SC JOYSTICK MAPPER
QUICK REFERENCE GUIDE V 2.25

20160701 – Cassini

- https://github.com/SCToolsfactory/SCJMapper-V2/releases

- Change Log: see ReadMe.txt

General Information

- Connect the game control devices to the PC

- Start from scratch 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`

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.

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

Console .. Opens with the top left key usually right below the "Esc" key
- depends on your keyboard

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 …

The Workflow

SCJMapper V 2 – Common Workflows

Start from …	Do Reset or Load	Make it _my_ map
Empty	Reset empty !	Name_my_map Dump and Save
CIG Defaults	Reset defaults !	Name_my_map Dump and Save
Existing CIG map	Chose CIG map Defaults, Load and Grab	Name_my_map Dump and Save
Existing _my_ map	Chose _my_map Reset, Load and Grab !	Name_my_map Dump and Save (Create a new version)
Existing _other_ map	Reset empty ! Context Menu: Open... other map Click Grab	Name_my_map Dump and Save

Assign Ctrls → Dump and Save

Create a new version

The GUI

The user interface is all laid out for direct access — there are no menus
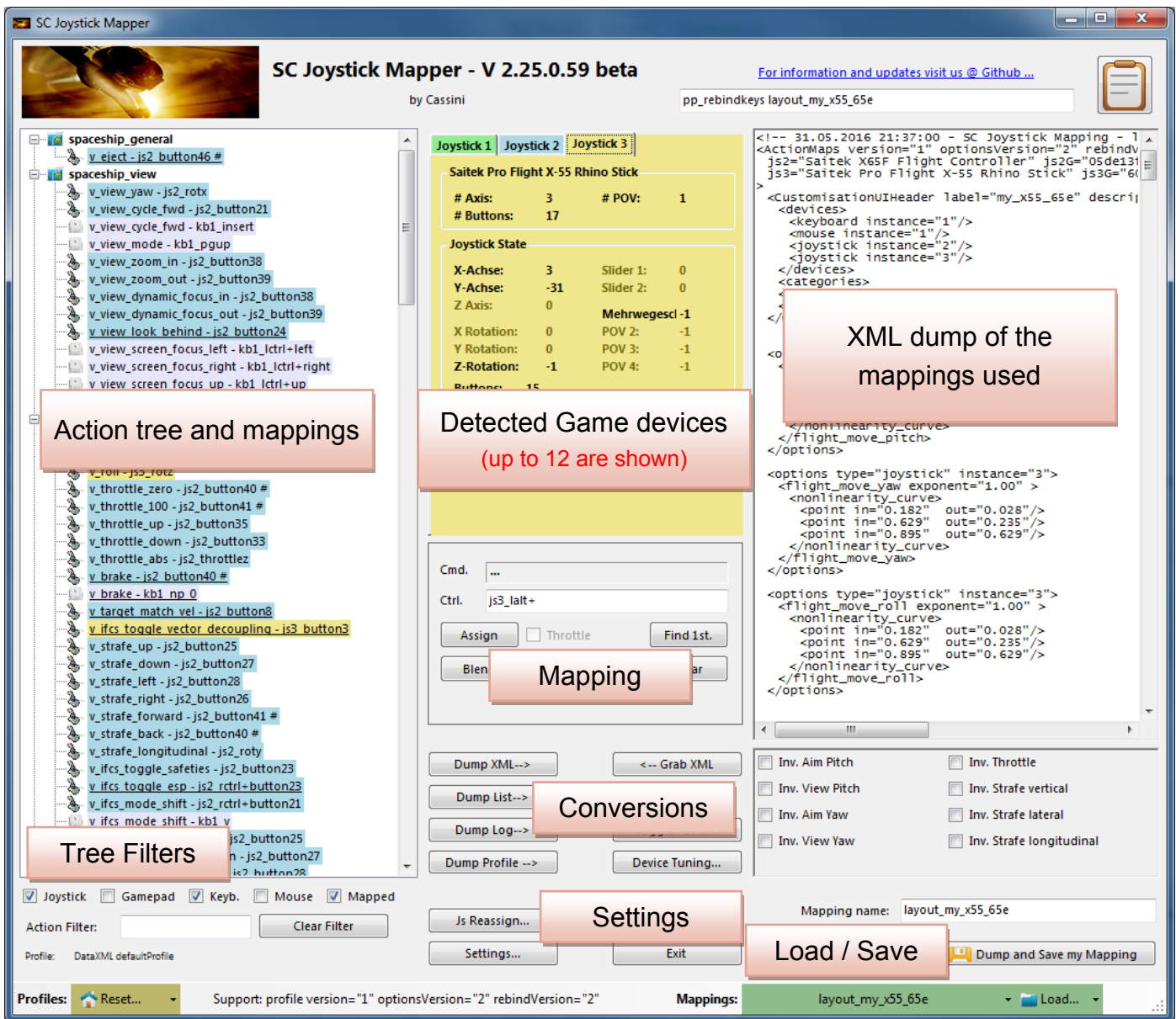
⇒ Action tree and mappings - shows the tree of action maps and actions derived from the defaultProfile directly from the game folders

