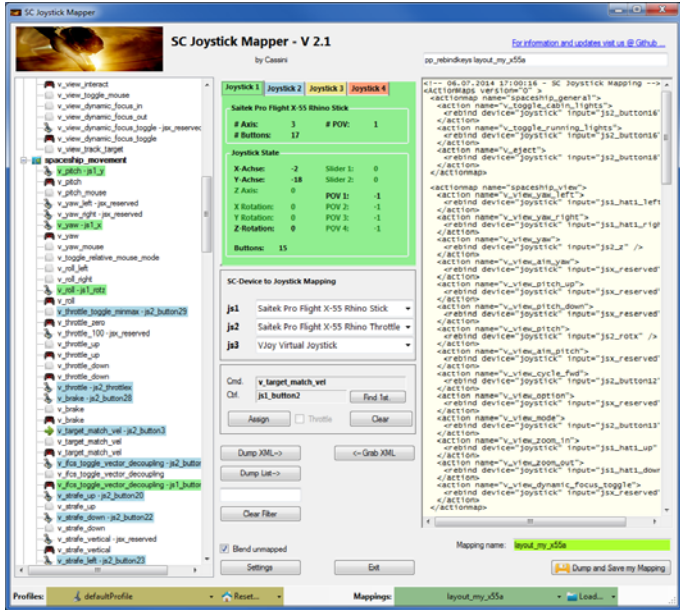


SC Joystick Mapper Quick Reference Guide V 2.1

20140709 – Cassini
ChangeLog: see ReadMe.txt

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 2.0 to V 2.1:

- As there seems to be issues with Win 8.1 we included a debug log facility.
- 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 ...

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

The screenshot shows the SC Joystick Mapper V 2.0 interface. On the left is an action tree with categories like 'spaceship_movement'. The center features a 'Detected Joystick devices' section showing 'Saitek Pro Flight X-55 Rhino Stick' with its properties (3 axes, 17 buttons, 1 POV). Below this is the 'SC-Device to Joystick Mapping' section, currently showing 'js1' as the Saitek stick, 'js2' as the Saitek throttle, and 'js3' as the VJoy Virtual Joystick. The 'Current mapping' section shows 'v_target_match_vel' mapped to 'js1_button15'. On the right is an XML dump of the mappings. At the bottom, there are buttons for 'Dump XML', 'Grab XML', 'Dump List', 'Clear Filter', 'Blend unmapped', 'Settings', and 'Exit'. A 'Dump and Save my Mapping' button is also present.

Detected Joystick devices
(up to 8 are shown)

Joystick properties
(greyed out ones are not available)

Joystick device map
(the default is usually OK)

Current mapping

Action Mapping Buttons

XML Area Buttons

Dump nice List

V2: filter the action tree

V2: Load from game folders

V2: Save into game folders

V2.1: Blend unmapped option

V2: New Reset with options

V2: Resize the window

The Joystick Area...

The screenshot shows the SC Joystick Mapper interface. On the left is a tree view of game actions, with 'spaceship_movement' expanded to show various axes like pitch, yaw, and roll. The main area is divided into sections for each joystick. The first joystick, 'Saitek X65F Flight Controller', is highlighted with a red border and shows its state (X, Y, Throttle, Rotary, Rudder) and button count (47). The second joystick, 'Saitek Cyborg Evo Force', is highlighted with a blue border and shows its state (X, Y, Z, Rotations) and button count (08). Below these is a mapping table for 'SC-Device to Joystick Mapping'.

js	Device
js1	Saitek X65F Flight Controller
js2	Saitek Cyborg Evo Force
js3	VJoy Virtual Joystick

