# SC Joystick Mapper
# Quick Reference Guide  V 2.5

Disclaimer:
Usual stuff – no warranty whatsoever..
Freeware – made for the SC community
Hope it helps and does not suck.
Have fun in the verse …
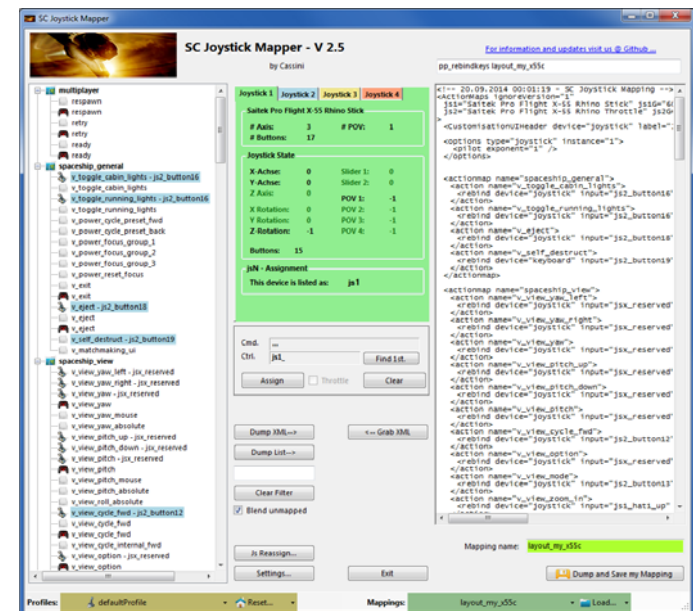
# Updating from V 2.x to V 2.5:

- If you not have used 2.3 already:
  Check the jsN assignment and maybe de-assign unused devices
  See the new 'js Reassign' feature on page 17.
  Note: You may need to do this twice for each of the "VJoy virtual joystick" devices.


- 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 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 …

# Contents

# Workflow

- Connect the joystick devices to the PC
- Start from scratch or load an existing map from a file
- Make or refine mappings
- Save the new map to an XML file
- Use it in the game: e.g. pp_rebindkeys C:\maps\layout_my_joystick
- V 2.0: You may load and save the map directly from your game folders so next time you just use   pp_rebindkeys layout_my_joystick

Note: the predefined actions are the ones found in the AC 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.

As I had my issues with missiles here a finding..
To reallocate the missile fire command you should map the following 2 actions to the same joystick button:
- *v_target_missile_lock_selected*
- *v_weapon_launch_missile*

BTW: if you copy e.g. "pp_rebindkeys C:\maps\layout_my_joystick" from notepad you may use Ctrl-V to paste it in-game into the console – saves you some typing…

# The GUI ...

Action tree and mappings

XML dump of the mappings used

Detected Joystick devices
(up to 8 are shown)

**SC Joystick Mapper**

SC Joystick Mapper - V 2.5

by Cassini

For information and updates visit us @ Github ...

pp_rebindkeys layout_my_x55c

v_view_cycle_headlook_mode
v_view_cycle_headlook_mode
v_view_dynamic_focus
v_view_dynamic_focus_toggle - jsx_reserv
v_view_dynamic_focus_toggle
v_view_track_target
spaceship_movement
v_pitch - js1_y
v_pitch
v_pitch_mouse
v_yaw_left - jsx_reserved
v_yaw_right - jsx_reserved
v_yaw - js1_x
v_yaw
v_yaw_mouse
v_toggle_relative_mouse_mode
v_roll_left
v_roll_right
v_roll - js1_rotz
v_roll
v_throttle_toggle_minmax - js2_button29
v_throttle_zero
v_throttle_zero
v_throttle_100 - jsx_reserved
v_throttle_100
v_throttle_100
v_throttle_up
v_throttle_up

| Joystick 1 | Joystick 2 | Joystick 3 | Joystick 4 |

**Saitek Pro Flight X-55 Rhino Stick**

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

**Joystick State**

| X-Achse: | 0 | Slider 1: | 0 |
| Y-Achse: | 0 | Slider 2: | 0 |
| Z Axis: | 0 | | |
| X Rotation: | 0 | POV 1: | -1 |
| Y Rotation: | 0 | POV 2: | -1 |
| Z-Rotation: | -1 | POV 3: | -1 |
| | | POV 4: | -1 |
| Buttons: | 15 | | |

**jsN - Assignment**

This device is listed as: js1

Joystick properties
(greyed out ones are not available)

