

SC JOYSTICK MAPPER QUICK REFERENCE GUIDE V 2.34

20171226 – Cassini

- <https://github.com/SCToolsfactory/SCJMapper-V2/releases>
- Change Log: see ReadMe.txt

SC Joystick Mapper - V 2.34.0.68 beta
by Cassini

Mappings: layout_my_x55_65o

pp_rebindkeys layout_my_x55_65o

For information and updates visit us @ Github ...

Joystick 1 Joystick 2
Saitek Pro Flight X-55 Rhino Stick
Axis: 3 # POV: 1
Buttons: 17

Joystick State
X-Achse: -10 Slider 1: 0
Y-Achse: 3 Slider 2: 0
Z Axis: 0 Mehrwegescha -1
X Rotation: 0 POV 2: -1
Y Rotation: 0 POV 3: -1
Z-Rotation: 33 POV 4: -1

Buttons:
jsN - Assignment
This device is listed as: js1

Selected:
Mapping:
Dev Ctrl: js1_lalt+
Assign Throttle Find 1st.
Disable JS / Kbd Clear

Dump XML Grab XML

Joystick Gamep Keyb. Mouse Mapped

Action Filter: Clear Filter Exit

Profile: GamePack defaultProfile

Support: profile version="11" optionsVersion="21" rebindVersion="21"

```
<!-- 23.12.2017 18:14:21 - SC Joystick Mapping -->
<ActionMaps version="11" optionsVersion="21" reb-
js1="Saitek Pro Flight X-55 Rhino Stick" js1G
js2="X65F Flight Controller" js2G="a7663300-5
>
<CustomisationUIHeader label="my_x55_65o" des
<devices>
<keyboard instance="1"/>
<mouse instance="1"/>
<joystick instance="1"/>
<joystick instance="2"/>
</devices>
<categories>
<category label="@ui_CCSpaceFlight"/>
</categories>
</CustomisationUIHeader>
<options type="joystick" instance="1">
<flight_move_pitch exponent="1.00">
<nonlinearity_curve>
<point in="0.182" out="0.028"/>
<point in="0.629" out="0.235"/>
<point in="0.895" out="0.629"/>
</nonlinearity_curve>
</flight_move_pitch>
</options>
<options type="joystick" instance="1">
<flight_move_yaw exponent="1.00">
<nonlinearity_curve>
<point in="0.182" out="0.028"/>
<point in="0.629" out="0.235"/>
<point in="0.895" out="0.629"/>
</nonlinearity_curve>
</flight_move_yaw>
</options>
<options type="joystick" instance="1">
<flight_move_roll exponent="1.00">
<nonlinearity_curve>
<point in="0.182" out="0.028"/>
<point in="0.629" out="0.235"/>
<point in="0.895" out="0.629"/>
</nonlinearity_curve>
</flight_move_roll>
</options>
<deviceoptions name="Saitek Pro Flight X-55 R
<option inputs="rotz" deadzone="0.030" />
</deviceoptions>
<deviceoptions name="Saitek Pro Flight X-55 R
```

Disclaimer: Usual stuff – no warranty whatsoever..

Freeware – made for the SC community

Hope it helps and does not suck.

Have fun in the verse ...



General Information

- Connect the game control devices to the PC
- Start from scratch (see Hints section) or load an existing map from a file
- Make or refine mappings
- Save the new map as an XML file
- Use it in the game: e.g. `pp_rebindkeys layout_my_joystick`
- You may load and save the map directly from your game folders so next time you just use `pp_rebindkeys layout_my_joystick`
- `pp_rebindkeys` without a name will reset the maps but only after you close the console window
- **It is a good idea** to always first `pp_rebindkeys` and then close the console to reset what the game holds from your previous attempt and then only open the console again and load the new or changed map

Note: the predefined actions are the ones found in the SC game default profile

– it is likely that some of them will not work at all as the game is not finished.

There is no proper description for which one does what – you may get help in SC Forums.

Console .. Opens with the top left key usually right below the “Esc” key - depends on your kbd

With every “Dump and Save”- the program creates a backup copy in the

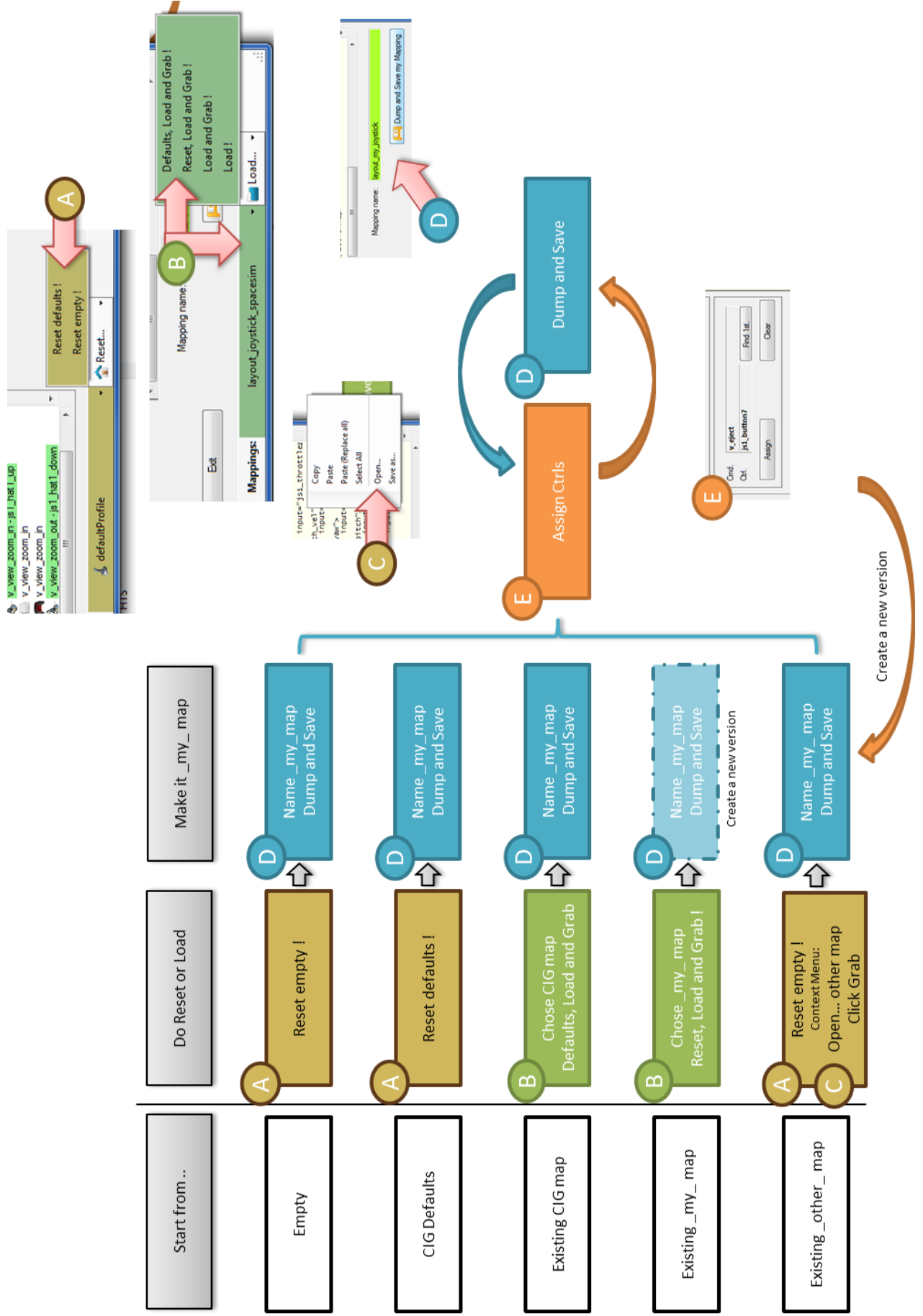
`My Documents\SCJMapper` folder, in addition the last one is moved to `filename.backup` so you have the last two saved versions if the USER folder of the game gets unavailable.

If you encounter an error or crash then read on...

- ◆ You will find ‘log4net.config.OFF’ in the distribution zip.
- ◆ Rename it to ‘log4net.config’ and run the program.
- ◆ Then look for a file named ‘trace.log’ in the program folder and
- ◆ send this via Git or to cassini@burri-web.org along with a description of the problem and your system i.e. OS, CPU, Graphics card, Joystick(s) we may then finally solve the issue ...

The Workflow

SCJMapper V 2 – Common Workflows



The GUI

Update for V 2.34

The user interface is all laid out for direct access — there are no menus

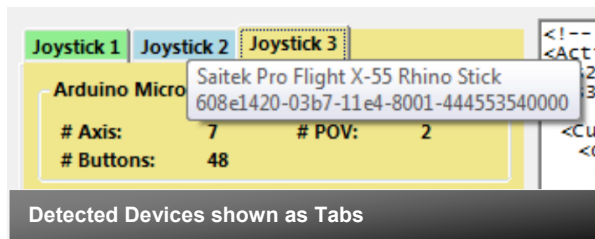
The screenshot shows the SC Joystick Mapper interface. Key components are highlighted with red boxes and labels:

- Settings**: A button at the top center.
- Load maps**: A button at the top right.
- Action tree and mappings**: A tree view on the left side showing a hierarchy of actions like `v_view_interact`, `v_view_freelook_mode`, etc.
- Detected Game devices (up to 12 are shown)**: A central panel showing detected devices, currently displaying 'Saitek Pro Flight X-55 Rhino Stick' with its axis and button counts.
- Mapping**: A panel below the device list for configuring individual mappings, including fields for 'Selected', 'Mapping', and 'Dev Ctrl', along with 'Assign', 'Throttle', 'Find 1st.', 'Disable', and 'JS / Kbd' buttons.
- Conversions**: A panel at the bottom center with 'Dump XML' and 'Grab XML' buttons.
- XML dump of the mappings used**: A panel on the right showing the generated XML code for the current mapping.
- Save map**: A button at the bottom right.
- Tree Filters**: A filter input field at the bottom left.

At the bottom of the window, the status bar shows: `Support: profile version='1' optionsVersion='2' rebindVersion='2'`

- ⇒ Action tree and mappings - shows the tree of action maps and actions derived from the defaultProfile directly from the game folders
- ⇒ There are some filters where you can limit the items shown in the tree
- ⇒ The program detects game devices - each one has its own tab
- ⇒ The XML area shows the outcome of the mapping and is what can be imported in the game directly
- ⇒ The Mapping area is where profile actions can be mapped individually to create the action mapping YOU want to use in the game

Game Devices

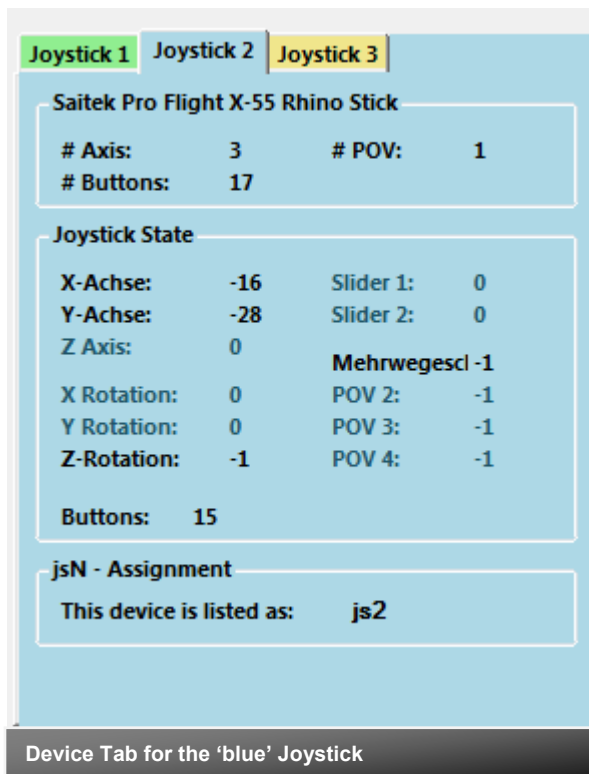


The tabs represent the game devices found connected to the PC. The program can show up to 12 devices.

The sequence 1..12 shows the order the PC reports them which is crucial to the mapping as this will result in the default js1_, js2_ .. Names used to build the command name.

A summary of the capabilities is shown in the top area.

A tooltip indicates the real name of the device - move and point the mouse to any Tab to show the indicator.



The elements shown in 'Joystick State' are the ones the device seems to support – greyed ones are not available for this device.

You will see the actual jsN assignment - or 'not assigned'.

The SC-Device to Joystick Mapping is a separate window accessed by hitting the 'Js Reassign' button.

Just hit any button, Axis of the device and see how things are changing.

Note: the range for Axis is set to -1000 .. +1000 by the program and is not what other applications may show you.

Action Tree and mappings

Action Tree

The action tree is initially built from the game's defaultProfile - so these are the known actions which are grouped along 'action maps' e.g. 'spaceship_movement'. Each action is predefined for a specific device.

There are joystick, keyboard, mouse, and gamepad actions indicated by the icon. – This is given by the SC default profile and cannot be changed. An action may e.g. not be available for the joystick.

Rebinding:

By 'rebinding' or mapping an action with a different control one does replace the default one.

Overwriting a keyboard action will result in having it available with a different command in the game.

You can only map actions using the same device as in the profile i.e. a keyboard action cannot be mapped with a joystick control.

If actions are mapped (as shown) the color indicates which device is mapped.