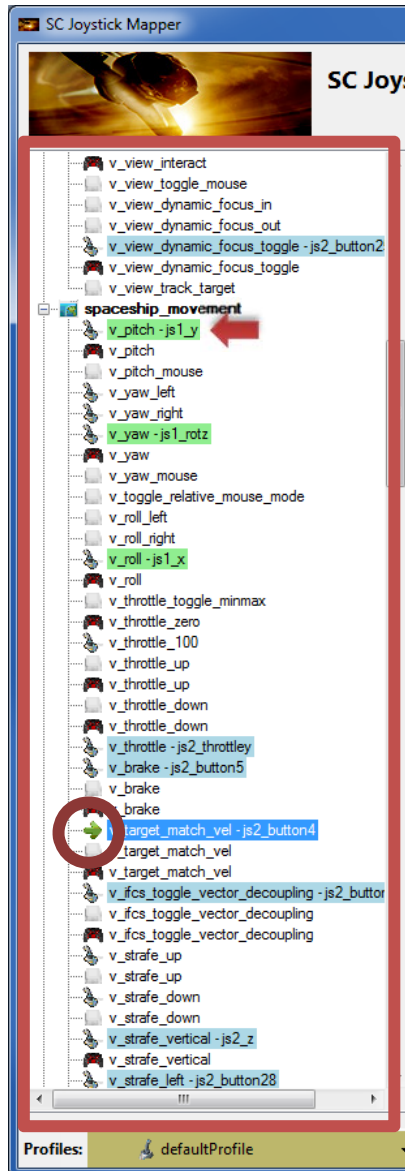
Here I pressed the Button 8 on the Cyborg Evo Joystick to capture the image

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 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.

The *SC-Device to Joystick Mapping* can be used if the default assignment “Joystick 1 -> js_1” does not match what the CryEngine is using. – Usually the default should work. You may only remap js1..js3 - 4..8 will remain as detected.

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.

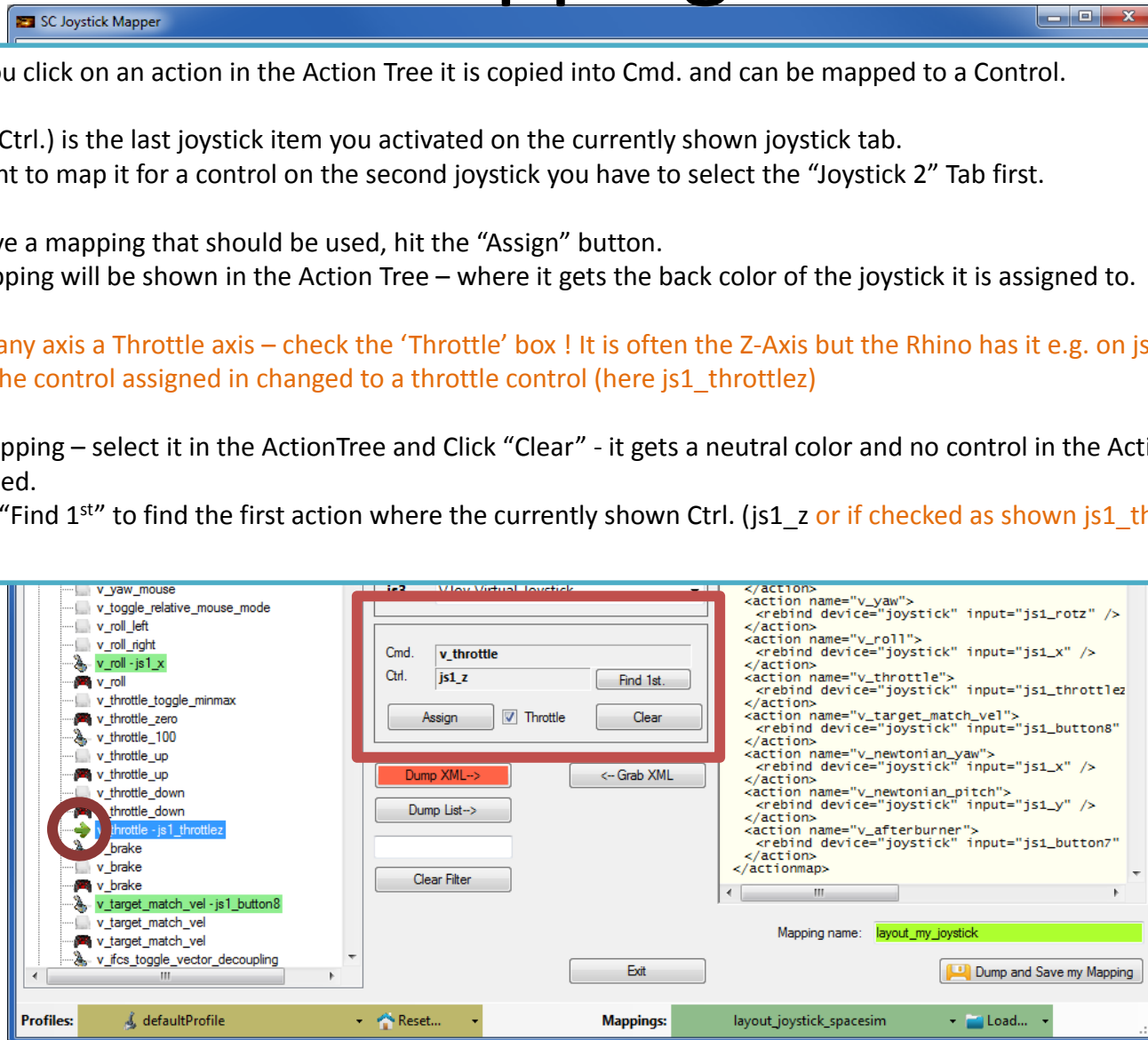
The new mapping will be shown in the Action Tree – where it gets the back color of the joystick it is assigned to.