Joystick device map

Selected mapping

| Cmd. | ... |
| Ctrl. | js1_ | Find 1st. |

| Assign | ☐ Throttle | Clear |

Action Mapping Buttons

```
<!-- 20.09.2014 00:01:19 - SC Joystick Mapping -->
<ActionMaps ignoreVersion="1"
 js1="Saitek Pro Flight X-55 Rhino Stick" js1G="6C
 js2="Saitek Pro Flight X-55 Rhino Throttle" js2G=
>
<CustomisationUIHeader device="joystick" label=":
<options type="joystick" instance="1">
  <pilot exponent="1" />
</options>

<actionmap name="spaceship_general">
 <action name="v_toggle_cabin_lights">
  <rebind device="joystick" input="js2_button16'
                                        ts">
                                        js2_button16'
  </action>
                        input="js2_button18'
  </action>
  <action name="v_self_destruct">
   <rebind device="keyboard" input="js2_button19'
                                 input="jsx_reserved'
                                        _reserved'
   <action name="v_view_yaw"
                                        erved"
    <a
    <ac                                 erved'
    <r
    </a
    </a
   <action name="v_view_pitch_down">
    <rebind device="joystick" input="jsx_reserved'
   </action>
   <action name="v_view_pitch">
    <rebind device="joystick" input="jsx_reserved'
   </action>
   <action name="v_view_mode">
    <rebind device="joystick" input="js2_button13'
   </action>
   <action name="v_view_zoom_in">
    <rebind device="joystick" input="js1_hat1_up'
   </action>
```

Dump nice List

Dump XML-->          <-- Grab XML

XML Area Buttons

Dump List-->

V2: filter the action tree

V2.1: Blend unmapped option

v_target_match_vel
v_ifcs_toggle_vector_decoupling - js2_but
v_ifcs_toggle_vector_decoupling
v_ifcs_toggle_vector_decoupling - js1_but
v_strafe_up - js2_button20
v_strafe_up
v_strafe_down - js2_button22

v_brake - js2_button28

Clear Filter

☑ Blend unmapped

V2.3, 2.4: Js Reassignment

V2: New Reset with options

Js Reassign...

Settings...

V2: Load from game folders

Exit

Mapping name: layout_my_x55c

V2: Save into game folders

Dump and Save my Mapping

V2: Resize the window

| Profiles: | 🎵 defaultProfile ▾ | 🏠 Reset... ▾ | Mappings: | layout_my_x55c ▾ | 📁 Load... ▾ |
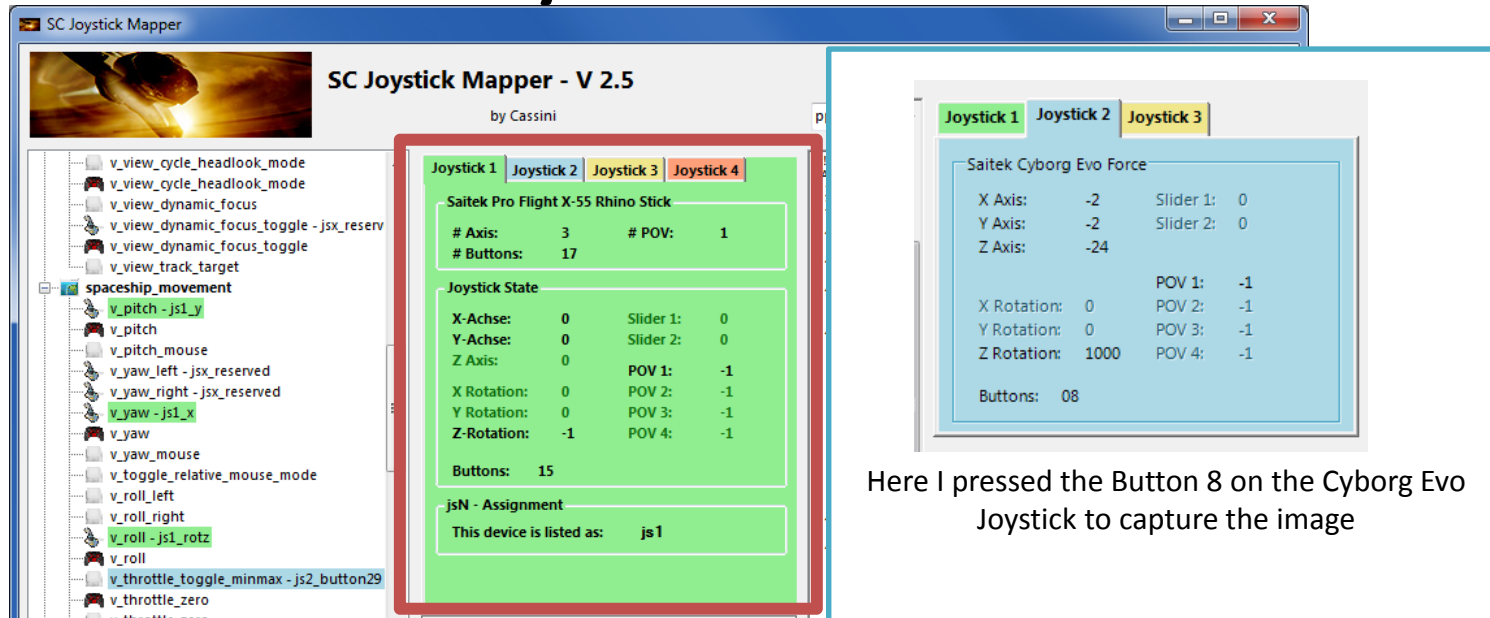
# The Joystick Area...