⇒ 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

Joystick 1 | Joystick 2 | **Joystick 3**

Arduino Micro

> Saitek Pro Flight X-55 Rhino Stick
> 608e1420-03b7-11e4-8001-444553540000

\# Axis: 7   # POV: 2
\# Buttons: 48

Detected Devices shown as Tabs

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		
		Mehrwegescl	-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**

The tabs represent the game devices found connected to the PC.
The program can show up to 9 devices.

The sequence 1..8 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 show 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.
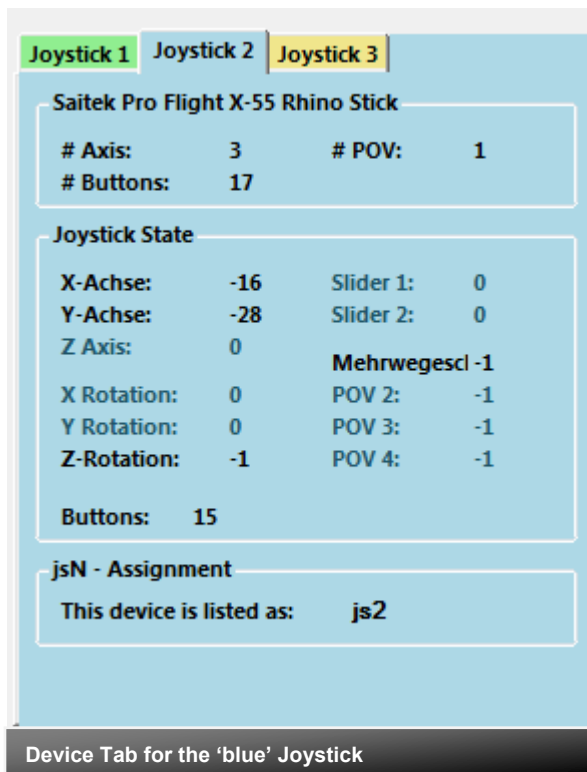
The elements shown in 'Joystick State' are the ones the device seems to support – greyed ones are not available for this device.

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

The action tree is initially built from the games 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 and 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.

V 2.22 added:

Underlined items indicate an ActionModifier is applied in defaultProfile

Selecting an Action:

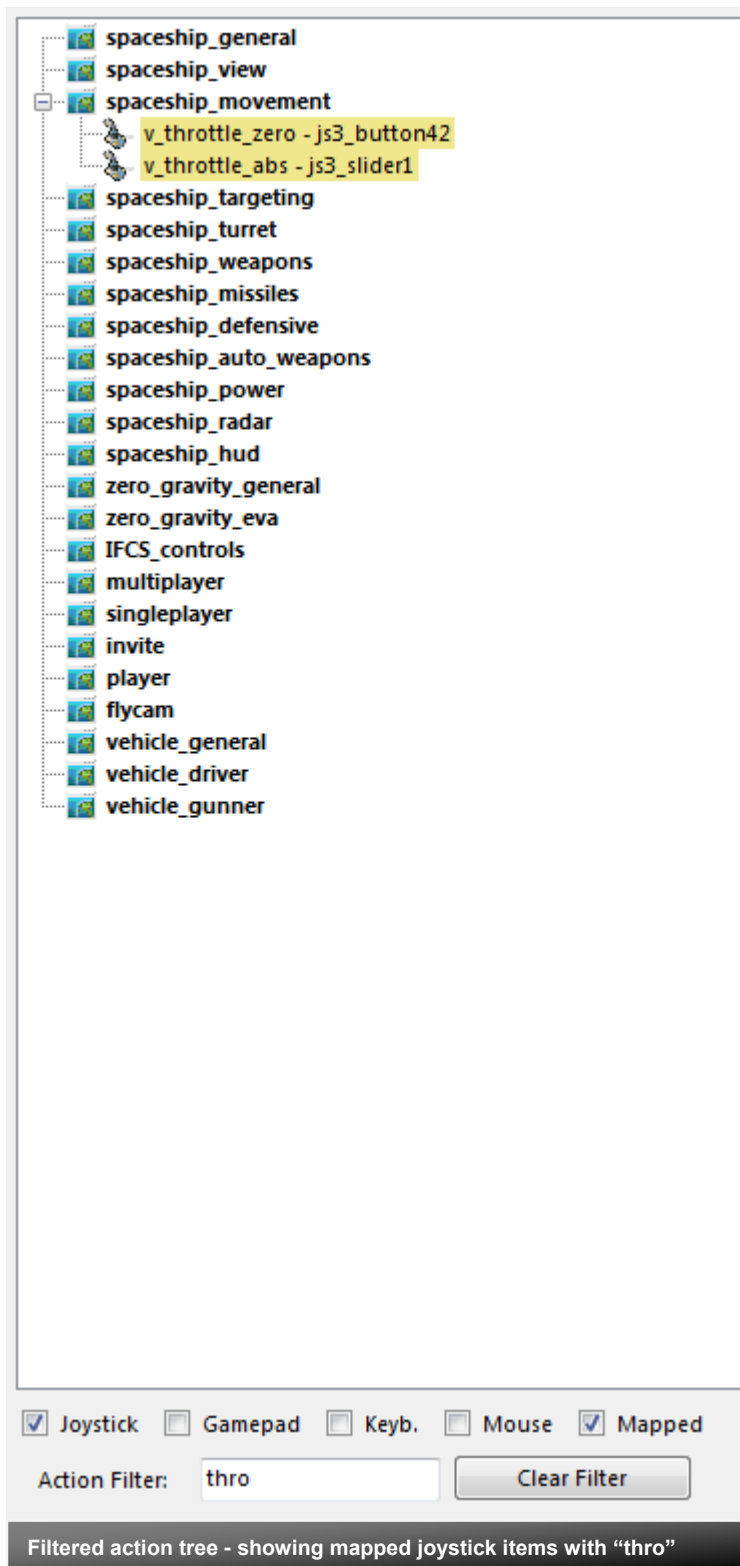Click on any action to make it the used action in the mapping area.