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 screenshot displays the SC Joystick Mapper interface. On the left, the ActionTree shows a list of actions such as v_target_match_vel, v_fcs_toggle_vector_decoupling, and v_strafe_up. A red box highlights the 'Dump XML->' and '<- Grab XML' buttons. The main XML Area on the right shows the XML code for the 'spaceship_general' and 'spaceship_movement' action maps. A red box highlights the XML code. At the bottom, the 'Dump and Save my Mapping' button is visible.

```
<!-- 30.06.2014 21:09:03 - SC Joystick Mapping -->
<ActionMaps version="0">
  <actionmap name="spaceship_general">
    <action name="v_eject">
      <rebind device="joystick" input="js2_button6" />
    </action>
  </actionmap>

  <actionmap name="spaceship_view">
    <action name="v_view_yaw_left">
      <rebind device="joystick" input="js1_hat1_left" />
    </action>
    <action name="v_view_yaw_right">
      <rebind device="joystick" input="js1_hat1_right" />
    </action>
    <action name="v_view_pitch_up">
      <rebind device="joystick" input="js1_hat1_up" />
    </action>
    <action name="v_view_pitch_down">
      <rebind device="joystick" input="js1_hat1_down" />
    </action>
    <action name="v_view_cycle_fwd">
      <rebind device="joystick" input="js2_button2" />
    </action>
    <action name="v_view_mode">
      <rebind device="joystick" input="js2_button27" />
    </action>
    <action name="v_view_zoom_in">
      <rebind device="joystick" input="js1_hat1_up" />
    </action>
    <action name="v_view_zoom_out">
      <rebind device="joystick" input="js1_hat1_down" />
    </action>
    <action name="v_view_dynamic_focus_toggle">
      <rebind device="joystick" input="js2_button25" />
    </action>
  </actionmap>

  <actionmap name="spaceship_movement">
    <action name="v_pitch">
      <rebind device="joystick" input="js1_y" />
    </action>
    <action name="v_yaw">
      <rebind device="joystick" input="js1_rotz" />
    </action>
    <action name="v_roll">
      <rebind device="joystick" input="js1_x" />
    </action>
    <action name="v_throttle">
      <rebind device="joystick" input="js2_throttle" />
    </action>
    <action name="v_brake">
      <rebind device="joystick" input="js2_button5" />
    </action>
    <action name="v_target_match_vel">
      <rebind device="joystick" input="js2_button4" />
    </action>
    <action name="v_ifcs_toggle_vector_decoupling">
      <rebind device="joystick" input="js2_button3" />
    </action>
  </actionmap>
</ActionMaps>
```


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.