The device tab colors match the entries, keyboard and mouse have distinct colors.

If the background is white - there is no current mapping given.

Unmapped actions are ignored.

Underlined items indicate an ActionModifier is applied in defaultProfile

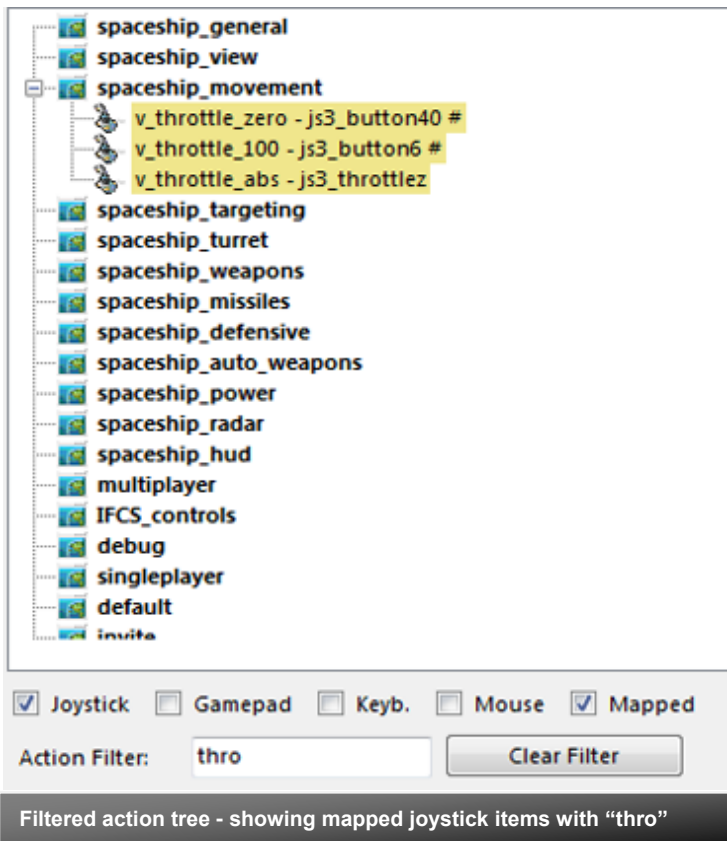
Selecting an Action:

Click on any action to make it the used action in the mapping area. Once selected it is marked with the green arrow



A regular action tree

Action Tree Filters



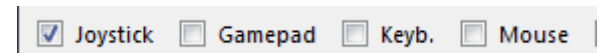
NOTE: Filters only restrict the items shown in the tree

Action Tree Filters

The action tree has a vast number of entries. So for convenience you may filter the shown items to the one you are interested in.

Device Filter

With the checkboxes at the bottom you may restrict the shown item to a particular category.



Check categories you want to see

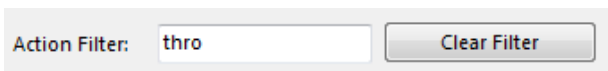
Mapped Only

Restricts to show only mapped items

Action Filter

Accepts text entry to match parts of the action name

Clear Filter



To empty the 'Action Filter' field

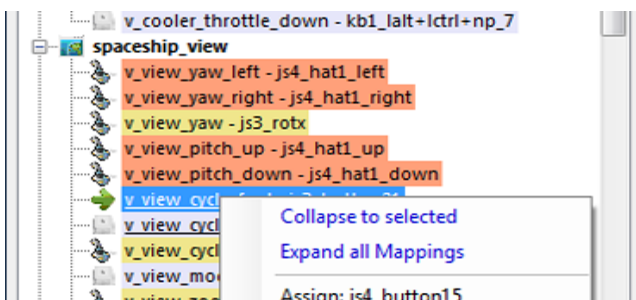
Collapse / Expand

Use this context menu to unclutter the tree view.

Select an entry and 'Collapse to selected' to only show the actionmap items where the selected item belongs to.

Select 'Expand..' to ... expand the complete tree again.

Note: Using filters or loading a profile will expand the tree again.

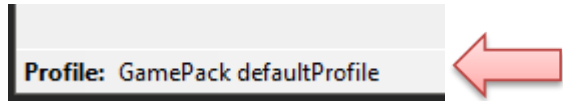


Working with Profiles

Working with profiles

The program gets the actions from the real game asset – so you are always up to the actual values.

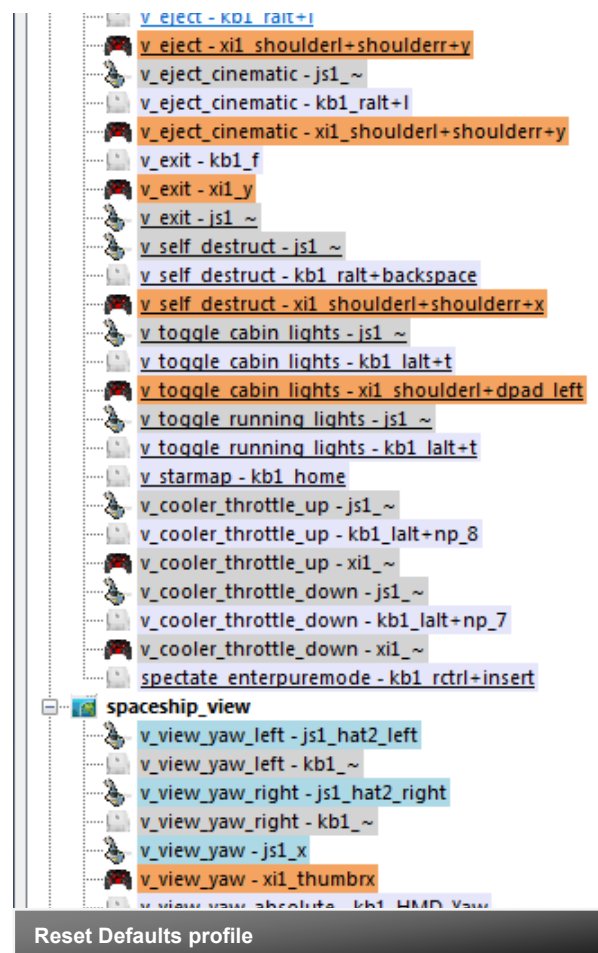
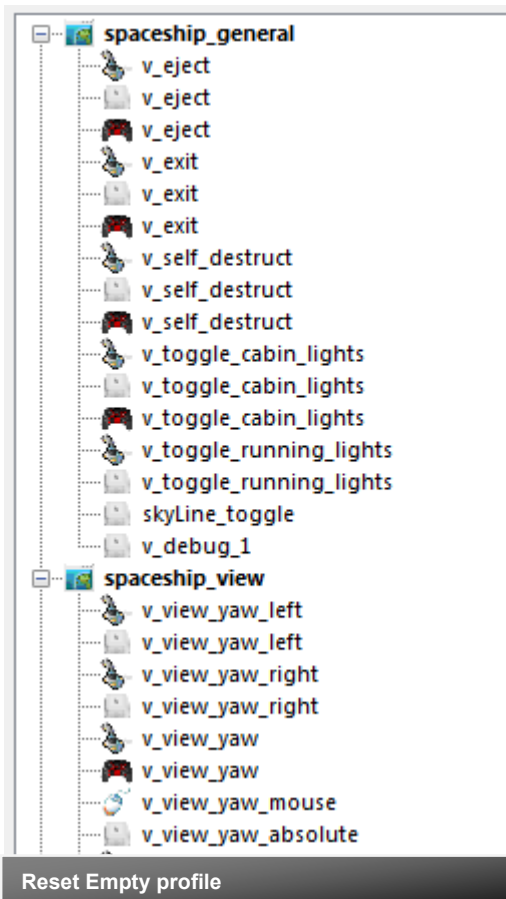
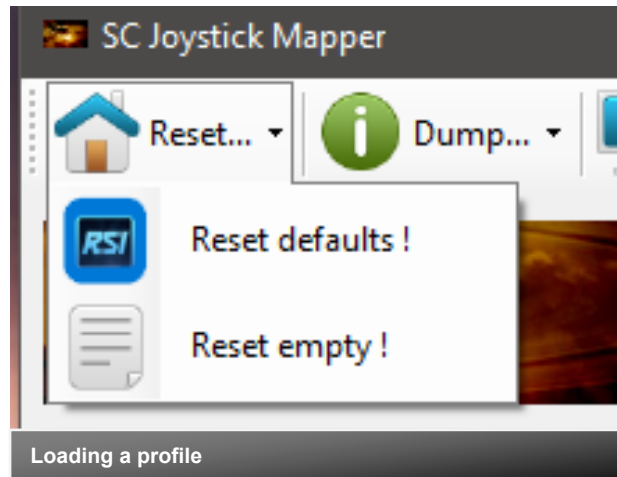
The in-game asset is used if **GamePack defaultProfile** is shown



From here you may Reset the action list to the following

-RESET DEFAULTS loads the Joystick actions mapped with what CIG is providing in defaultProfile

-RESET EMPTY reverts to just an action list without any mappings



Mapping

Selected

Mapping

Dev Ctrl.

Throttle

Device Mode

Selected

Mapping

Dev Ctrl.

Throttle

Keyboard and Mouse Mode

Joystick 1 Joystick 2 Joystick 3

Saitek Pro Flight X-55 Rhino Stick

# Axis:	3	# POV:	1
# Buttons:	17		

Joystick State

X-Achse:	-16	Slider 1:	0
Y-Achse:	-28	Slider 2:	0
Z Axis:	0	Mehrwegesc1:	-1
X Rotation:	0	POV 2:	-1
Y Rotation:	0	POV 3:	-1
Z-Rotation:	-1	POV 4:	-1

Buttons: 15

jsN - Assignment

This device is listed as: js2

Device Tab for the 'blue' Joystick

Whenever you click on an action in the Action Tree it is copied into **Mapping** and can be mapped to a Control.

Dev Ctrl. is the last item you activated on the currently shown device tab.

You may also map keyboard and mouse actions.

Devices vs. Keyboard/Mouse

To switch between game devices and keyboard/mouse use the 'JS/Kbd' toggle. Note: keyboard entries are accepted when the Ctrl. Field has the focus

Select the device

To map a device control first select the device tab i.e. if you want to map a control of the second joystick you have to select the 'Joystick 2' Tab first.

Assign

Once you have a mapping that should be used, hit the "Assign" button.

The new mapping will be shown in the Action Tree – where it gets the back color of the device it is assigned to.

Throttles

To make any axis a Throttle axis – check the 'Throttle' box ! It is often the Z-Axis. A throttle gets a name like js2_throttlez.

Clear Actions

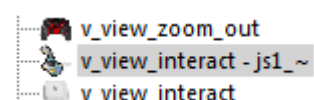
To clear a mapping – select it in the ActionTree and Click "Clear" - it gets a neutral color and no control in the ActionTree – it is now unmapped.

Find a mapping

You may use "Find 1st" to find the first action where the currently shown Ctrl.

Disabling

If you wish to disable a single item from the defaultProfile i.e. hide it from use select an item and then hit the 'Disable' button.



Advanced Mapping

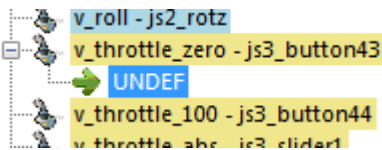
Context Menu

Right click an action opens a context menu giving a choice of functions that are possible right now.

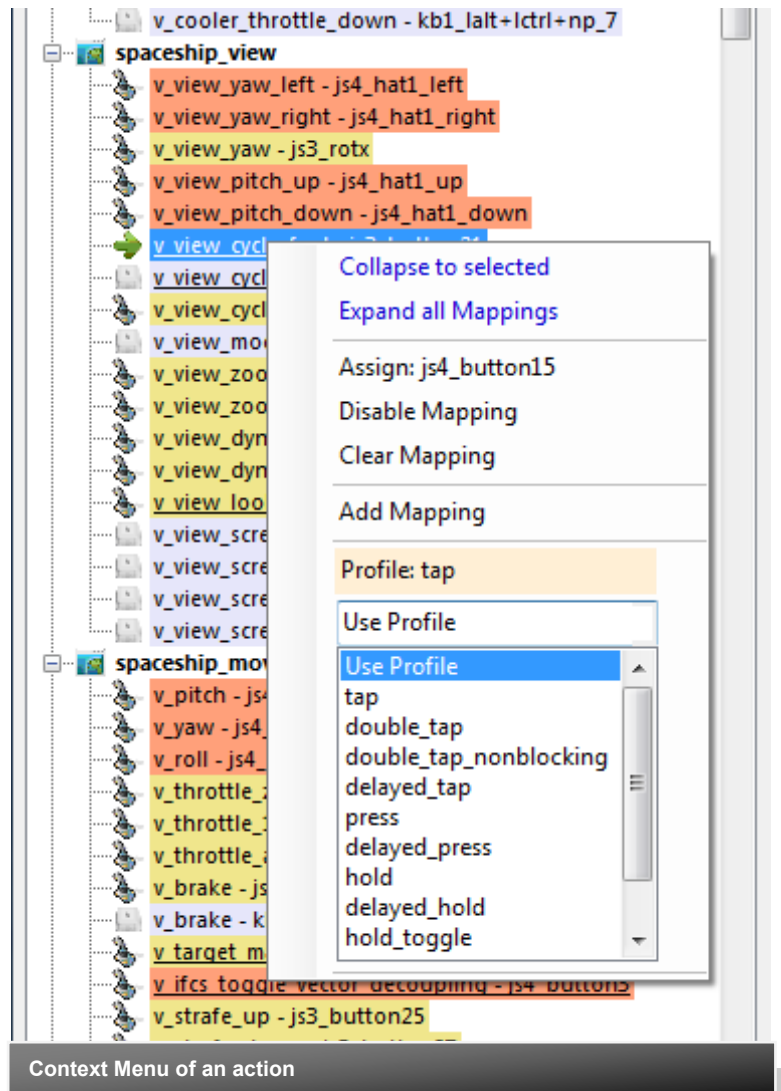
Assign, Disable, Clear behave like the buttons in the main GUI

Add Mapping (see also Mouse Mapping)

Will add a binding to the selected item to use a second control for this item. Such an addition can be mapped like the main entry - also deleted to remove it.