Once selected it is marked with the green arrow


A regular action tree

Action Tree Filters


```
spaceship_general
spaceship_view
spaceship_movement
    v_throttle_zero - js3_button42
    v_throttle_abs - js3_slider1
spaceship_targeting
spaceship_turret
spaceship_weapons
spaceship_missiles
spaceship_defensive
spaceship_auto_weapons
spaceship_power
spaceship_radar
spaceship_hud
zero_gravity_general
zero_gravity_eva
IFCS_controls
multiplayer
singleplayer
invite
player
flycam
vehicle_general
vehicle_driver
vehicle_gunner
```

☑ Joystick ☐ Gamepad ☐ Keyb. ☐ Mouse ☑ Mapped

Action Filter: [thro] [Clear Filter]

Filtered action tree - showing mapped joystick items with "thro"

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.
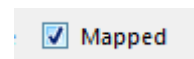
Device Filter

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

☑ Joystick ☐ Gamepad ☐ Keyb. ☐ Mouse
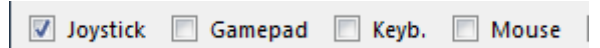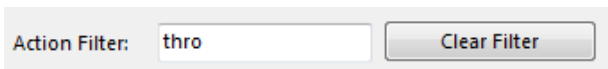
Check categories you want to see

Mapped Only

Restricts to show only mapped items

☑ Mapped

Action Filter

Accepts text entry to match parts of the

Action Filter: [thro] [Clear Filter]

action name

Clear Filter

To empty the field

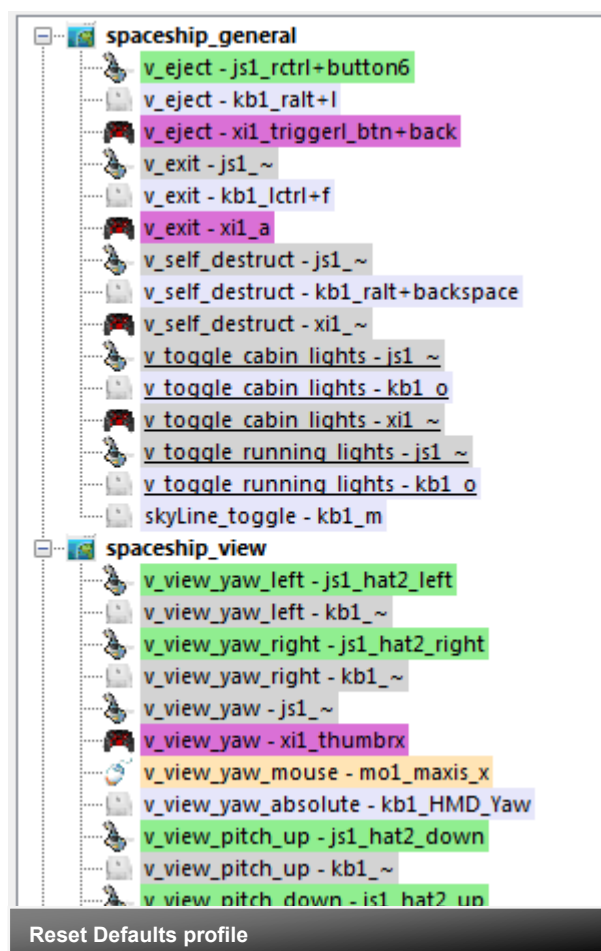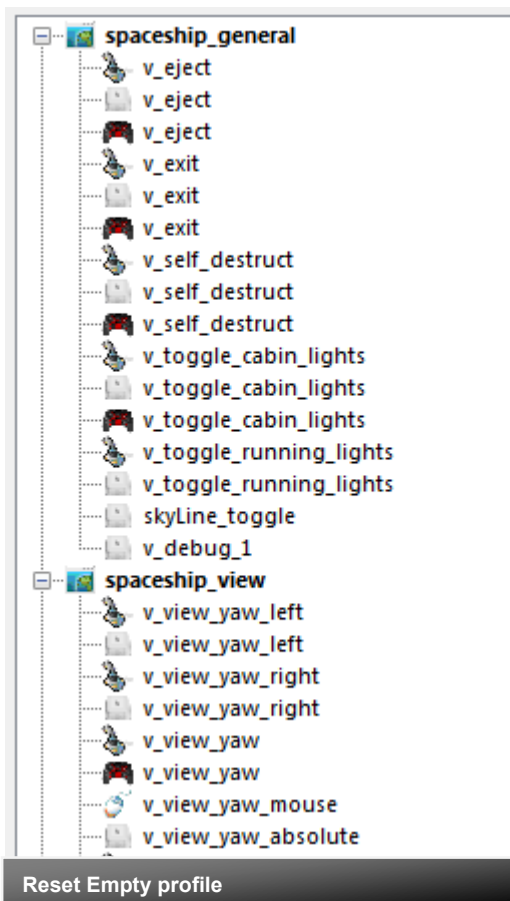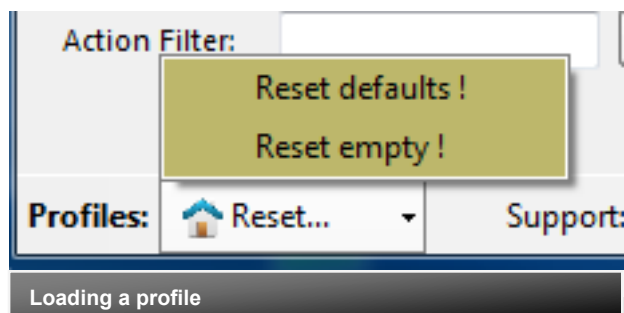NOTE: Filters only restrict the items shown in the tree