The image shows the SC Joystick Mapper application interface. On the left, a file explorer window titled "Speichern unter" (Save as) is open, showing a list of files in the "My" folder. The file "T2Mapping.txt" is selected, and the "Dateityp" (File type) is set to "Text files (*.txt)". A red box highlights the filename and file type fields.

The main application window displays a list of mapped actions on the left and a large XML area on the right. The XML area contains a formatted list of mapped actions, such as:

```
-- 30.06.2014 21:34:03 - SC Joystick Mapping --  
*** spaceship_general  
V_eject - js2_button6  
*** spaceship_view  
V_view_yaw_left - js1_hat1_le  
V_view_yaw_right - js1_hat1_ri  
V_view_pitch_up - js1_hat1_up  
V_view_pitch_down - js1_hat1_do  
V_view_cycle_fwd - js2_button2  
V_view_mode - js2_button2  
V_view_zoom_in - js1_hat1_up  
V_view_zoom_out - js1_hat1_do  
V_view_dynamic_focus_toggle - js2_button2  
*** spaceship_movement  
V_pitch - js1_y  
V_yaw - js1_rotz  
V_roll - js1_x  
V_throttle - js2_throttl  
V_brake - js2_buttons5  
V_target_match_ve1 - js2_button4  
V_ifcs_toggle_vector_decoupling - js2_button3  
V_strafe_vertical - js2_z  
V_strafe_left - js2_button2  
V_strafe_right - js2_button2  
V_strafe_longitudinal - js2_rotx  
V_newtonian_yaw - js1_x  
V_newtonian_pitch - js1_y  
V_newtonian_brake - js2_buttons5  
V_ifcs_toggle_safety - js2_button2  
V_afterburner - js2_button1  
*** spaceship_targeting  
V_target_cycle_all_fwd - js1_button1  
V_target_cycle_all_back - js1_button8  
V_target_missile_lock_focused - js1_button2  
V_target_cycle_hostile_fwd - js1_button1  
V_target_nearest_hostile - js1_button1  
*** spaceship_weapons  
V_attack1_group1 - js1_button1  
V_attack1_group2 - js1_button4  
V_attack1_group3 - js1_buttons5  
V_attack1_group4 - js1_button4  
*** spaceship_missiles  
V_weapon_cycle_missile_fwd - js2_button2  
V_weapon_launch_missile - js1_button2  
*** spaceship_defensive  
V_weapon_launch_countermeasure - js1_button3  
V_weapon_cycle_countermeasure_fwd - js2_button2  
V_shield_boost_recharge - js1_button1  
V_shield_cycle_presets_fwd - js1_button9  
V_shield_cycle_presets_back - js1_button1  
*** spaceship_auto_weapons
```

A red box highlights the XML area. Below the XML area, there are buttons for "Dump XML->", "Dump List->", "Clear Filter", and "Exit". The "Dump List->" button is highlighted with a red box. At the bottom of the application window, there are fields for "Profiles" (defaultProfile) and "Mappings" (layout_hotas_x55).

V2 – Features - 1

The screenshot shows the SC Joystick Mapper interface. On the left, a tree view of actions is displayed, with a filter box containing the text 'thr'. The tree is filtered to show only actions containing 'thr'. The filtered actions are:

- spaceship_general
- spaceship_view
- spaceship_movement
 - v_throttle_toggle_minmax
 - v_throttle_zero
 - v_throttle_100
 - v_throttle_up
 - v_throttle_up
 - v_throttle_down
 - v_throttle_down
 - v_throttle_js2_throttley
- spaceship_targeting
- spaceship_weapons
- spaceship_missiles
- spaceship_defensive
- spaceship_auto_weapons
- spaceship_radar
- spaceship_hud
- IFCS_controls