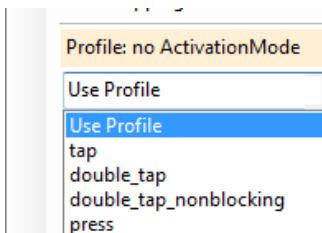


(Note: this may work partly in SC3.0)



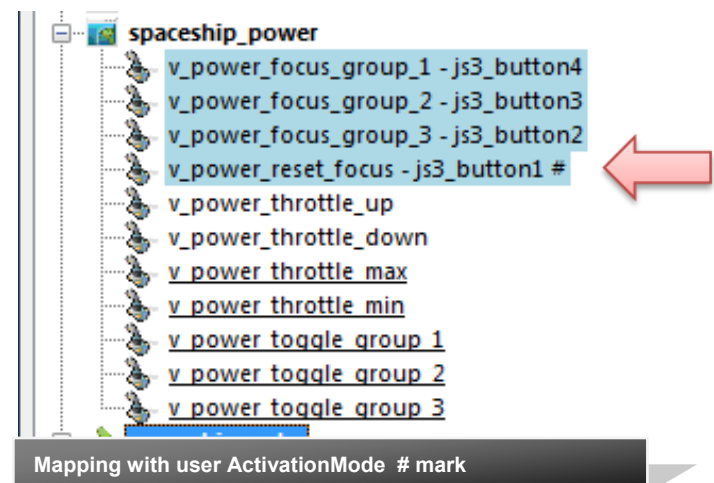
Activation Modes

Starting Profile: are activation modes Profile indicates what is in the profile as default or 'no ActivationMode' if the profile does not apply one



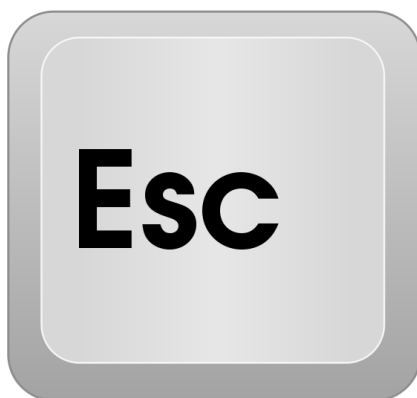
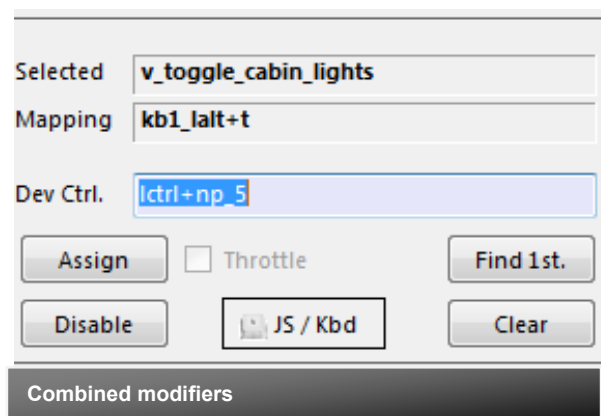
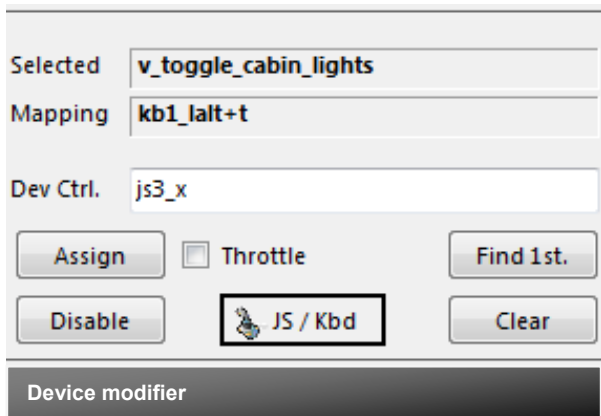
from there listed.

```
<actionmap name="spaceship_view">
<action name="v_view_cycle_headlook_mode">
<rebind input="js3_button21" ActivationMode="double_tap">
</action>
<action name="v_view_toggle_headlook_mode">
<rebind input="js3_rctrl1+button21" />
</action>
</actionmap>
```



You may choose a new activation mode for this mapping which is

Joystick mapping with Modifiers



Keyboard Modifiers

Controls can be extended with a Modifier. Right now only keyboard modifiers can be used for joysticks.

Modifiers are preset:

Left/right Shift / Alt / Ctrl keys

Modifiers can be combined.

If you press a modifier it will show up like 'lshift+lctrl+key'

For devices the notation is different - it is prepended by the device tag
E.g. js2_lalt+y (js2_y is the control that is modified here)

For keyboard input press all keys and release them at once.

Sometimes a second attempt is needed to create the proper key sequence.

Clear Modifiers

To clear all modifiers from the input

Press the ESC key for a moment.

it will be cleared after ~3-4 seconds

Mouse Mapping

Adding Mouse Commands

Switch to Kbd Mode

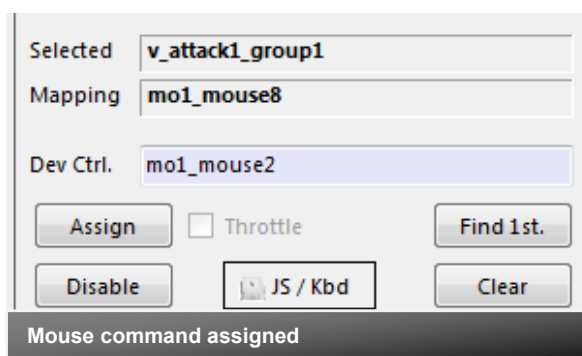
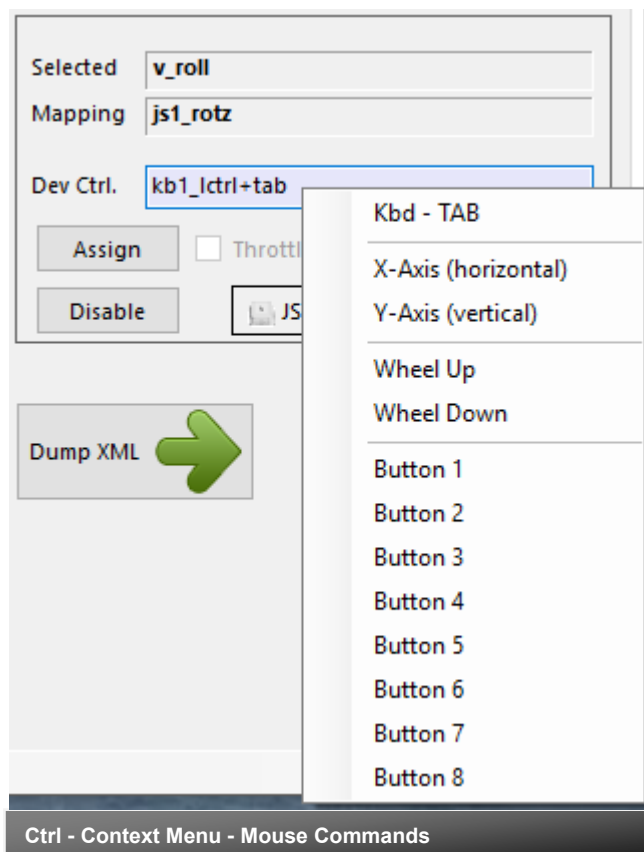


Context Menu

Right clicking the 'Ctrl' entry field opens a context menu giving a choice of mouse commands that are possible right now.

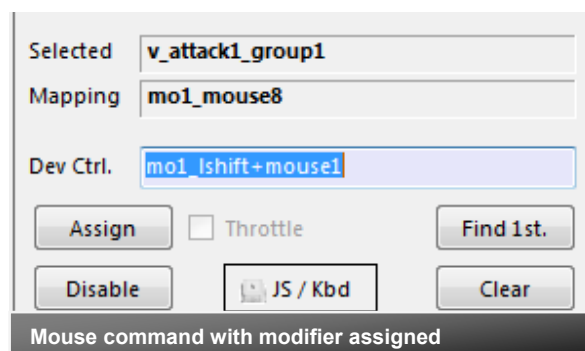
The number of buttons is taken from the current mouse input setting - you may need to find out which one is 1,2 ...

Keyboard Tab is here as well as it cannot be entered (navigates the GUI).



Modifiers from keyboard

Can be used to extend mouse commands



Mouse Mapping cont'd

Mouse mapped for keyboard action

It seems that for some actions CIG allows to map the mouse in addition to the keyboard. This may be intentional or not and may change in the future...

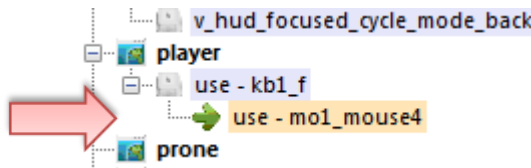
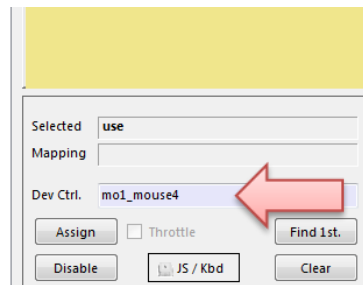
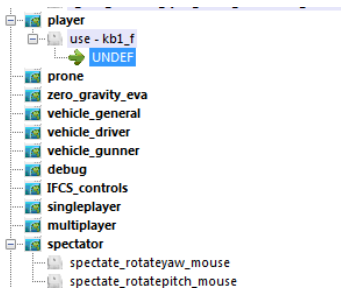
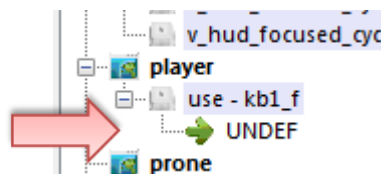
In order to add a mouse button to a keyboard action "Add Mapping" and assign a mouse input to it.

Example is with 'use' in the 'player' actionmap.

- To use "Add Mapping" one has to map the basic action - here to the already default key f.
- Then rightclick and select Add Mapping.
- Select the new UNDEF entry.

- Rightclick and select the mouse button in "Dev Ctrl."

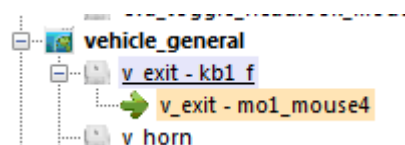
- Assign



```

</action>
<action name="use">
  <rebind input="kb1_f" />
  <addbind input="mo1_mouse4" />
</action>
<action name="toggle magnetic boots">

```



```

</actionmap>
<actionmap name="vehicle_general">
  <action name="v_exit">
    <rebind input="js1_ " multiTap="1" />
  </action>
  <action name="v_exit">
    <rebind input="kb1_f" />
    <addbind input="mo1_mouse4" />
  </action>
</actionmap>
<action name="v_horn">

```

Resulting XML

Seems to work in the Game (at least hangar it did)

Don't forget that for e.g. Use and Leave the buggy you would need to extend the vehicle - exit action as well.

It is tied to f as delayed press activation in the default profile.

For keyboard f there are many more mappings you want to check.

Note: this is rather experimental and may not always work as expected, also due to the many actions a mouse can be already be bound to.

XML Dump

XML Format

Mappings are sent to the game using XML formatted files.

The XML Area is where you may find the



mapping after hitting the 'Dump' button.