Here I pressed the Button 8 on the Cyborg Evo Joystick to capture the image

The tabs represent the joystick devices found connected to the PC also the number 1..8 shows the order the PC reports them which is crucial to the mapping as this will result in the default js_1, js_2 .. Names used to build the command name.
The elements are the ones the joystick seems to support – greyed ones are not available for this device.

V 2.4: you will see the actual Js assignment  - or 'not assigned' – see page 17
The SC-Device to Joystick Mapping is a separate window accessed by hitting the '**Js Reassign**' button.

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

# The Action Tree …
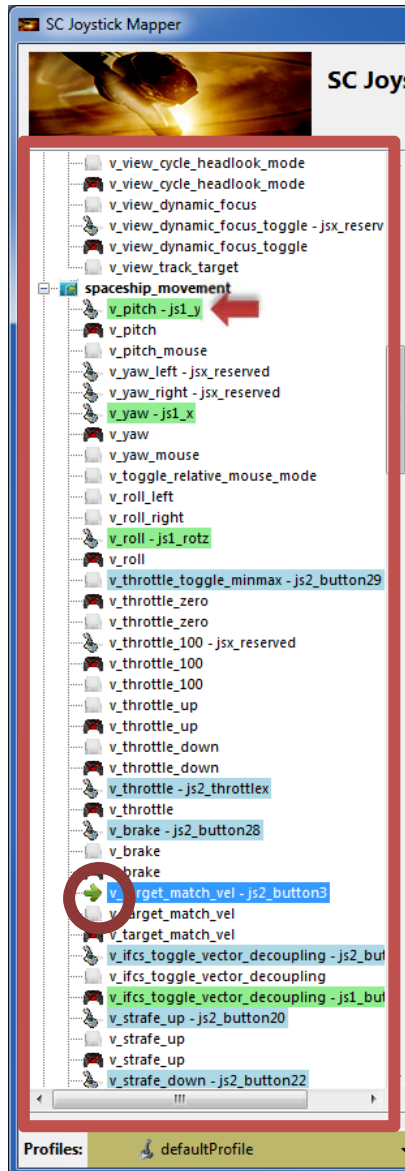


The tree is initially built from the known actions which are grouped along 'actionmaps' e.g. 'spaceship_movement.
Each action is either a predefined joystick or keyboard action – this is given by the SC default profile.

By 'rebinding' or mapping and action with a different controls one does **replace** the default one i.e. overwriting keyboard actions will result in not having them available on the keyboard once you load the map in the game!
However no damage is done! This mapping is only valid until you exit the game or type *pp_rebindkeys* without a name

If actions are mapped (as shown) the color indicates to which joystick the mapping goes.

**v_pitch – js1_y** then means that the action v_pitch (joystick per default) is rebound to the joystick 1 (green) and there the Y-axis control.
If the background is white - there is no current mapping given.
Unmapped actions are ignored.

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

# The Mapping Area…

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

The Control (Ctrl.) is the last joystick item you activated on the currently shown joystick tab.
I.e. if you want to map it for a control on the second joystick you have to select the "Joystick 2" Tab first.

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 joystick it is assigned to.

V2: To make any axis a Throttle axis – check the 'Throttle' box ! It is often the Z-Axis but the Rhino has it e.g. on js2_y.
If you do so the control assigned in changed to a throttle control (here js1_throttlez)

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.
You may use "Find 1st" to find the first action where the currently shown Ctrl. (js1_z or if checked as shown js1_throttlez) is mapped.
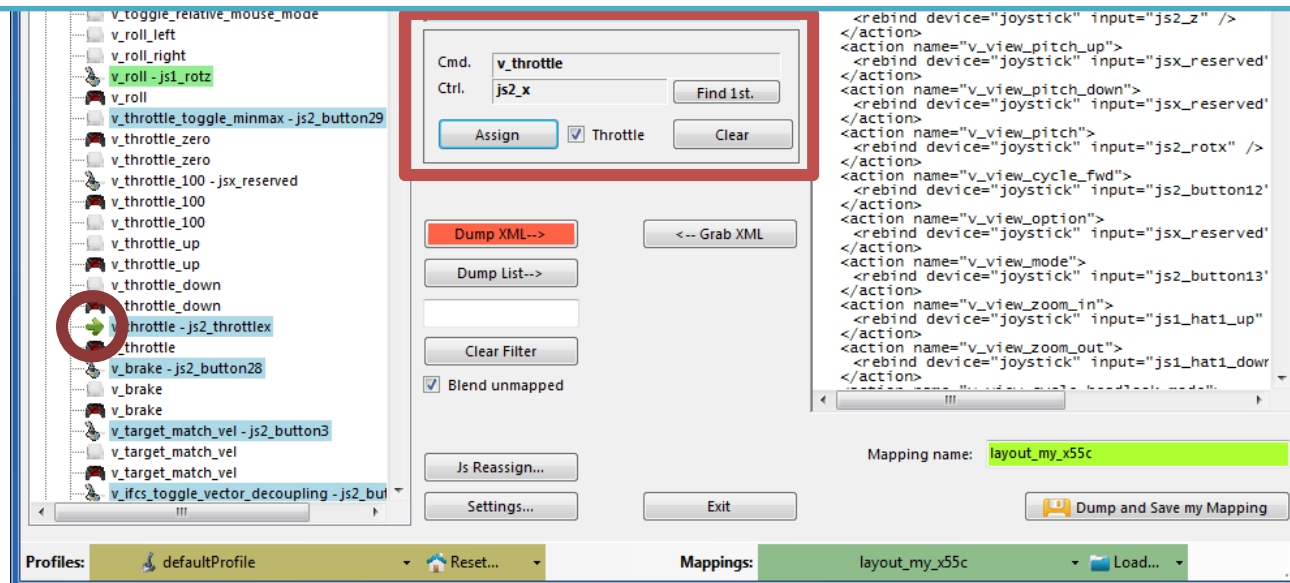
# The XML Area…