Below the tree, there are buttons for 'Dump XML-->', '<-- Grab XML', 'Dump List-->', and 'Clear Filter'. The 'Clear Filter' button is highlighted with an orange box. To the right, the XML output is shown, with the filtered actions visible:

```
</action>
<action name="v_throttle">
  <rebind device="joystick" input="js2_throttley" />
</action>
<action name="v_brake">
  <rebind device="joystick" input="js2_button5" />
</action>
<action name="v_target_match_vel">
  <rebind device="joystick" input="js2_button4" />
</action>
<action name="v_ifcs_toggle_vector_decoupling">
  <rebind device="joystick" input="js2_button3" />
</action>
```

At the bottom, there are buttons for 'Exit' and 'Dump and Save my Mapping'. The 'Profiles' section shows 'defaultProfile' and the 'Mappings' section shows 'layout_hotas_x55'.

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.

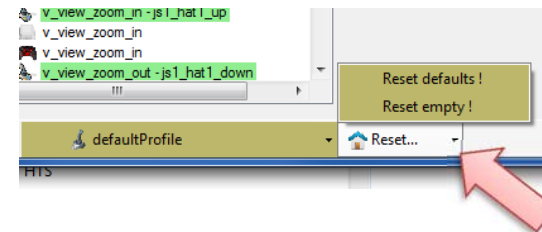
V2 – Features - 2

New working with profiles.

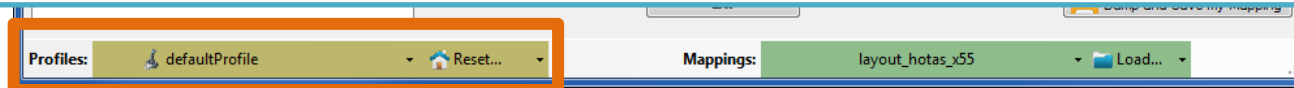
The program gets the actions from the real game asset – so you are always up to the actual values.

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

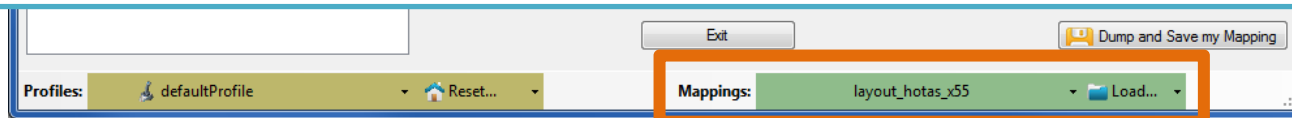
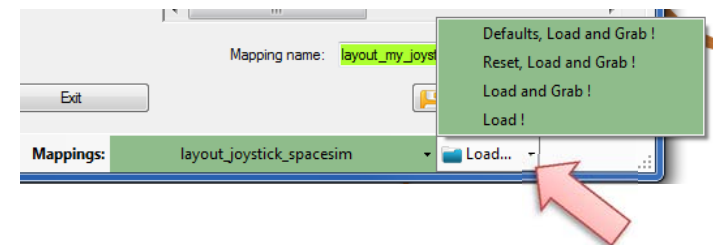
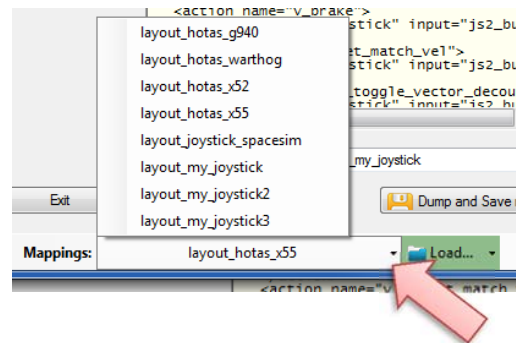
New working with actionmaps (Maps, Mapping etc..)