The Context Menu

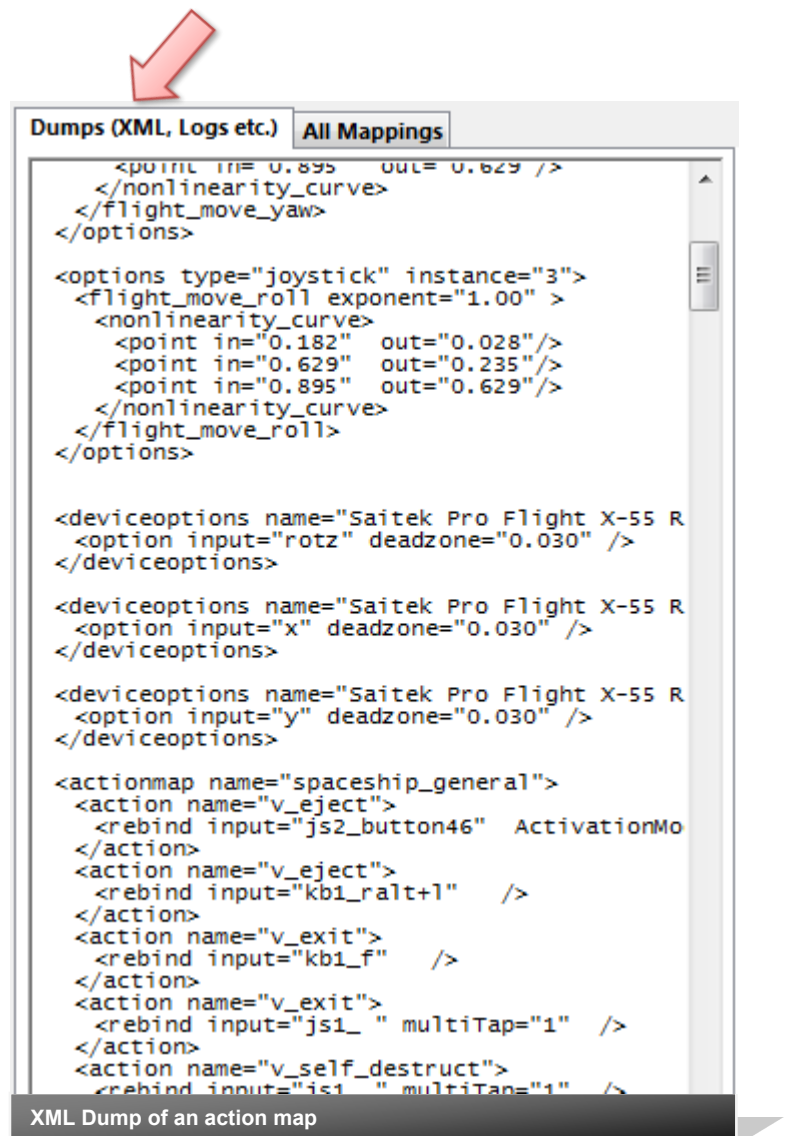
Right click opens a menu where you may choose from:

Copy, Paste, PasteAll, Select All, Open..., Save As...

The usage is rather common here. Once you dumped the mapping you want to "Save" it as "filename.xml" somewhere.

To refine any mapping "Open" the file – the content is shown in the XML Area, then "Grab" it into the ActionTree. Once the refinement is finished – again Save it to a file.

Note: only use properly formatted ActionMaps here. The program may just break if it encounters something unexpected!



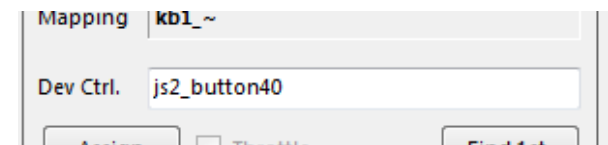
All Mappings

All Mappings - Tab

Dumps and this new mapping list are sharing the same space in a tabbed area.

You may switch at any time - nothing is lost here.

The Mappings are derived from the “Dev Ctrl.” and is updated whenever it *changes*.

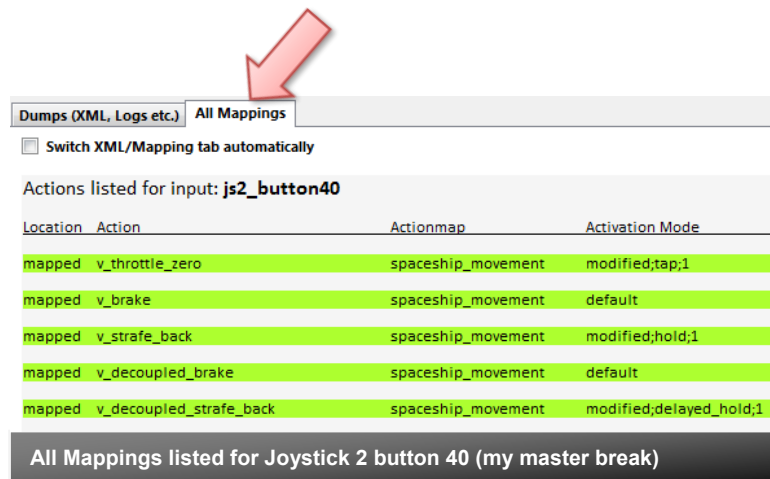


Mappings are listed as either ‘profile’ which is an entry from the defaultProfile or ‘mapped’ which is one from the currently loaded user mapping.

The last part is the activation mode with multi tap number. Sometimes it is good to know if a command is delayed etc.

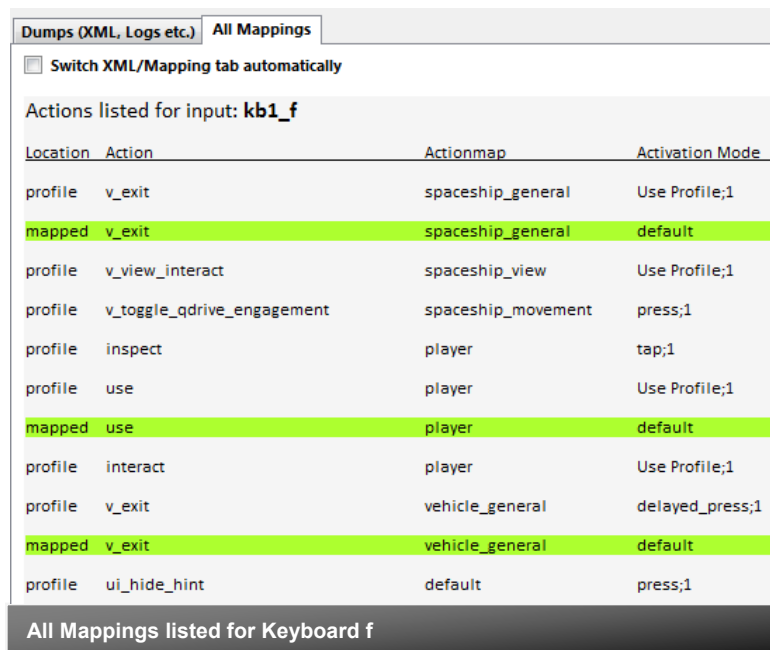
Note: sometimes you might need to toggle keyboard entries when previously a mouse entry was done - cannot be avoided..

To get the program to switch the tabs automatically - i.e. when an input changes to “All Mappings” and when a ‘Dump..’ button is pressed to “Dump (XML..)” Check the corresponding box. Also available in Settings.



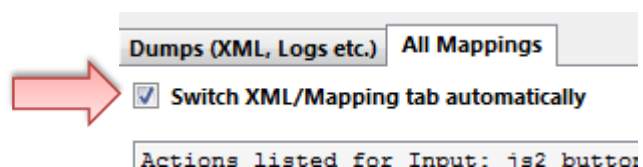
A screenshot of the 'All Mappings' tab in the software interface. A red arrow points to the 'All Mappings' tab. Below the tab, there is a checkbox labeled 'Switch XML/Mapping tab automatically'. The text 'Actions listed for input: js2_button40' is displayed. A table lists mappings with columns: Location, Action, Actionmap, and Activation Mode. The table contains six rows, all with 'mapped' in the Location column and 'spaceship_movement' in the Actionmap column. A black bar at the bottom contains the text 'All Mappings listed for Joystick 2 button 40 (my master break)'.

Location	Action	Actionmap	Activation Mode
mapped	v_throttle_zero	spaceship_movement	modified,tap;1
mapped	v_brake	spaceship_movement	default
mapped	v_strafe_back	spaceship_movement	modified,hold;1
mapped	v_decoupled_brake	spaceship_movement	default
mapped	v_decoupled_strafe_back	spaceship_movement	modified,delayed_hold;1



A screenshot of the 'All Mappings' tab in the software interface. Below the tab, there is a checkbox labeled 'Switch XML/Mapping tab automatically'. The text 'Actions listed for input: kb1_f' is displayed. A table lists mappings with columns: Location, Action, Actionmap, and Activation Mode. The table contains ten rows, with a mix of 'profile' and 'mapped' in the Location column. A black bar at the bottom contains the text 'All Mappings listed for Keyboard f'.

Location	Action	Actionmap	Activation Mode
profile	v_exit	spaceship_general	Use Profile;1
mapped	v_exit	spaceship_general	default
profile	v_view_interact	spaceship_view	Use Profile;1
profile	v_toggle_qdrive_engagement	spaceship_movement	press;1
profile	inspect	player	tap;1
profile	use	player	Use Profile;1
mapped	use	player	default
profile	interact	player	Use Profile;1
profile	v_exit	vehicle_general	delayed_press;1
mapped	v_exit	vehicle_general	default
profile	ui_hide_hint	default	press;1



A screenshot of the 'All Mappings' tab in the software interface. A red arrow points to the checkbox labeled 'Switch XML/Mapping tab automatically', which is checked. Below it, the text 'Actions listed for Input: js2 button' is visible.

Action maps

Update for V 2.34

Working with action maps

(Maps, Mapping etc..)

The program gets the action maps from the USERS game asset – so you are always up to the actual values.

In addition it provides the in game mappings from RSI for review and modification (you have to save them with a custom name)

(...\StarCitizen\LIVE\USER\Controls\Mappings)

From here you may first chose a map, then 'Load' the action map – this will overwrite you XML window in any case

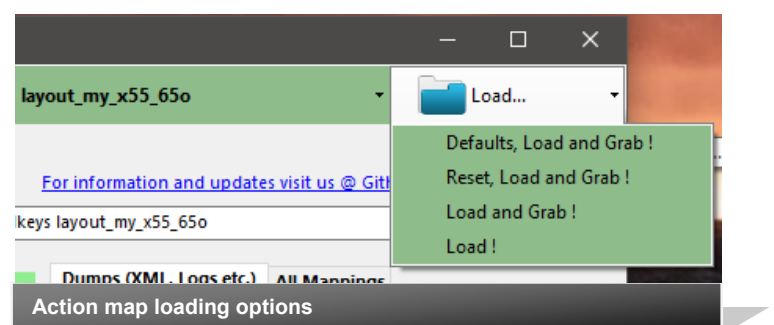
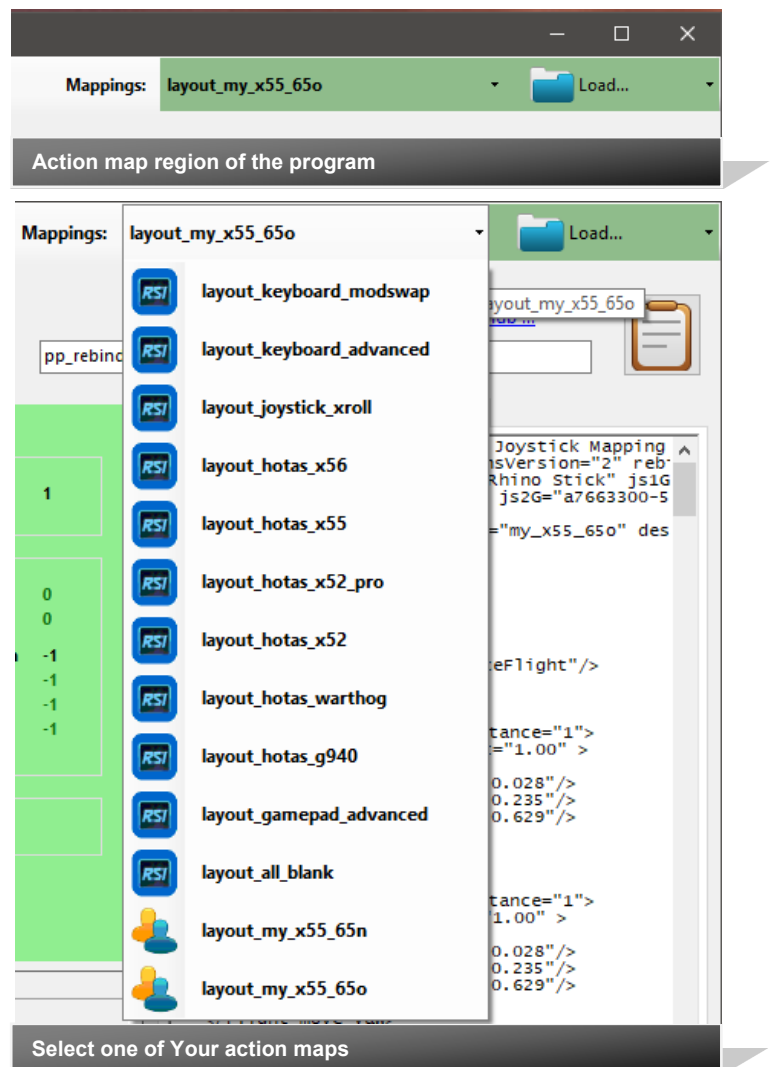
-DEFAULT, LOAD and GRAB first Reset (defaults) the action list then it loads and grabs the new map and merges them with the defaults

-RESET, LOAD and GRAB first Reset (empty) the action list (all mappings cleared) then it loads and grabs the new map

-LOAD and GRAB loads the map into the XML window and clicks Grab i.e. merges the existing mapping with the one loaded

-LOAD loads the map into the XML window only

See page 3 for some common workflows And how to handle them easily.



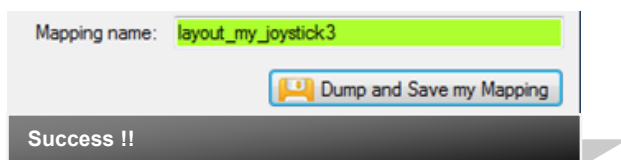
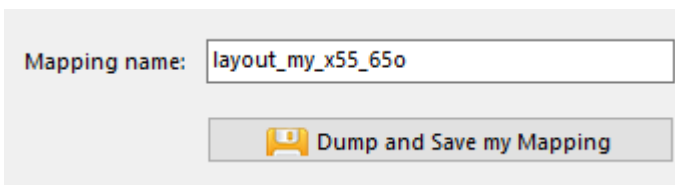
Your Actionmaps

Working with your own actionmaps

The program not only gets the actionsmaps from the real game asset – but also can save your maps there.