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.
Rightclick 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.

Load and Save much easier …  read V2 Feature pages

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

# The XML Area…



If you hit "Dump List" a formatted list of the mapped actions is written into the XML area.

You may use the "Save As.." menu to save it e.g. as TXT file.

# V2 – Features - 1



You may filter the action tree now

Start typing and the tree is reduced to the actions and controls that contain the characters typed

e.g. I typed 'thr' to see my throttles only
Try button and you get all your assigned buttons only etc.

Click 'Clear Filter' to get back to the complete list again.

Note: this will not change, remove or modify any of your mappings, it just reduces the tree to the ones you are interested in.

# V2 – Features - 2

**New working with profiles.**

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

From here you may Reset the action list to the following
- RESET EMPTY      reverts to just an action list without any mappings
- RESET DEFAULTS    loads the Joystick actions mapped with what CIG is providing
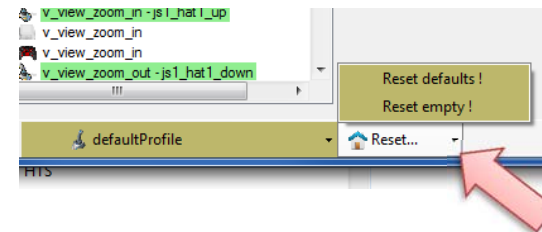


Note: as CIG is providing a number of defaultProfiles you may chose one of those – however using the
**defaultProfile** is usually the best option
(This may be work in progress by CIG…)
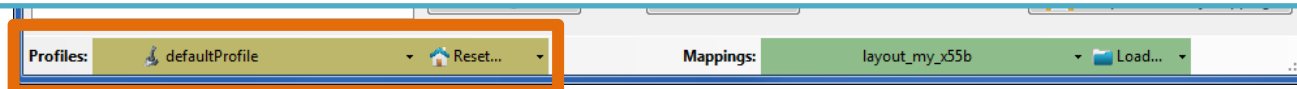
# V2 – Features - 3

**New working with actionmaps (Maps, Mapping etc..)**
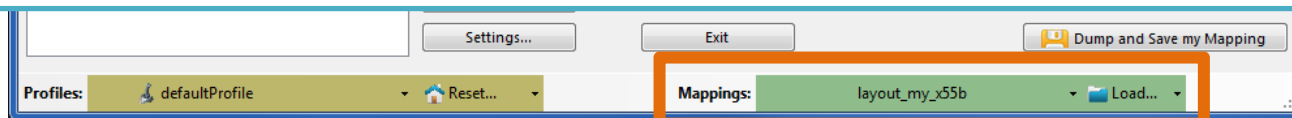
The program gets the actionsmaps from the real game asset – so you are always up to the actual values.
(...\StarCitizen\CitizenClient\Data\Controls\Mappings)

From here you may first chose a map, then 'Load' the actionmap – this will overwrite you XML window in any case
- LOAD   loads the map into the XML window only
- LOAD and GRAB   loads the map into the XML window and clicks Grab i.e. merges the existing mapping with the one loaded
- RESET, LOAD and GRAB  first Reset (empty) the action list (all mappings cleared) then it loads and grabs the new map
- DEFAULT, LOAD and GRAB  first Reset (defaults) the action list then it loads and grabs the new map and merges them with the defaults

See last page for some common workflows
And how to handle them easily
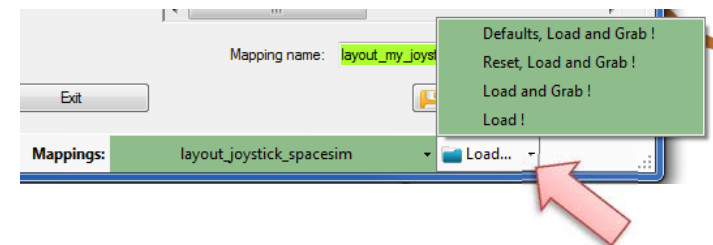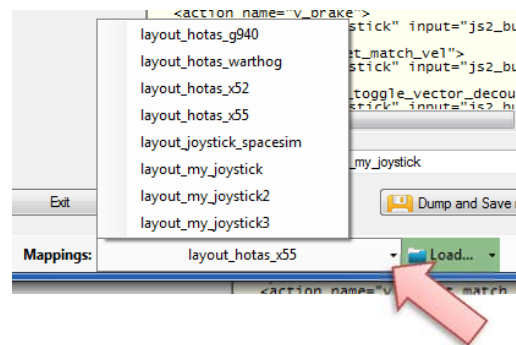
# V2 – Features - 4