Working with profiles

The program gets the actions from the real game asset – so you are always up to the actual values.
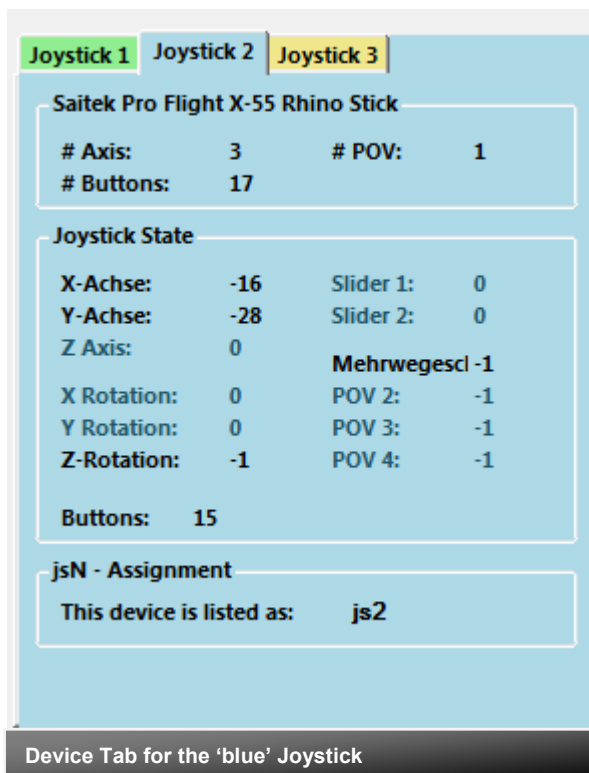
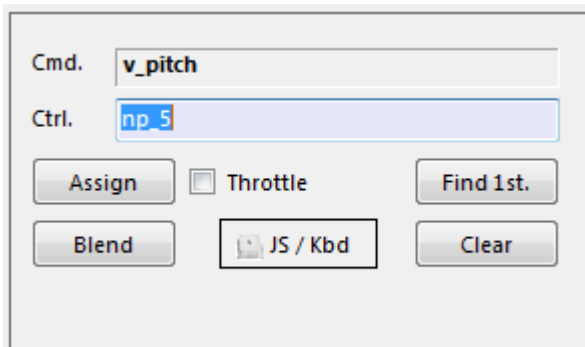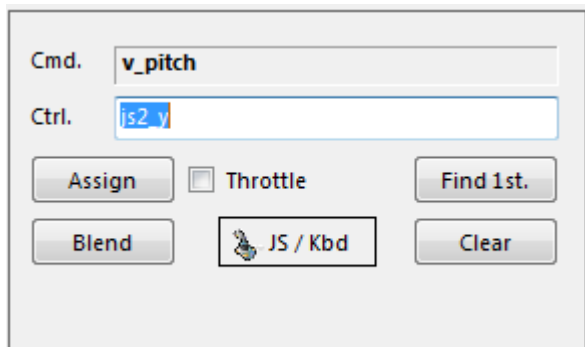From here you may Reset the action list to the following