(...\StarCitizen\LIVE\USER\Controls\Mappings)

- 1.Type a name
- 2.Hit the button – it will then Dump and Save your map into the game folder (asking you to overwrite it if it exists)



Remark: your map name has always to start with '**layout_my_**' to prevent conflicts with CIGs own actionmaps
Lowercase only, no spaces, tabs allowed else you see the red flag ..

A successful Save will show the green flag

Your own maps will then show up like the game provided maps
pp_rebindkeys layout_my_joystick

should load it into the game

Note: For your convenience each Save also makes a copy of into your personal "My Documents\SCJMapper" folder – no work is lost if there is an update that cleans the Mappings folder.

Actiontree as table

Actiontree as Table

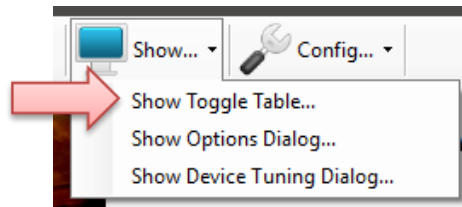
REF_ActionMap	ActionName	Device	Def_Binding	Def_Modifier	AddBind	Usr_Binding	Usr_Modifier	Disabled
01-spaceship_general	v_eject	joystick	js1_rctrl+button6	double_tap	<input type="checkbox"/>	js3_button46	delayed_press	<input type="checkbox"/>
01-spaceship_general	v_eject	keyboard	kb1_ralt+l	double_tap	<input type="checkbox"/>	kb1_ralt+l	Use Profile	<input type="checkbox"/>
01-spaceship_general	v_eject	xboxpad	xi1_shoulderl+s...	double_tap	<input type="checkbox"/>		Use Profile	<input type="checkbox"/>
01-spaceship_general	v_exit	keyboard	kb1_f	Use Profile	<input type="checkbox"/>	kb1_f	Use Profile	<input type="checkbox"/>
01-spaceship_general	v_exit	xboxpad	xi1_y	Use Profile	<input type="checkbox"/>		Use Profile	<input type="checkbox"/>
01-spaceship_general	v_exit	joystick	js1_~	press	<input type="checkbox"/>	js1_~	Use Profile	<input checked="" type="checkbox"/>
01-spaceship_general	v_self_destruct	joystick	js1_~	delayed_press	<input type="checkbox"/>	js1_~	Use Profile	<input checked="" type="checkbox"/>
01-spaceship_general	v_self_destruct	keyboard	kb1_ralt+backs...	delayed_press	<input type="checkbox"/>	kb1_ralt+backs...	Use Profile	<input type="checkbox"/>
01-spaceship_general	v_self_destruct	xboxpad	xi1_shoulderl+s...	delayed_press	<input type="checkbox"/>		Use Profile	<input type="checkbox"/>
01-spaceship_general	v_toggle_cabin_lights	joystick	js1_~	smart_toggle	<input type="checkbox"/>	js1_~	Use Profile	<input checked="" type="checkbox"/>
01-spaceship_general	v_toggle_cabin_lights	keyboard	kb1_lalt+t	smart_toggle	<input type="checkbox"/>	kb1_lalt+t	Use Profile	<input type="checkbox"/>
01-spaceship_general	v_toggle_cabin_lights	xboxpad	xi1_shoulderl+d...	smart_toggle	<input type="checkbox"/>		Use Profile	<input type="checkbox"/>
01-spaceship_general	v_toggle_running_lights	joystick	js1_~	smart_toggle	<input type="checkbox"/>	js1_~	Use Profile	<input checked="" type="checkbox"/>
01-spaceship_general	v_toggle_running_lights	keyboard	kb1_lalt+t	smart_toggle	<input type="checkbox"/>	kb1_lalt+t	Use Profile	<input type="checkbox"/>
01-spaceship_general	v_starmap	keyboard	kb1_home	press	<input type="checkbox"/>		Use Profile	<input type="checkbox"/>
01-spaceship_general	v_cooler_throttle_up	joystick	js1_~	Use Profile	<input type="checkbox"/>	js1_~	Use Profile	<input checked="" type="checkbox"/>
01-spaceship_general	v_cooler_throttle_up	keyboard	kb1_lalt+np_8	Use Profile	<input type="checkbox"/>	kb1_lalt+lctrl+n...	Use Profile	<input type="checkbox"/>
01-spaceship_general	v_cooler_throttle_up	xboxpad	xi1_~	Use Profile	<input type="checkbox"/>		Use Profile	<input type="checkbox"/>
01-spaceship_general	v_cooler_throttle_down	joystick	js1_~	Use Profile	<input type="checkbox"/>	js1_~	Use Profile	<input checked="" type="checkbox"/>
01-spaceship_general	v_cooler_throttle_down	keyboard	kb1_lalt+np_7	Use Profile	<input type="checkbox"/>	kb1_lalt+lctrl+n...	Use Profile	<input type="checkbox"/>
01-spaceship_general	v_cooler_throttle_down	xboxpad	xi1_~	Use Profile	<input type="checkbox"/>		Use Profile	<input type="checkbox"/>
01-spaceship_general	spectate_enterpuremode	keyboard	kb1_rctrl+insert	delayed_press	<input type="checkbox"/>		Use Profile	<input type="checkbox"/>
02-spaceship_view	v_view_yaw_left	joystick	js1_hat2_left	Use Profile	<input type="checkbox"/>	js4_hat1_left	Use Profile	<input type="checkbox"/>
02-spaceship_view	v_view_yaw_left	keyboard	kb1_~	Use Profile	<input type="checkbox"/>		Use Profile	<input type="checkbox"/>
02-spaceship_view	v_view_yaw_right	joystick	js1_hat2_right	Use Profile	<input type="checkbox"/>	js4_hat1_right	Use Profile	<input type="checkbox"/>
02-spaceship_view	v_view_yaw_right	keyboard	kb1_~	Use Profile	<input type="checkbox"/>		Use Profile	<input type="checkbox"/>

Action Filter: Clear
 Def Bind Filter: Clear
 Usr Bind Filter: Clear
 Joystick Gamepad Mouse Kbd
 Edit Disable Disable all Unmapped
 Accept Edits Undo Edits

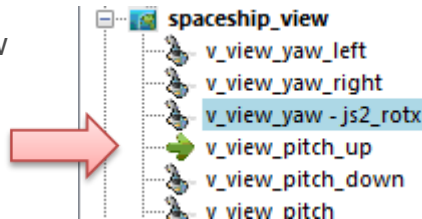
Actiontree can be show as table

Actiontree as table

“Toggle Table...” will show and hide the Table window (above)



Double clicking a row or clicking the row header will select this item in the Main Windows Action Tree (green arrow).



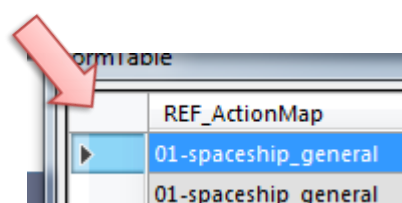
The table can be filtered with either text and/or the checkboxes
 (Note: those filters are not linked with the ones for the main action tree)



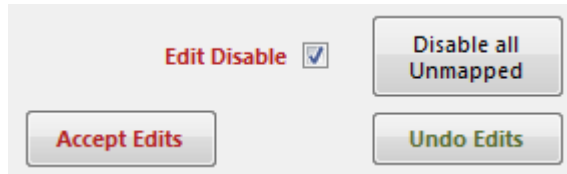
The table can be sorted by clicking any active column header.

REF_ActionMap	ActionName	Device	Def_Bin
20-player	attack1	keyboard	kb1_mou
18-default	cam_toggle_cinematic	keyboard	kb1_ralt+
18-default	cancel_cinematic	keyboard	kb1_spac
20-player	cancelselect	keyboard	kb1_mou

Clicking the leftmost (empty) column sorts the table along the initial Actiontree order.

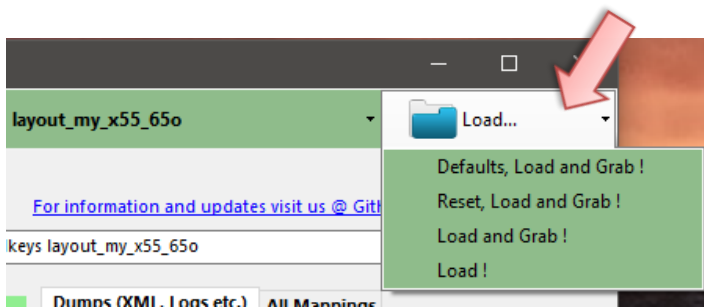


Fast Disabling with a table



Read about Disabling also later in this document..

Hints - What about commands you really don't want to be mapped in game ?



Edit Disabling

The only editable item in this table is “Disabled”. First enable edit with the checkbox. Then click on any of the checkboxes in the ‘Disabled’ column. **Undo** will revert, **Accept** carries all the changes to the main tree but they are not saved yet.

Disable all Unmapped

Will disable all **unmapped** entries that are currently visible in the action tree. I.e. use the checkboxes / filters to limit the visible items in the action tree.

(Note: if you want to discard those changes after “Accept Edits” — “Load..” the map again)

Note: there is an oddity when changing ‘Disabled’ and the table is sorted by ‘Usr_Binding’. As it immediately resorts the table after accepting the edit the changed entry is moved somewhere else. If you click another one below it may then have moved already and the click goes wrong. This is intrinsic and cannot be changed.

So if you want to fast apply disabling by clicking one after the other item either do NOT sort by ‘Usr_Binding’ OR if you must - start checking against the sort order i.e. if sorted ascending start checking from bottom to top.

Space for future use ...

Settings

Settings

Ignore Buttons - enter button numbers which should be ignored separated by spaces (e.g. 24 25)

Joystick 1 Joystick 7

Joystick 2 Joystick 8

Joystick 3 15 Joystick 9

Joystick 4 Joystick 10

Joystick 5 Joystick 11

Joystick 6 Joystick 12

Path to the Star Citizen Installation (e.g. C:\Games\StarCitizen)

E:\G\StarCitizen ...

Advanced Options ...

Use Gamepad Use CSV Listing

Switch XML/Mapping tab automatically List Modifiers

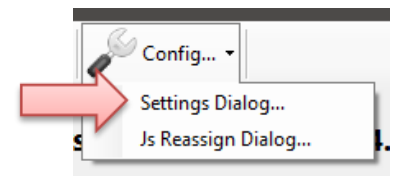
Ignore Actionmaps - check the ones to hide

- spaceship_defensive
- spaceship_auto_weapons
- spaceship_power
- spaceship_radar
- spaceship_ping
- spaceship_scanning
- spaceship_hud
- lights_controller
- player
- prone
- zero_gravity_eva
- vehicle_general
- vehicle_driver
- vehicle_gunner
- debug
- IFCS_controls
- singleplayer
- multiplayer
- spectator
- default
- ui_textfield
- invite

Note: Accepting changes will clear the action tree to apply the new settings; Cancel now if you want to save your work first.

Accept Cancel

There are a number of settings you may need to do for efficient working..



Ignore Buttons

Some devices have buttons pressed to switch modes. I may be needed to 'ignore' them to get proper readouts for mapping.

Enter the numbers with a space between - like in the example below

Ignore Buttons - enter button numbers which should be ignored separated by spaces (e.g. 24 25)

Joystick 1 15 16 17

Joystick 2

Ignore Action maps

You may not want to deal with all the maps provided by the game - check the ones you want to ignore those maps are hidden from you and will not be processed once ignored.

Ignore Actionmaps - check the ones to hide

- multiplayer
- singleplayer
- invite
- player
- flycam
- vehicle_general
- vehicle_driver
- vehicle_gunner

Settings (2)

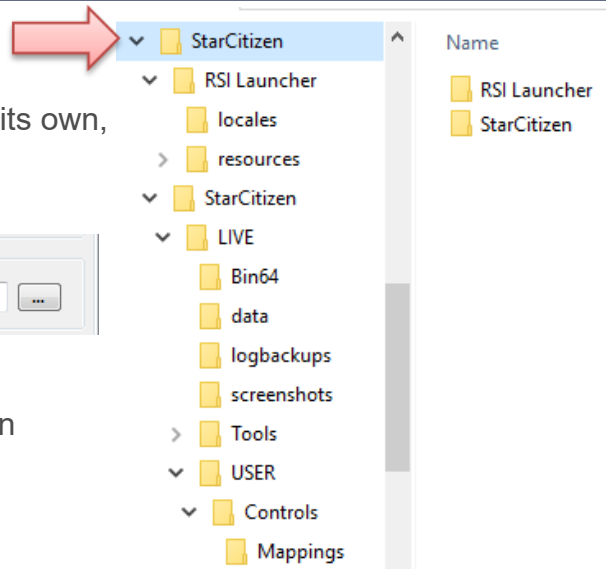
Providing a path to the game

In general the program finds the path to the game on its own, however if not, you may direct it to use a given path



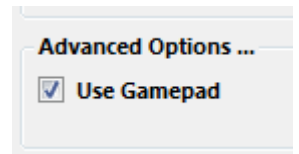
The path should be the top folder of the SC installation

Make sure to check the left box to use the path



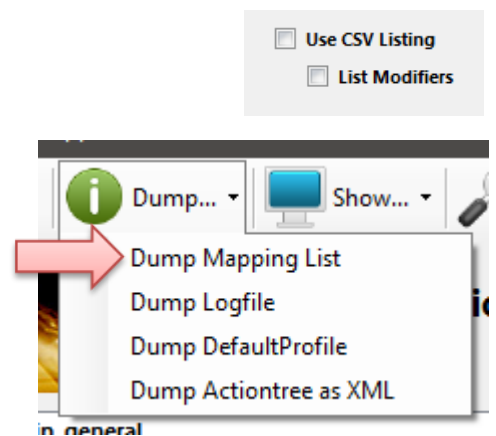
Use Gamepad

The gamepad needs special treatment - if you want to use a gamepad you have to check the box.



