creates a new menu in the UI called "New Spotting List" with an item called "Duplicate Sheet", and shows a personalized welcome message to the user.

The **duplicateSheet()** function duplicates the current sheet and prompts the user to input a new name for the sheet. If the name does not contain an underscore character, it creates a new sheet with the input name and sets it as the active sheet. It also shows a popup notification reminding the user about the naming conventions, and calls the **updateSheetName()** function.

The **updateSheetName()** function updates the value of cell P2 in the current sheet with the name of the sheet.

Reaper (ReasScript)

Overview

[Link to script](#)

[Link to the heavily annotated version](#)

Contact

Please get in contact, I would love to hear from you. If you have any questions, comments, or feedback about this project, please don't hesitate to get in touch.

Email me directly at **ben@papermountain.games**. I'll do my best to respond as quickly as possible.