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

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

Loading a profile

Reset Empty profile

Reset Defaults profile

Device Mode

Keyboard and Mouse Mode

Device Tab for the 'blue' Joystick

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 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 us 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.
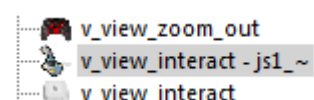
Clear Actions

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.

Blending

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

Advanced Mapping

Context Menu

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

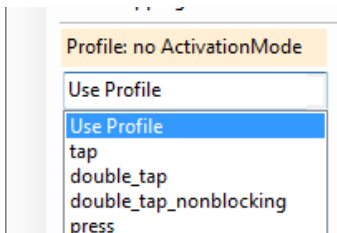**Assign, Blend, Clear** behave like the buttons in the main GUI

Add 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 does not work in SC2.0/2.1)
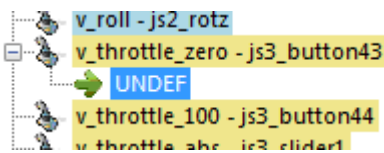
Activation Modes

Starting from Profile: there are activation modes listed. Profile indicates what is in the profile as default or 'no Activation-Mode' if the profile does not apply one
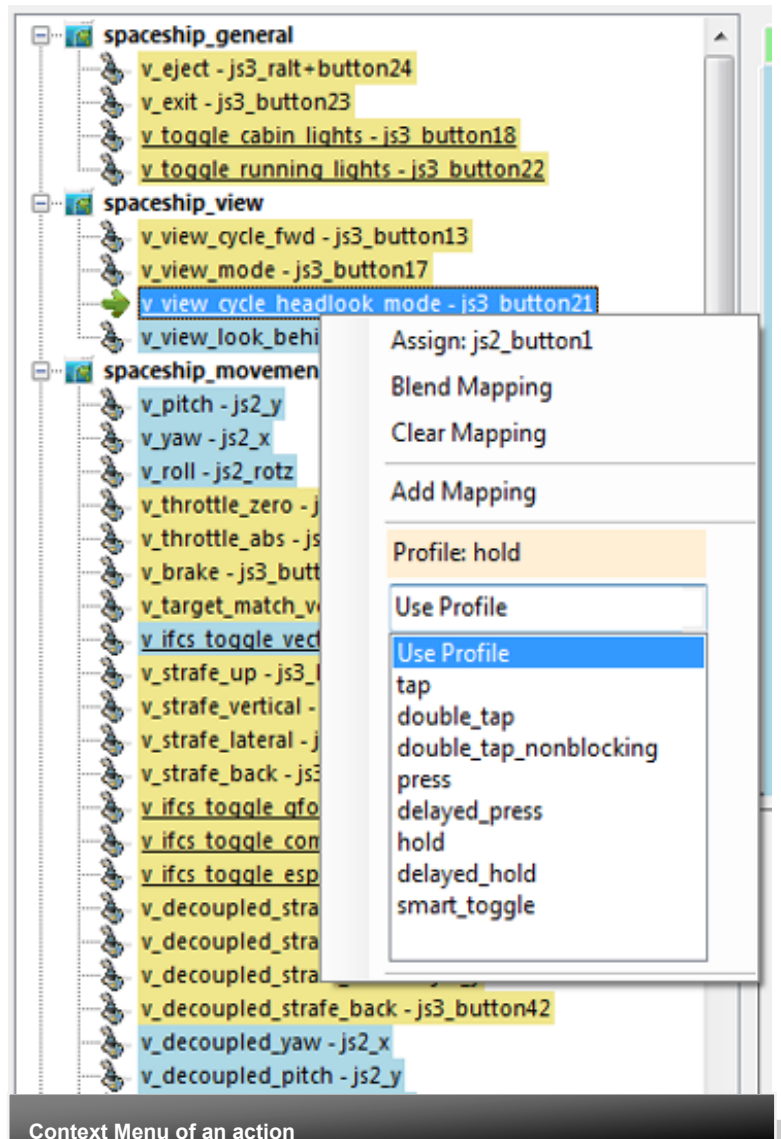