Listing Actiontrees as CSV list

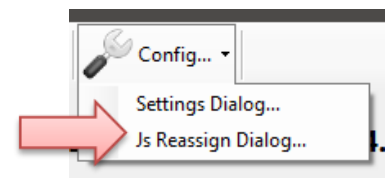
The actiontree can be listed in CSV format and with copy/paste or Save then used in a spreadsheet or database program. Optional the modifiers are listed. The list is created with "Dump List"
Note: use the various options to e.g. create a list from the default profile or your map with or without the CIG standard layout. See also Hints on page 24 !!



Joystick Assignment

Joystick	Device Name	Assigned Number
Joystick 1	vJoy Device	n.a.
Joystick 2	Saitek Pro Flight X-55 Rhino Stick	js2
Joystick 3	Arduino Micro	js3
Joystick 4		
Joystick 5		
Joystick 6		
Joystick 7		
Joystick 8		

(re) assign the joystick devices to the wanted js - number



Go here if you wish to assign a device to a particular js – number or to re-assign the devices to other numbers.

Per default the devices found are assigned along the sequence 1..8 but SC may remap them so here is the place to fix this without having to go through all commands and reassign them.

Notes: The color of the assigned items will not change as it is still the same device but js1 will become js2 for example.

You can leave this dialog with “Accept” only if each device is either assigned to a unique number or to n.a. (not assigned) otherwise an error pops to ask you to fix it or Cancel.

Related SC console commands are:

```
i_DumpDeviceInformation
```

```
pp_ResortDevices joystick 1 2
```

```
pp_rebindkeys export joystick  
pp_rebindkeys export xboxpad
```

Device Tuning 1/3

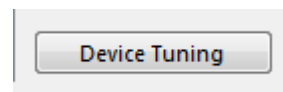
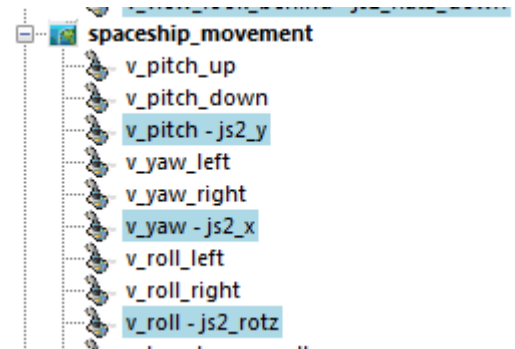
There are options provided to tune the reaction of a game device

Use 'Device Tuning' to optimize it, it supports:

- Deadzone
- Sensitivity
- Invert
- either Exponent or NonLinearCurve independently for the Yaw-, Pitch-, and Roll- axes or the Strafe axes

Note: Tuning will only recognize mapped controls

Hit the 'Device Tuning' button to open the tuning window



Joystick Tuning

Actual mapping for the axis

Live View of the joystick movement

Tuning parameters of the axis

Tuning parameters of the active axis

Joystick IN-> OUT map

Turnspeed [seconds per full turn]

Damping - how fast will a movement stop (1=fast)

Activate an axis

Switch group

Live IN - OUT values scaled 0..1

Changing Skies

Done

Yaw js3_x

Pitch js3_y

Roll js3_rotz

IN(x) OUT(y)

Point	IN(x)	OUT(y)
Point 1	0.182	0.028
Point 2	0.629	0.235
Point 3	0.895	0.629

sec per 360° turn: 6

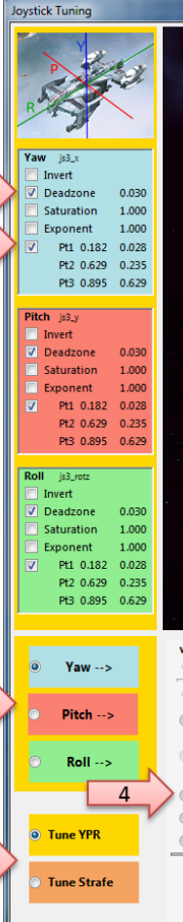
damping: 6

Out there 1 Canyon Highway

Out there 3 Shiodome Big Sight

Skybox.dds LA HeliPad Sunset

Device Tuning 2/3



How to...

There is one active axis – the color frame of the chart indicates the active one (here blue = Yaw) 1

Parameters can be manipulated for the active axis.

Switch the active one by clicking the Yaw, Pitch, Roll Option (bottom, left) 2

Or change the group to and from Strafe to YPR 2a

Activating a tuning parameter will activate too 3

Parameters must be 'checked' to be used 3a

e.g. Deadzone and NonLinearCurve (Pt1..3) are checked for Yaw

Each axis has it's own set of parameters

Active and Checked (Enabled) parameters can be changed. 3

Deadzone is a simple slider from 0.0 to 0.15 (try it out in the live view)

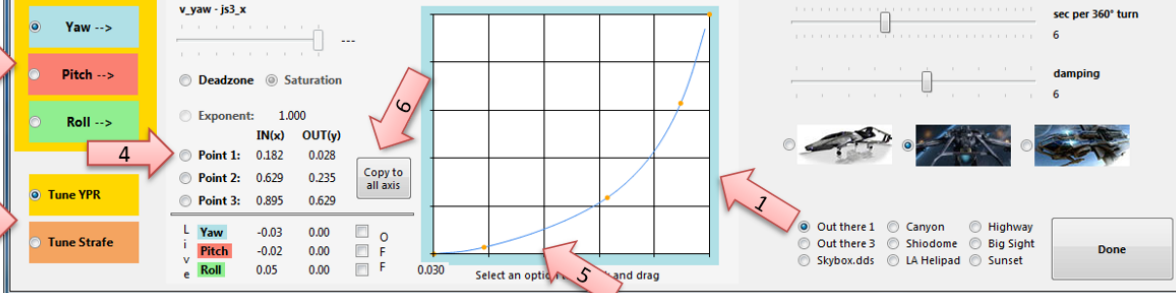
All other parameters are handled by first choosing it (e.g. Point 1) 4

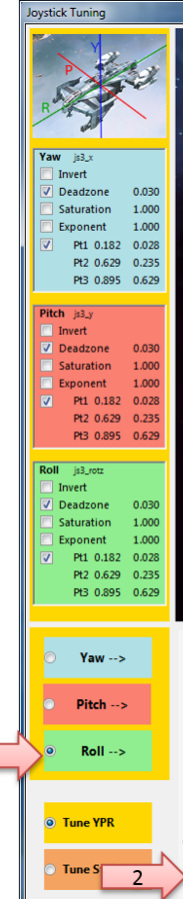
Changing the value by first left click and hold into the chart area, then moving the mouse up-down and left-right to adjust – then release the mouse button.

Point 1 is usually the leftmost orange marker 5

If you wish to copy the Curve Points to all other axis – click the Copy button 6

Sensitivity and Exponent will only go with up-down movement of the mouse

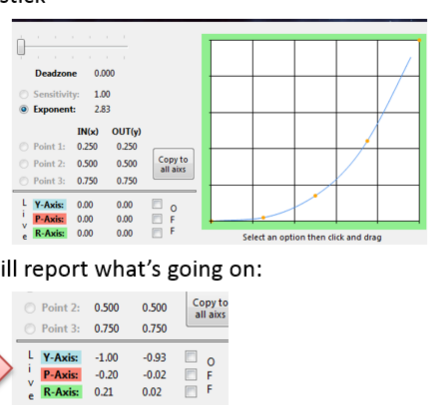





Here Roll (Green) is active and Exponent is chosen to be changed. 1

By click, hold and moving down – the exponent was changed from 1.47 to 2.83

The curve represents IN vs OUT of the joystick




If you move the joystick the 'Live' fields will report what's going on:



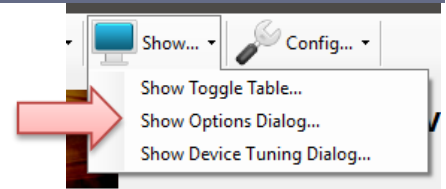
Sometimes it is helpful to just disable one direction of the movement 3

Check OFF for any axis (it just disables it for the Live View)



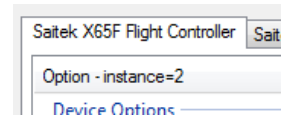
Device & Action Options 1/2

Open the **Options ...** window to access this feature



Device Options are the ones tied to a certain device e.g. a joystick axis.

Action Options are grouped into different kind of actions e.g. flight_move group similar to the actionmap grouping (but not exactly the same..) AND they are tied to a device and "instance" i.e. the jsN number for joysticks. (The X65F is js2 in this example).



The dialog will also track which control is assigned to which action and show it in the rows accordingly

- There is one tab for each device that is used - here we have the two joysticks.
- You click into a row to edit the settings.

There are only Saturation and Deadzone available for *Device Options*.

For *Action Options* there are tuning parameters available and if an action is mapped both kind of edits are made available for convenience.

The screenshot shows the JMMapper - Options window with two tabs: 'Saitek X65F Flight Controller' and 'Saitek Pro Flight X-55 Rhino Stick'. The 'Saitek X65F Flight Controller' tab is active, showing a table of options. A red arrow points to the 'Option - instance=3' header, and a green arrow points to the 'flight_move_yaw' row. The table has columns: Option, Dev Control, Saturation, Deadzone, Invert, Expo., Curve P1, and Curve P2.

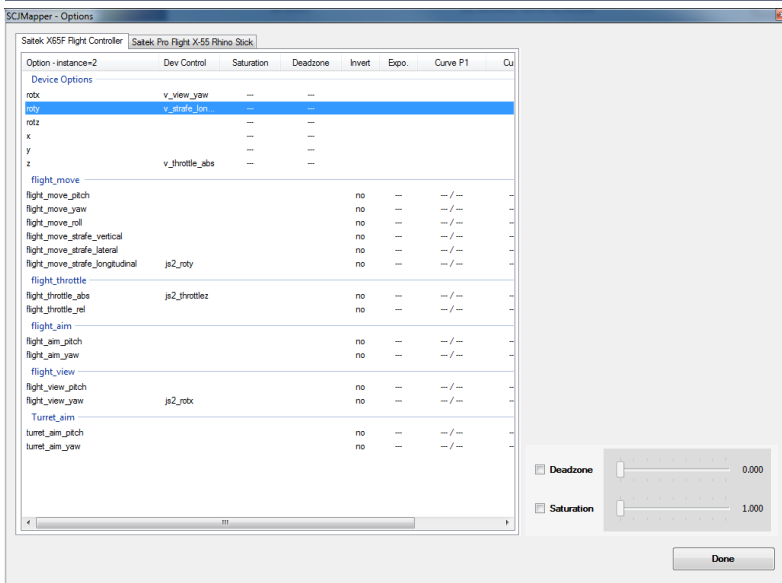
Option	Dev Control	Saturation	Deadzone	Invert	Expo.	Curve P1	Curve P2
Device Options							
rotz	v_roll	--	0.030				
x	v_yaw	--	0.028				
y	v_pitch	--	0.028				
flight_move							
flight_move_pitch	js3_y			no	--	0.182 / 0.028	0.629
flight_move_yaw	js3_x			no	--	0.182 / 0.028	0.629
flight_move_roll	js3_rotz			no	--	0.182 / 0.028	0.629
flight_move_strafe_vertical				no	--	--/--	--/--
flight_move_strafe_lateral				no	--	--/--	--/--
flight_move_strafe_longitudinal				no	--	--/--	--/--
flight_throttle							
flight_throttle_abs				no	--	--/--	--/--
flight_throttle_rel				no	--	--/--	--/--
flight_aim							
flight_aim_pitch				no	--	--/--	--/--
flight_aim_yaw				no	--	--/--	--/--
flight_view							
flight_view_pitch				no	--	--/--	--/--
flight_view_yaw				no	--	--/--	--/--
Turret_aim							
turret_aim_pitch				no	--	--/--	--/--
turret_aim_yaw				no	--	--/--	--/--

On the right, a graph shows a curve for 'v_yaw - js3_x'. A red arrow points to the graph. Below the graph, there are radio buttons for 'Exponent', 'Curve', and 'None'. The 'Curve' option is selected, showing a table of points:

Point	IN(x)	OUT(y)
Point 1	0.182	0.028
Point 2	0.629	0.235
Point 3	0.895	0.629

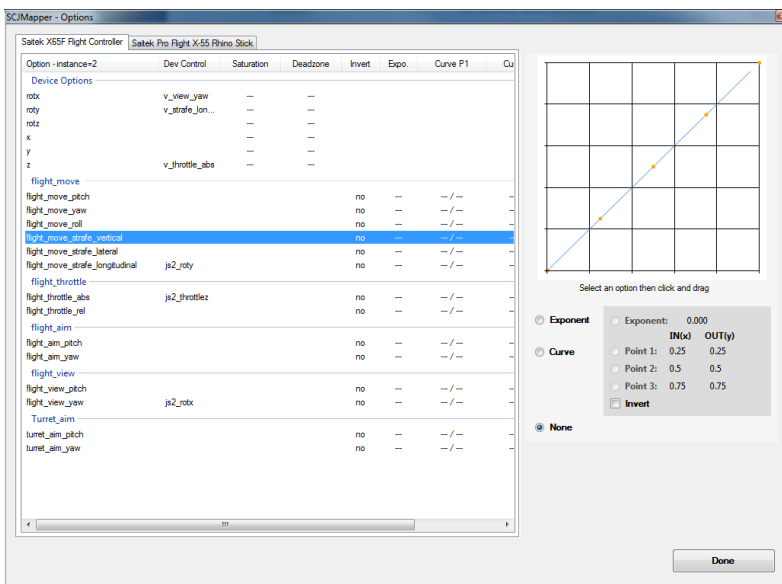
Below the graph, there are checkboxes for 'Deadzone' (checked) and 'Saturation' (unchecked). The 'Deadzone' slider is set to 0.028 and the 'Saturation' slider is set to 1.000. A 'Done' button is at the bottom right.