**New 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\CitizenClient\Data\Controls\Mappings)

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

NOTE: your map name has always to start with 'layout_my_'  to prevent modifying 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.
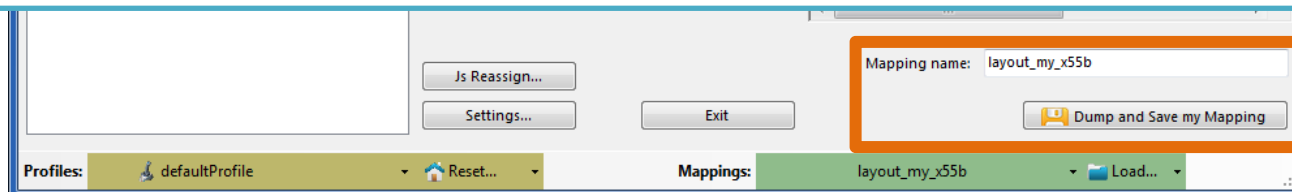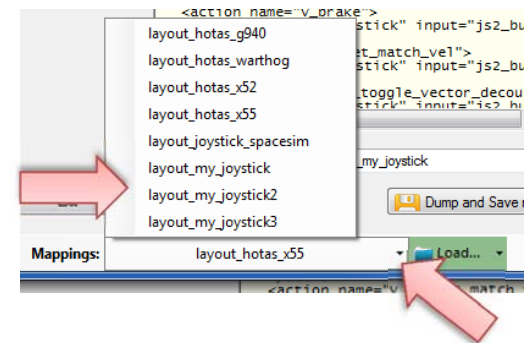
# V2.1 – Features

**New possibility to blend the unmapped joystick entries**

If you wish to hide all the joystick actions that you don't use – to make sure they are not active – check "Blend unmapped"

The program will then map all unmapped actions with 'jsx_reserved' preventing any profile settings on the joystick.
This is fully reversible – just uncheck the option and Dump the contents again.

**New Settings window**
As many are concerned about steady ON buttons that might interfere with assigning the proper control to an action we included a setting to IGNORE specific buttons.
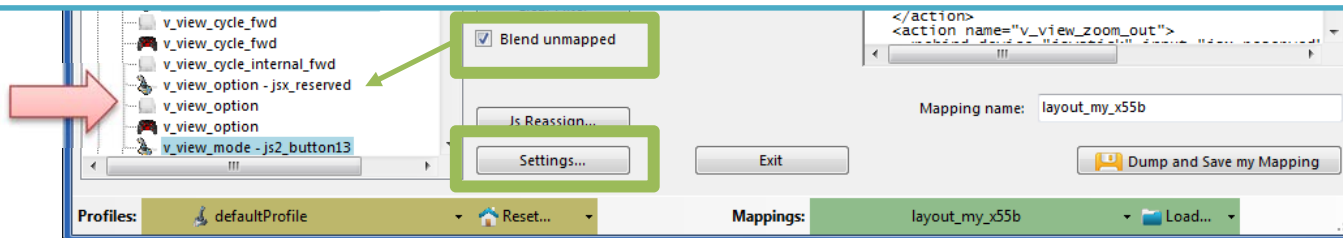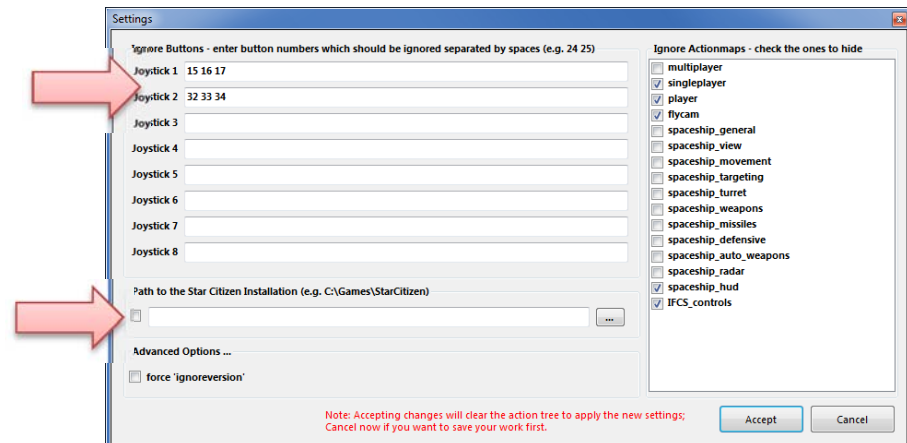Just enter the button numbers to ignore separated by a Space.
Make sure you enter the numbers for the right Joystick.
Numbers are the same as in the main window.

There is also way to override the programs own detection
of the Star Citizen install folder.
Make sure to use the Checkbox if you want to override!