Context Menu of an action

You may choose a new activation mode for this mapping which is then carried into the XML.

```
<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_rctrl+button21"  />
```

Most notable are double_taps which may be applied by CIG in the profile sometimes and are then carried into the mapping if not changed here.

V2.18 added:

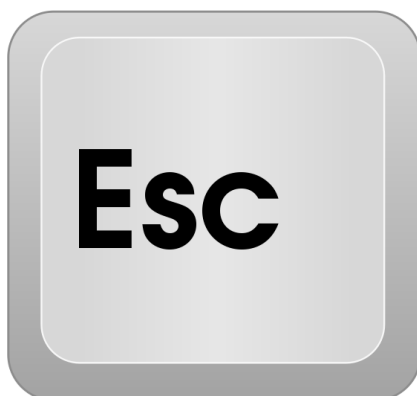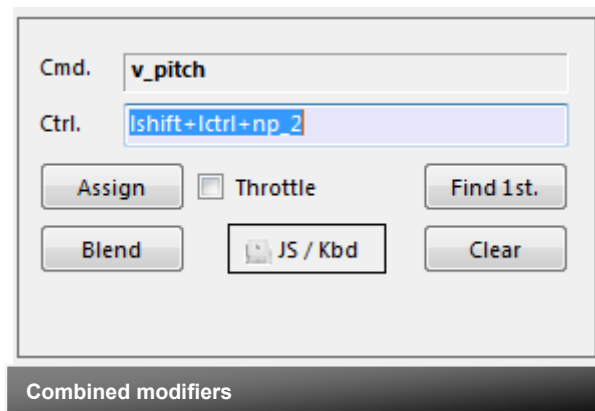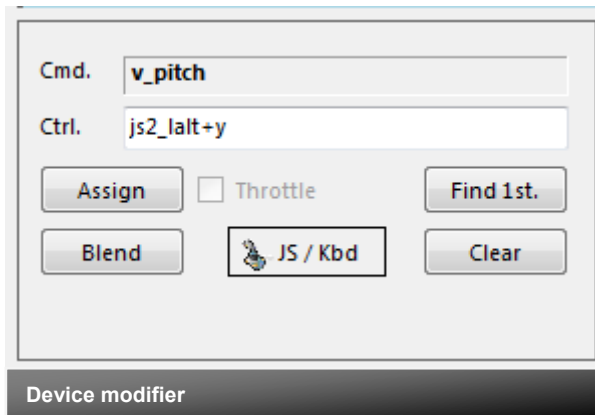Mappings with ActivationMode changes are marked with "#"

Mapping with user ActivationMode # mark

Joystick mapping with Modifiers

Device modifier

Combined 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.