Device & Action Options 2/2



Device Options

Enable /Disable Deadzone and Saturation with the checkboxes, use the slider to control the value of an enabled item.



Action Options

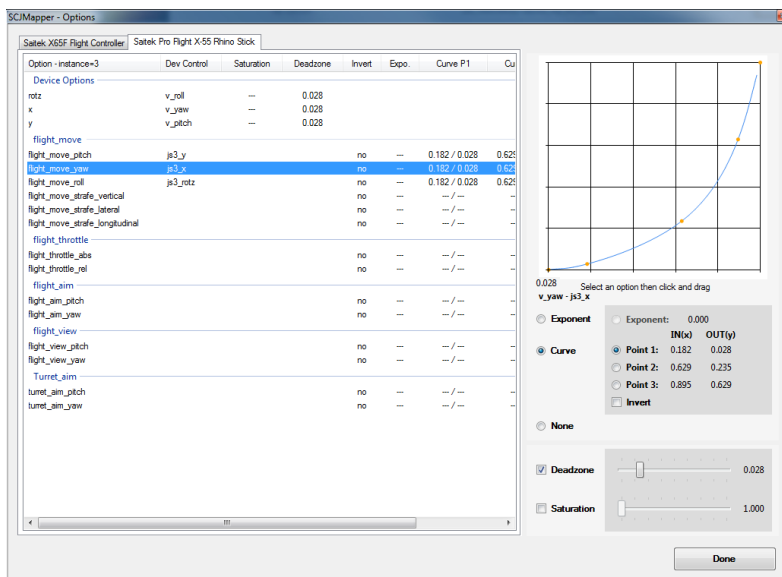
Use the radio buttons to select one of the tuning kinds (Exponent, Curve or None)

Click and drag the curve or points in the grid.

Check Invert to invert this action

None will disable the tuning but not Invert

Here is a mapped action selected.



This enables the tuning items but also the related device options of the mapped control

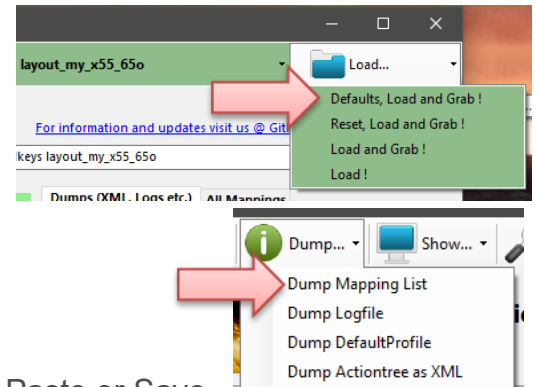
Note: tuning of unmapped items will not make a lot of sense but you may later assign a control to the action and then the tuning becomes active in the mapping.

Also note that this is how CIG treats the Options - the program is just following the rules..

Hints ...

How to get a list of all game commands when using a map file?

- Load a map using 'Defaults'
- Hit 'Dump Mapping List'
 - ... Gets you the complete list of commands in use if you load that map in game
- Right click in the listing to get a context menu to Copy / Paste or Save As..
- The mapping filter checkboxes can be used Joystick Gamepad Keyb. Mouse Mapped to



```

*** spaceship_auto_weapons
v_weapon_toggle_ai . kb1 _ slash . [1] Use Profile

*** spaceship_power
v_power_focus_group_1 + js3 _ button4 . [1] Use Profile
v_power_focus_group_1 . kb1 _ 1 . [1] Use Profile
v_power_focus_group_2 + js3 _ button3 . [1] Use Profile
v_power_focus_group_2 . kb1 _ 2 . [1] Use Profile
v_power_focus_group_3 + js3 _ button2 . [1] Use Profile
v_power_focus_group_3 . kb1 _ 3 . [1] Use Profile
v_power_reset_focus + js3 _ button1 . [1] Use Profile
v_power_reset_focus . kb1 _ 0 . [1] Use Profile
v_power_throttle_up + js3 _ button6 . [1] Use Profile
v_power_throttle_up . kb1 _ np_add # [2] double_tap
v_power_throttle_down + js3 _ rctrl+button6 . [1] Use Profile
v_power_throttle_down . kb1 _ np_subtract . [1] Use Profile
v_power_throttle_max + js3 _ button5 # [1] press
v_power_throttle_max . kb1 _ np_add # [2] double_tap
v_power_throttle_min + js3 _ rctrl+button5 # [1] tap
v_power_throttle_min . kb1 _ np_subtract . [2] double_tap
v_power_toggle_group_1 + js3 _ rctrl+button4 . [1] smart_toggle
v_power_toggle_group_1 . kb1 _ 4 . [1] smart_toggle
v_power_toggle_group_2 + js3 _ rctrl+button3 . [1] smart_toggle
v_power_toggle_group_2 . kb1 _ 5 . [1] smart_toggle
v_power_toggle_group_3 + js3 _ rctrl+button4 . [1] smart_toggle
v_power_toggle_group_3 . kb1 _ 6 . [1] smart_toggle

*** spaceship_radar
v_radar_toggle_onoff + js3 _ button16 . [1] Use Profile
v_radar_toggle_active_or_passive + js3 _ button37 . [1] Use Profile
v_radar_toggle_active_or_passive . kb1 _ period . [1] Use Profile
v_radar_cycle_mode_fwd + js3 _ button15 . [1] Use Profile
v_radar_cycle_zoom_fwd + js3 _ button14 . [1] Use Profile
v_radar_cycle_zoom_fwd . kb1 _ comma . [1] Use Profile
v_radar_cycle_focus_fwd + js3 _ button13 . [1] Use Profile
v_radar_toggle_view_focus + js3 _ rctrl+button13 . [1] Use Profile

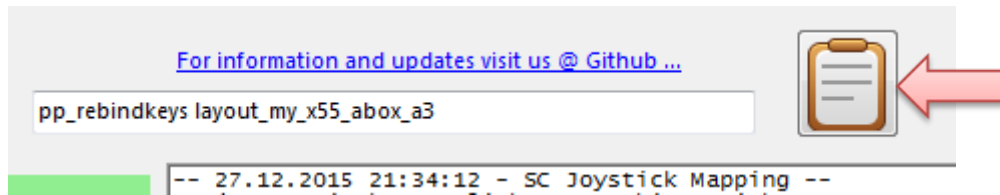
*** spaceship_hud
v_hud_cycle_mode_fwd . kb1 _ apostrophe . [1] Use Profile
v_hud_cycle_mode_back . kb1 _ semicolon . [1] Use Profile
v_hud_focused_cycle_mode_fwd . xi1 _ shoulderr . [1] Use Profile
v_hud_focused_cycle_mode_back . xi1 _ shoulderl . [1] Use Profile
v_hud_open_tab1 . kb1 _ f1 . [1] Use Profile
    
```

For bindings and activation:

- . indicates a profile entry i.e. a default setting
- + indicates a user mapping
- # indicates a user ActivationMode setting

Hints ...

How to use pp_rebindkeys easy in the game ?



- Clicking the Notepad icon top right copies the pp_rebindkeys command into the Clipboard – from there just Ctrl-V it into the SC console..

Note: if you want to be sure to apply only your new map first type pp_rebindkeys without a file and then Enter - the response of the game should be - loaded factory defaults ...

Then use the command with your mapname (without the .xml extension)

How to apply keyboard commands and modifiers ?

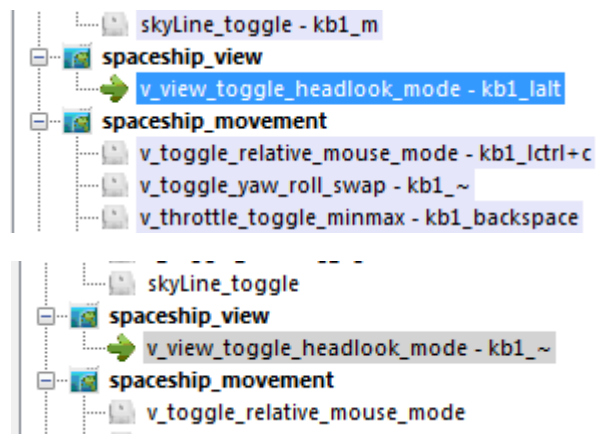
Sometimes your command is not recognized with the first try

Check the Ctrl field each time and if it does not yet capture what you want – try once more. Also releasing all controls currently pressed **together** helps to get successful Ctrl. Entries.

What about commands you really don't want to be mapped in game ?

Sometimes default commands from CIG annoyingly interfere with your game style

- Load a Profile with defaults and filter if needed to find the problematic action
- If you find that this single kbd leftalt command is disturbing your use of the left alt modifier
- Reload your own map and **'Disable'** that action for the keyboard to ignore it in the game



Hints ...

How to Calibrate a gamepad?

Sometimes the gamepad axes are rather off and will overwrite commands.

E.g. there is always `xi_thumbly` shown and one cannot get any other ctrl. mapped and the readout is high.

GamePad State		
DPad:		
TStick Left:	192	3072
TStick Right:	0	0

To calibrate the gamepad press all 4 ABXY buttons together and wait about 2 sec. then the reading should be 0 or close to 0 for all axes (the detection limit is about 500).



GamePad State		
DPad:		
TStick Left:	0	52
TStick Right:	0	0

How to find out which controllers (Joysticks) are available in game ?

- Run the game and then go back to SCJMapper
- Use 'Dump Logfile' to read parts of the CIG gamelog.

A screenshot of the SCJMapper software interface. On the left, a log window displays the following text:

```
-- 06.05.2017 02:42:01 - SC Joystick AC Log Controller Detect  
  
Log started on 05/06/17 00:13:20  
Running 64 bit version  
Executable: E:\G\StarCitizen\StarCitizen\Public\Bin64\StarCitizen.exe  
ProductVersion: 2.6.7.65236  
Windows 7 64 bit SP 1 (build 6.1.7601)  
32717MB physical memory installed, 24698MB available, 8388607MB virtual memory installed  
Current display mode is 2560x1600x32  
IBM enhanced (101/102-key) keyboard and 16+ button mouse installed  
- Connected joystick0: vJoy Device {BEAD1234-0000-0000-0000-504944564944}  
- Connected joystick1: Saitek X65F Flight Controller {086A06A3-0000-0000-0000-504944564944}  
- Connected joystick2: Saitek Pro Flight X-55 Rhino Stick {22150738-0000-0000-0000-504944564944}  
- Connected xinput0
```

A red arrow points from the log window to a context menu on the right. The context menu has a title bar with 'Dump...' and 'Show...' buttons. The menu items are: 'Dump Mapping List', 'Dump Logfile', 'Dump DefaultProfile', and 'Dump Actiontree as XML'. A red arrow points to the 'Dump Logfile' option.

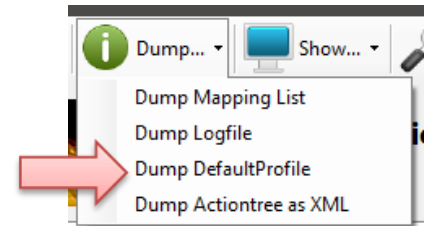
You may

see which devices are recognized by the game - joystick0 must be mapped as js1 etc. xinput0 is the gamepad here (this is then xi1)

Hints ...

How to get the defaultProfile.xml now that it is no longer a text file?