# V2.2, 2.5 – Features

**New possibility to ignore unwanted actionmaps**

If you wish to ignore some maps to unclutter the GUI
If you with to use the default ignored new actionmaps *multiplayer, singleplayer, player*

The program will ignore all actionmaps that are **checked**
In the example *multiplayer, singleplayer, player and IFCS_controls* are completely ignored and will not show up.

Just uncheck any to use it again.

V2.5 New option to force 'ignoreversion="1"'

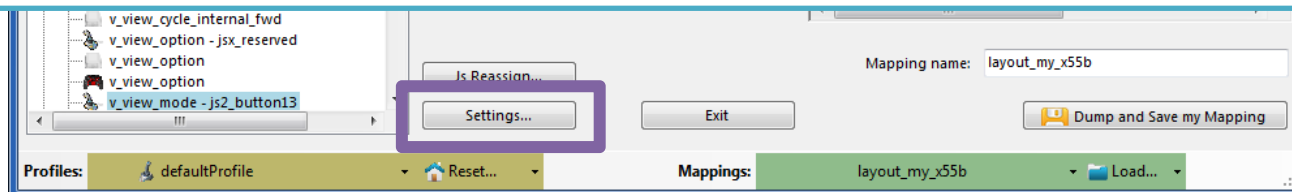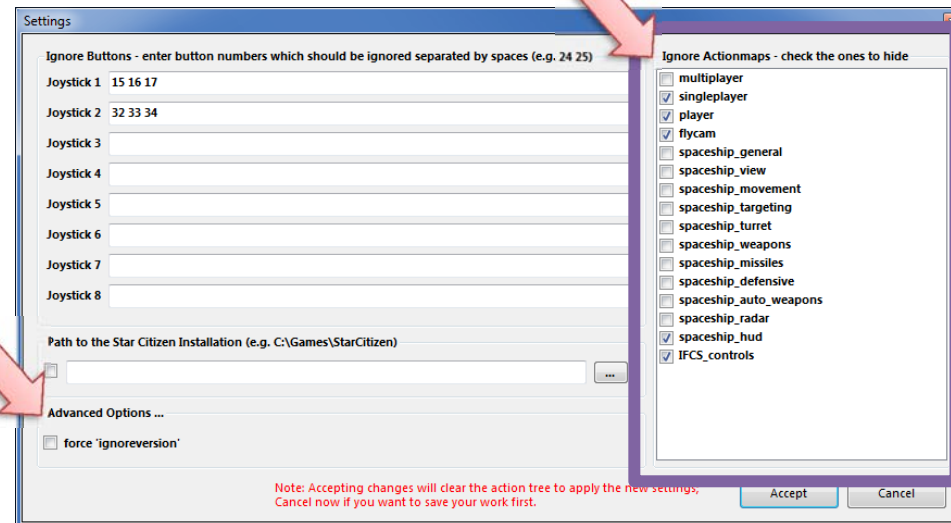If you wish to use the ignoreversion attribute rather than any version="n" ..
The prog is able to handle it now. Either type e.g. 'version="0"' or 'ignoreversion="1"'
Into the ActionMaps Tag and the prog will maintain it as you typed it.
Or just force it to use 'ignoreversion="1"'
by checking the box here

# V2.3, 2.4 – Features

**New possibility to (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.
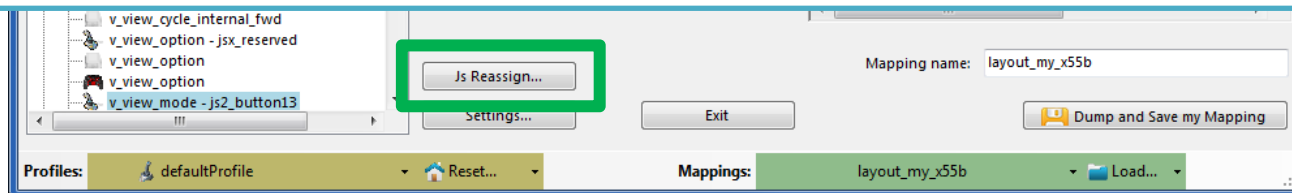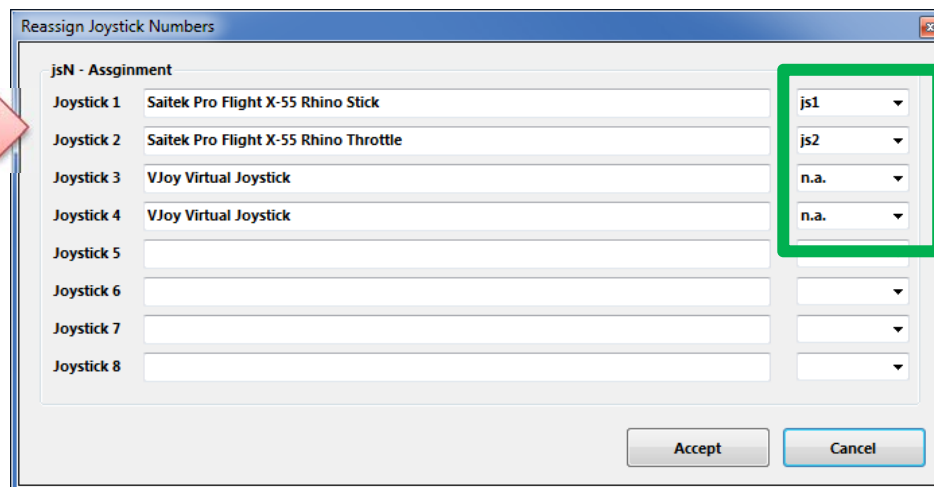
Notes: The color of the assigned items will not change as it is still the same device but js1 will become js2 for example.
You can leave this dialog with "Accept" only if each device is either assigned to a unique number or to n.a. (not assigned) otherwise an error pops to ask you to fix it or Cancel.