The program gets the actionsmaps from the real game asset – so you are always up to the actual values.
(..\StarCi ti zen\Ci ti zenCl i ent\Data\Control s\Mappi ngs)

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

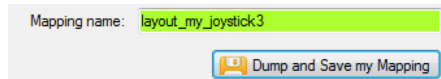
New working with your own actionmaps

The program not only gets the actionmaps from the real game asset – but also can save your maps there.
(...\StarCitizen\CitizenClient\Data\Control s\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)

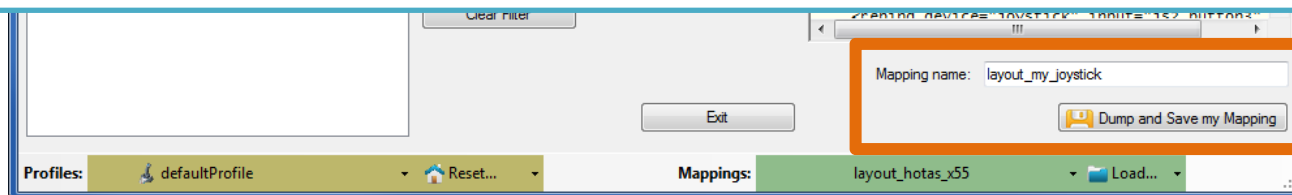
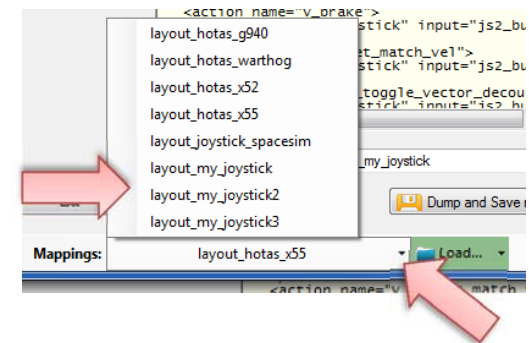
NOTE: your map name has always to start with 'layout_my_' to prevent modifying CIGs own actionmaps
Lowercase only, no spaces, tabs allowed else you see the red flag ..

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.

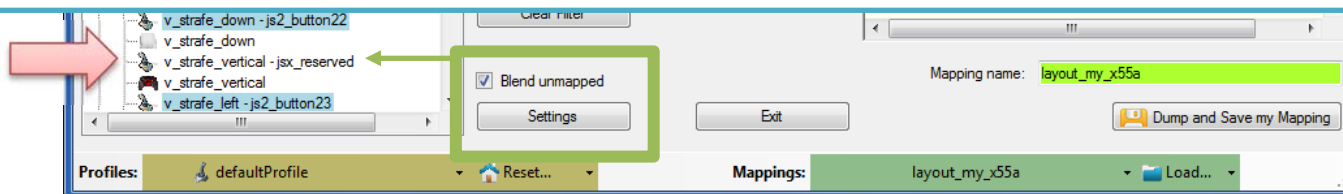
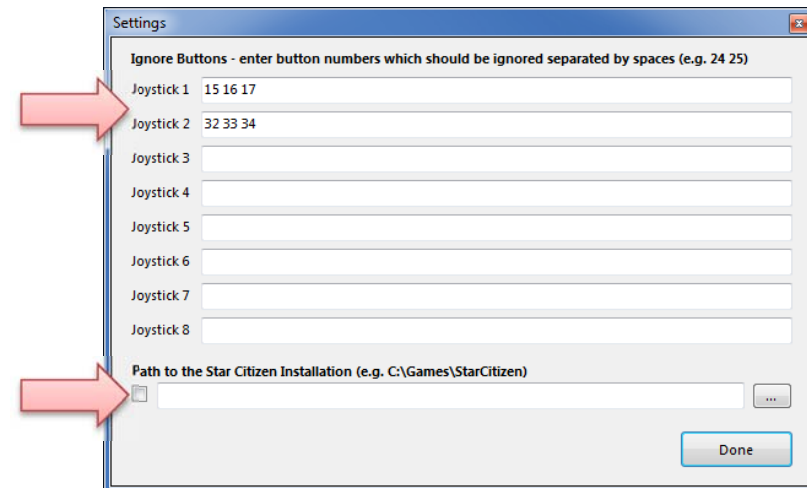
Just enter the button numbers to ignore separated by a Space.

Make sure you enter the numbers for the right Joystick.