- Use 'Dump DefaultProfile'



... Gets you the complete used defaultProfile in the right window

Profile: GamePack defaultProfile

The in-game asset is used if **GamePack defaultProfile** is shown

- Right click in the listing to get a context menu to Copy / Paste or Save As..

```
<profile version="1" optionsversion="2" rebindversion="2" >
  <platforms >
    <PC keyboard="1" mouse="1" xboxpad="1" ps3pad="0" joystick="1" />
    <Xbox keyboard="1" xboxpad="1" ps3pad="0" />
    <PS3 keyboard="1" xboxpad="0" ps3pad="1" />
  </platforms>

  <actiongroup action="v_attack1" >
    <action name="v_attack1_group1" />
    <action name="v_attack1_group2" />
    <action name="v_attack1_group3" />
  </actiongroup>

  <ActivationModes >
    <ActivationMode name="tap" onPress="0" onHold="0" onRelease="1" multiTap="1" multiTapBlock="1" presT
    <ActivationMode name="double_tap" onPress="1" onHold="0" onRelease="0" multiTap="2" multiTapBlock="1"
    <ActivationMode name="double_tap_nonblocking" onPress="1" onHold="0" onRelease="0" multiTap="2" multiT
    <ActivationMode name="press" onPress="1" onHold="0" onRelease="0" multiTap="1" multiTapBlock="1" pres
    <ActivationMode name="delayed_press" onPress="1" onHold="0" onRelease="0" multiTap="1" multiTapBlock=
    <ActivationMode name="hold" onPress="1" onHold="0" onRelease="1" multiTap="1" multiTapBlock="1" retri
    <ActivationMode name="delayed_hold" onPress="1" onHold="0" onRelease="1" multiTap="1" multiTapBlock="1
    <ActivationMode name="smart_toggle" onPress="1" onHold="0" onRelease="1" multiTap="1" multiTapBlock="1
  </ActivationModes>

  <CustomisationUIHeader >
    <keyboard label="@ui_ResetToDefaults" description="@ui_KeyboardDefaultDesc" image="KeyboardDefault" />
    <xboxpad label="@ui_ResetToDefaults" description="@ui_GamepadDefaultDesc" image="GamePadDefault" />
    <joystick label="@ui_ResetToDefaults" description="@ui_JoystickDefaultDesc" image="JoystickDefault" />
  </CustomisationUIHeader>

  <optiontree type="keyboard" name="root" UIShowInvert="-1" UIShowSensitivity="-1" UISensitivityMin="0.01"
    <optiongroup name="master" UILabel="@ui_COMasterSensitivity" UIShowSensitivity="1" UIShowInvert="0" >
      <optiongroup name="inversion" UILabel="@COMasterSensitivityCurvesMouse" UIShowCurve="-1" UIShowSensitiv
        <optiongroup name="inversion" UILabel="@ui_COInversionSettings" UIShowSensitivity="0" UIShowInvert="-1"
          <optiongroup name="fps" UILabel="@ui_COFPS" UIShowSensitivity="1" UIShowInvert="0" >
            <optiongroup name="fps_view" >
              <optiongroup name="fps_view_pitch" UILabel="@ui_COFPSviewPitch" invert_cvar="cl_invertMouse" l
              <optiongroup name="fps_view_yaw" UILabel="@ui_COFPSviewYaw" UIShowSensitivity="1" UIShowInvert
            </optiongroup>
          </optiongroup>
        </optiongroup>
      <optiongroup name="flight" UILabel="@ui_COflight" UIShowSensitivity="0" UIShowInvert="0" >
        <optiongroup name="flight_move" UILabel="@ui_COflightMove" UIShowSensitivity="1" >
          <optiongroup name="flight_move_pitch" UILabel="@ui_COflightPitch" UIShowSensitivity="1" UIShow
          <optiongroup name="flight_move_yaw" UILabel="@ui_COflightYaw" UIShowSensitivity="1" UIShowInvert
        </optiongroup>
      <optiongroup name="flight_view" UILabel="@ui_COFreeLook" UIShowSensitivity="1" >
```

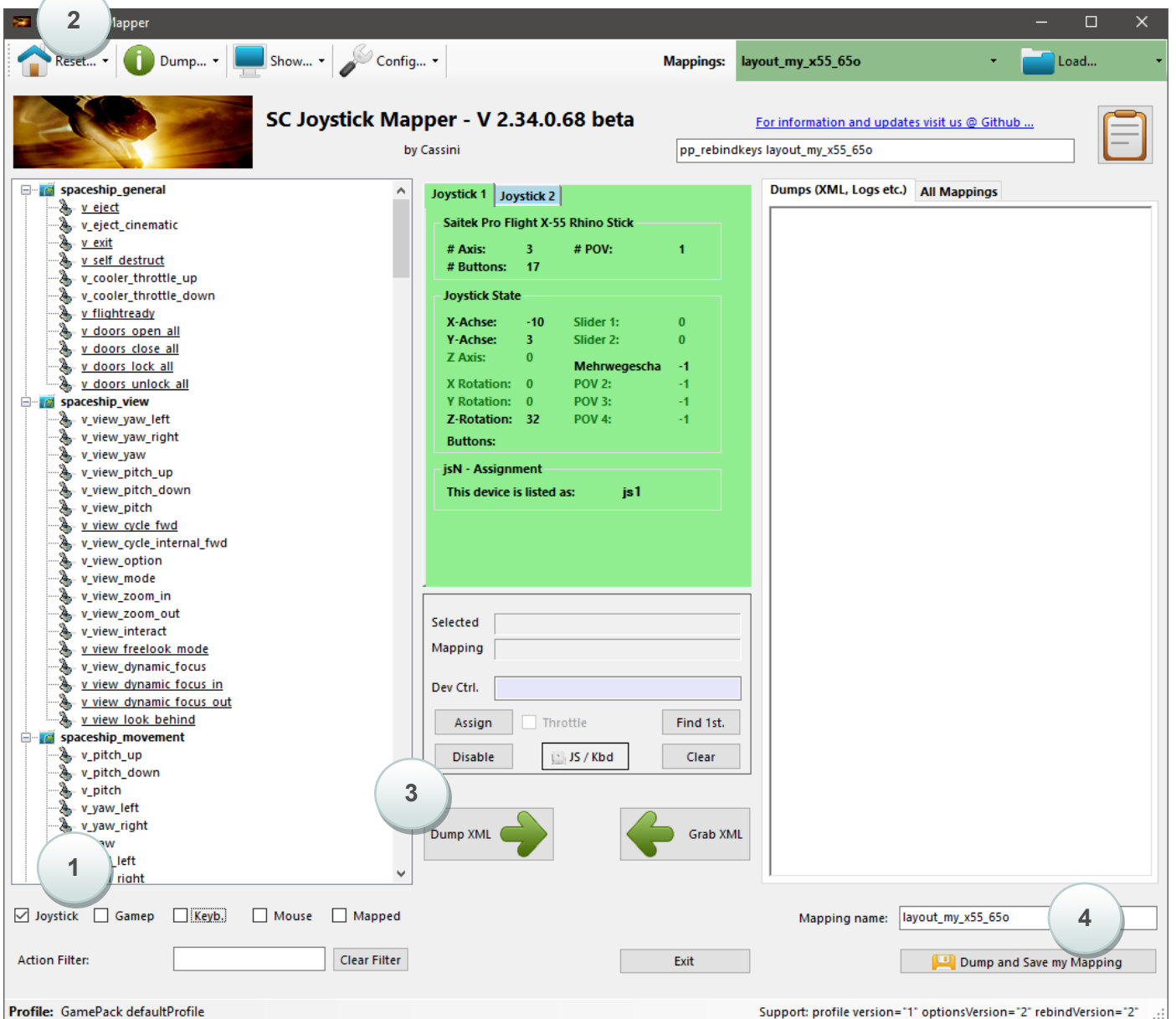
Hints ...

Intentionally left blank for future hints -
OR your hint if you send it to me ...

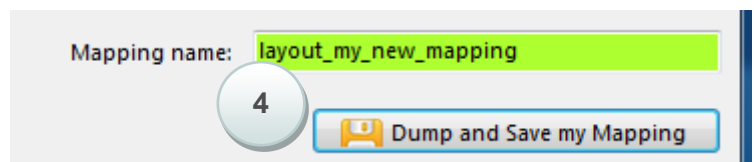
Hints ...

How to start with a mapping ?

- 1 Check all device types to be assigned (here only Joystick)
- 2 Use “Reset” – “Reset empty” - should look like below
- 3 “Dump XML ->” – just to see what this looks like – pretty empty...



4 Now it would be a good idea to *Dump and Save* the empty map with a name not yet used



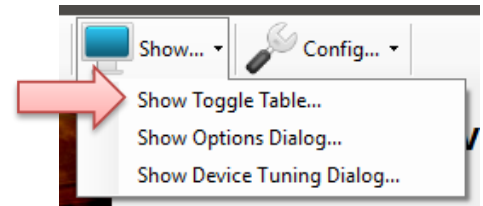
Now you are ready to map ...

Hints ...

How to start with a complete disabled map ? 1/2

Start with an empty map as shown in the previous page

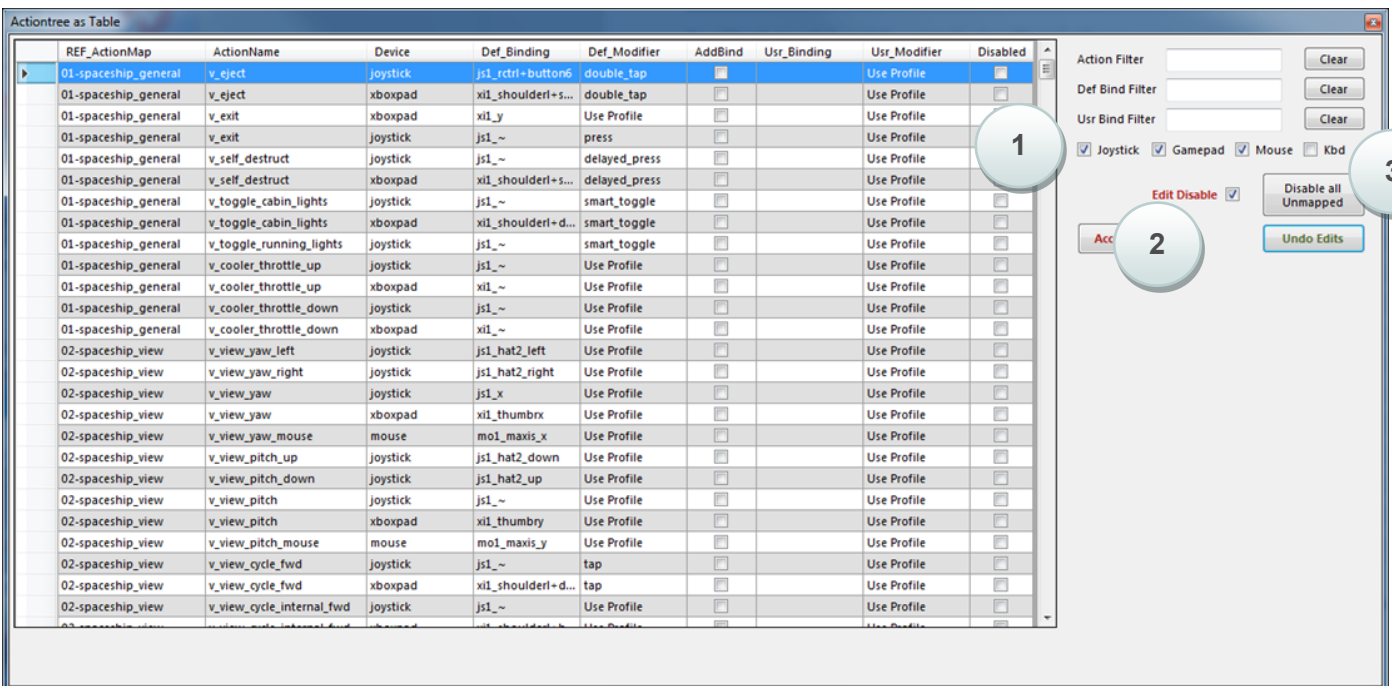
Use Toggle Table.. – this is the Fast Disable trick



1 Check e.g. Mouse, Joystick and Gamepad – to edit and disable only those

2 Check “Edit Disable” – we want to edit the Disabled fields

3 Click “Disable all Unmapped”

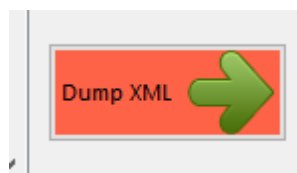
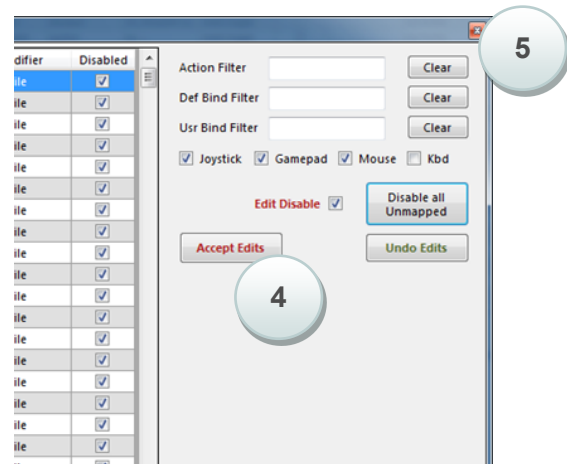


Now you see all entries of Mouse, Joystick and Gamepad have been disabled

4 “Accept Edits” – the main window of SCJmapper is updated now

5 Close this window

Back in the Main Window – “Dump XML” is now red – Click it to see the XML





Brought to you by Cassini 2017

Data and RSI spacecraft are derived work from the RSI homepage

Changelog:

V2.18 - update Hints - List Commands - add description for + and =, add joystick modifier timeout description, add mouse commands

V2.21 - update Mouse context menu and new screenshots where the version is shown

V2.22 - add Underlined ActivationModes, DumpProfile button and new screenshots where the version is shown

V2.23 - add Actiontree as table description and new screenshots where the version is shown

V2.25 - add CSV list option, add BlendAll to table view

V2.27 - add extended Context Menu in Mapping tree (Collapse/Expand), Rename 'Blend' to 'Disable', some editorial changes

V2.28 - add "Device & Action Options", changed GUI elements, and Tuning for Strafe and the Hints section with "How to start..."

V2.29 - add Gamepad Calibration, changed GUI elements, some more Hints

V2.30 - add Tabbed AllMappings, Addbind Mouse to Keyboard actions, changed GUI elements

V2.34 - add changed GUI elements, CIG actionmaps