V2.4 allows to assign js1 .. Js8 now

Related SC console commands are:

`i_DumpDeviceInformation`

`pp_ResortDevices joystick 1 2`

---

SC Joystick Mapper

Reassign Joystick Numbers

**jsN - Assginment**

| | | |
|---|---|---|
| Joystick 1 | Saitek Pro Flight X-55 Rhino Stick | js1 |
| Joystick 2 | Saitek Pro Flight X-55 Rhino Throttle | js2 |
| Joystick 3 | VJoy Virtual Joystick | n.a. |
| Joystick 4 | VJoy Virtual Joystick | n.a. |
| Joystick 5 | | |
| Joystick 6 | | |
| Joystick 7 | | |
| Joystick 8 | | |

Accept     Cancel

v_view_cycle_internal_fwd
v_view_option - jsx_reserved
v_view_option
v_view_option
v_view_mode - js2_button13

Js Reassign...

Settings...     Exit

Mapping name: layout_my_x55b

Dump and Save my Mapping

Profiles:  defaultProfile     Reset...     Mappings:  layout_my_x55b     Load...

# V2.5 – Features



**New possibility – support for options**

The prog will now maintain the following 3 XML tags
- <CustomisationUIHeader …>
- <options …>
- <deviceoptions …>

You may copy and paste or type whatever of those 3 tags you want to use – the program will maintain your typing and also read it from the mapping file when it is already there.
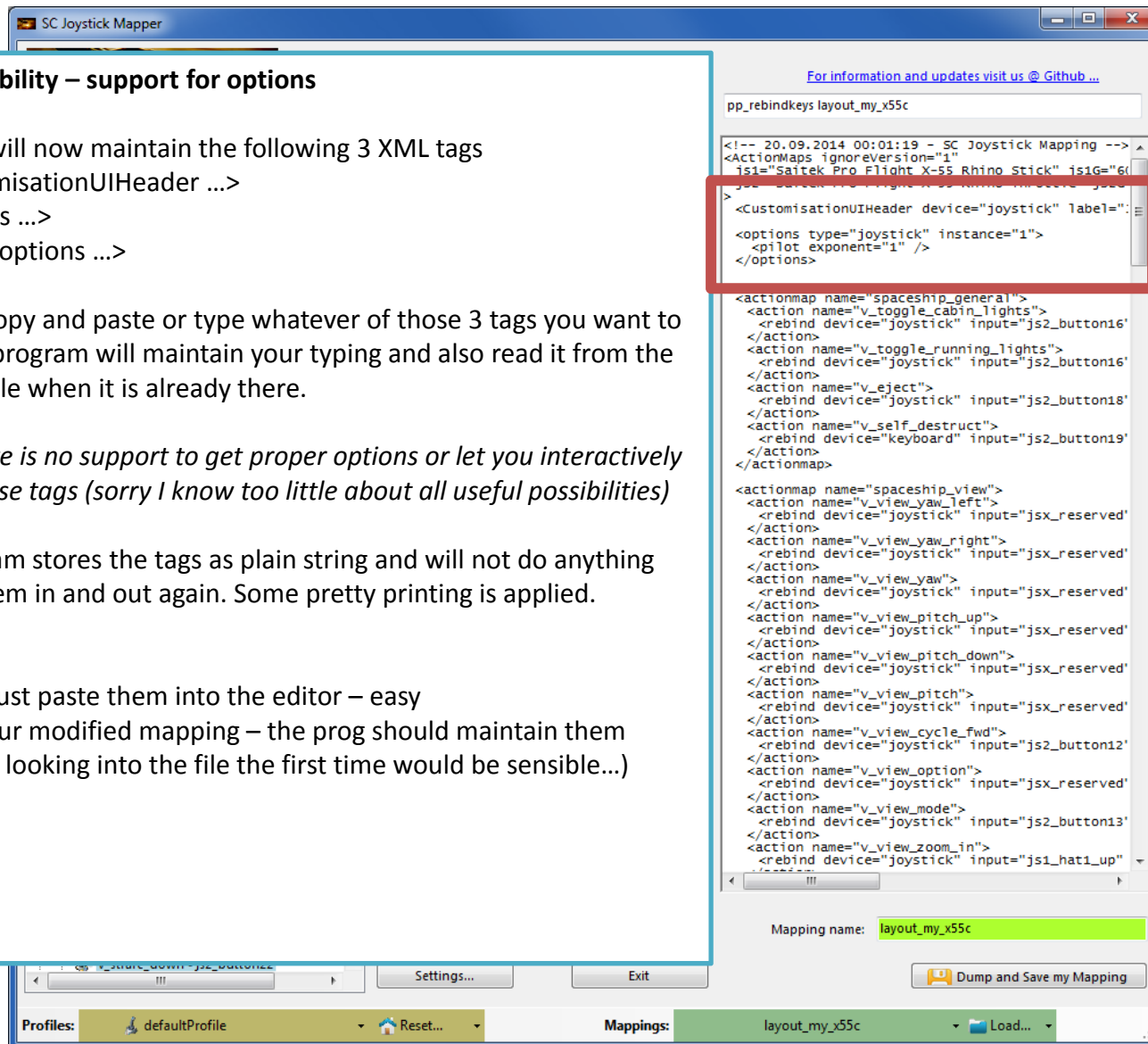
*Note: There is no support to get proper options or let you interactively design those tags (sorry I know too little about all useful possibilities)*