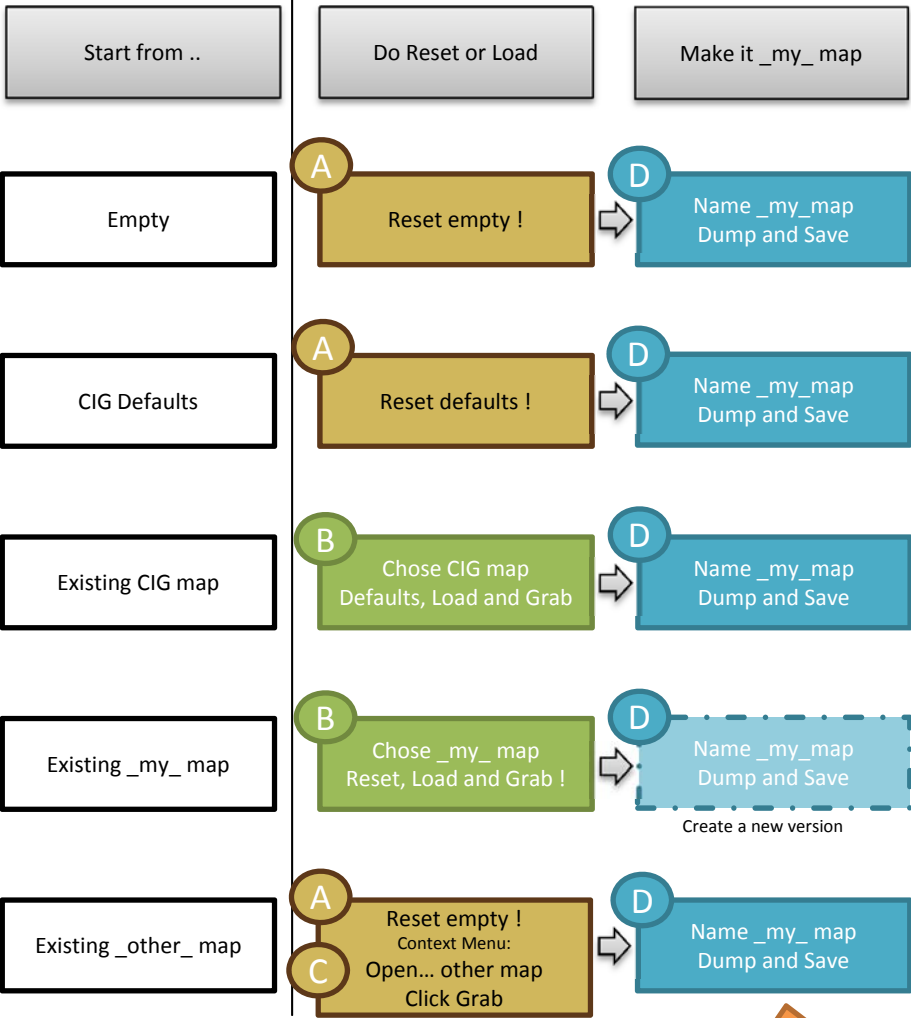
Numbers are the same as in the main window.

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!



SCJMapper V 2 – Common Workflows



The screenshots illustrate the following workflow steps:

- A:** Screenshot of the 'Reset defaults!' and 'Reset empty!' buttons in the software interface.
- B:** Screenshot of the 'Mapping name:' dialog box with a context menu open, showing options like 'Defaults, Load and Grab!', 'Reset, Load and Grab!', 'Load and Grab!', and 'Load!'.
- C:** Screenshot of a context menu over a code editor showing options like 'Copy', 'Paste', 'Paste (Replace all)', 'Select All', 'Open...', and 'Save as...'.
- D:** Screenshot of the 'Dump and Save my Mapping' dialog box.
- E:** Screenshot of the 'Assign Cntrl.' dialog box showing 'Cmd.' as 'v_eject' and 'Cntrl.' as 'js1_button7'.

Flow arrows connect these steps: A → B → C → D → E → D → E → D.