The program stores the tags as plain string and will not do anything but get them in and out again. Some pretty printing is applied.
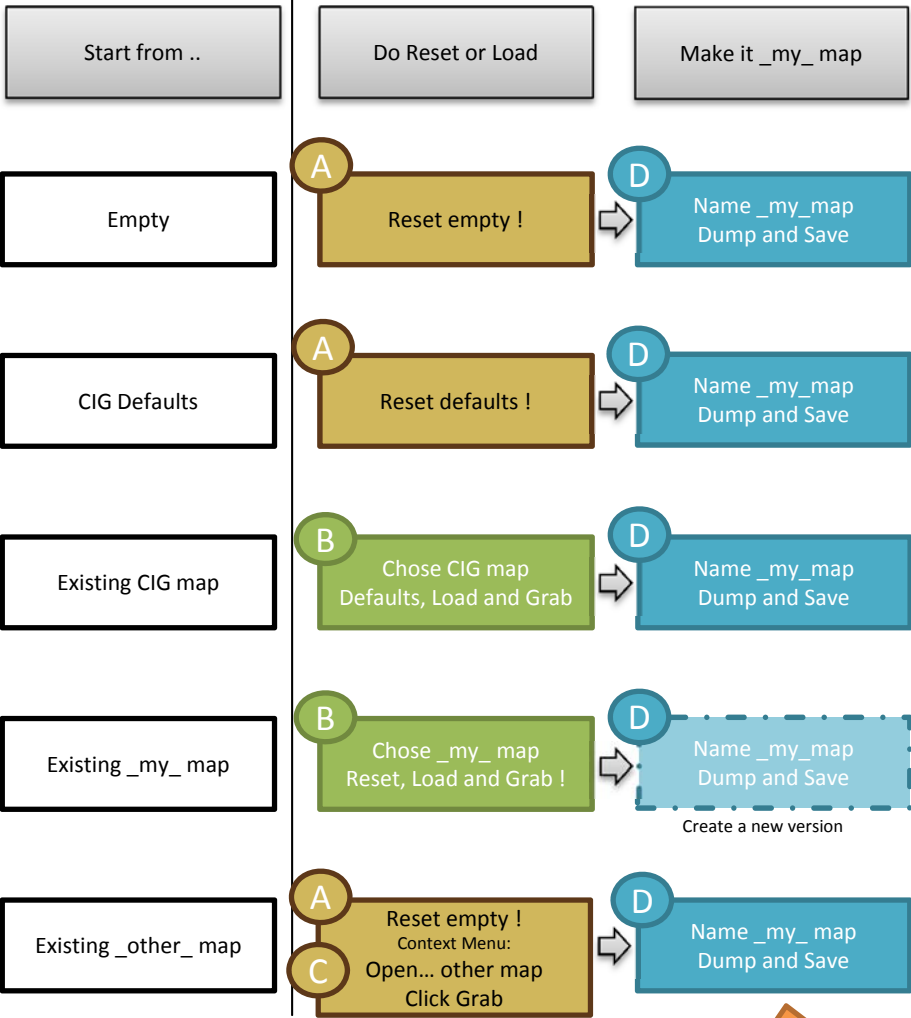
Hint:
copy and just paste them into the editor – easy
Or load your modified mapping – the prog should maintain them
(testing by looking into the file the first time would be sensible…)

# SCJMapper V 2 – Common Workflows



| Start from .. | Do Reset or Load | Make it _my_ map |
|---|---|---|
| Empty | **A** Reset empty ! | **D** Name _my_map Dump and Save |
| CIG Defaults | **A** Reset defaults ! | **D** Name _my_map Dump and Save |
| Existing CIG map | **B** Chose CIG map Defaults, Load and Grab | **D** Name _my_map Dump and Save |
| Existing _my_ map | **B** Chose _my_ map Reset, Load and Grab ! | **D** Name _my_map Dump and Save — Create a new version |
| Existing _other_ map | **A** Reset empty ! Context Menu: **C** Open… other map Click Grab | **D** Name _my_map Dump and Save |

**E** Assign Ctrls

**D** Dump and Save

Create a new version