V2.18 added:
it will be cleared after ~3-4 seconds

Mouse Mapping

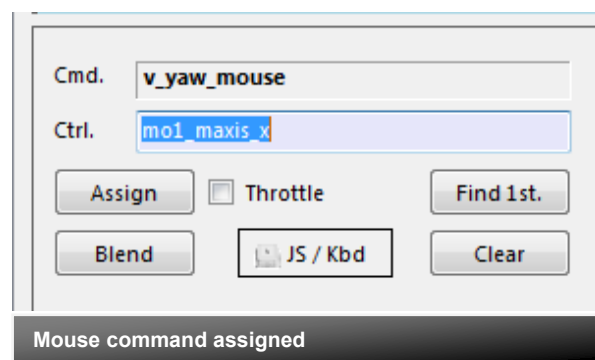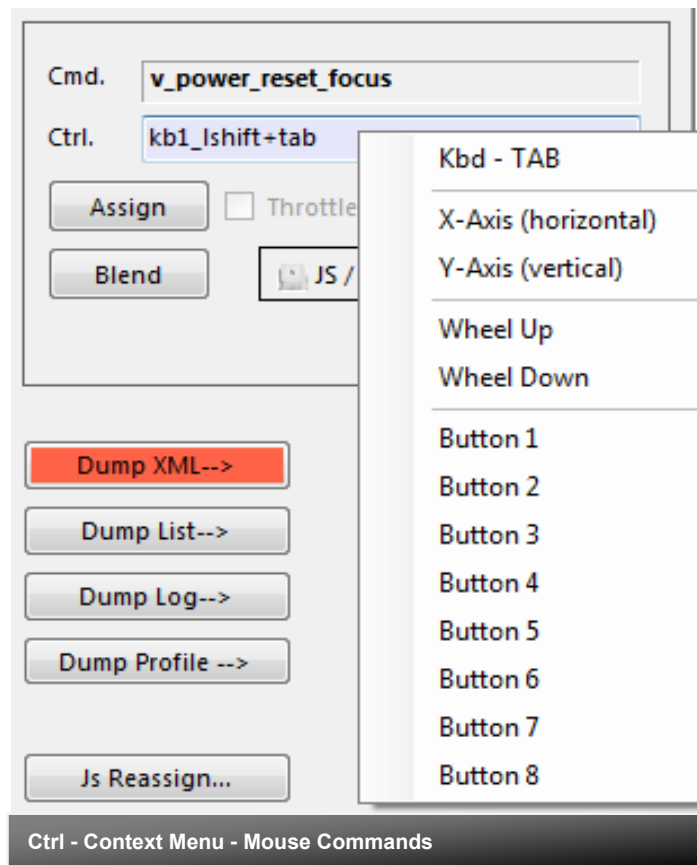## Adding Mouse Commands

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.

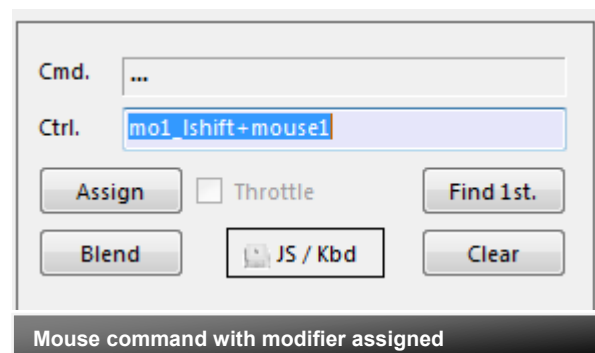The number of buttons is taken from the current mouse input setting - you may need to find out which one is 1,2 ...

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

Ctrl - Context Menu - Mouse Commands

Mouse command assigned

Modifiers from keyboard
Can be used to extend mouse commands

Mouse command with modifier assigned

XML Dump

```
<options type="joystick" instance="2">
 <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 Rhino
 <option input="x" deadzone="0.025" />
</deviceoptions>

<deviceoptions name="Saitek Pro Flight X-55 Rhino
 <option input="y" deadzone="0.025" />
</deviceoptions>

<deviceoptions name="Saitek Pro Flight X-55 Rhino
 <option input="rotz" deadzone="0.025" />
</deviceoptions>

<actionmap name="spaceship_general">
 <action name="v_eject">
  <rebind input="js3_ralt+button24" />
 </action>
 <action name="v_exit">
  <rebind input="js3_button23" />
 </action>
 <action name="v_toggle_cabin_lights">
  <rebind input="js3_button18" />
 </action>
 <action name="v_toggle_running_lights">
  <rebind input="js3_button22" />
 </action>
</actionmap>

<actionmap name="spaceship_view">
 <action name="v_view_cycle_fwd">
  <rebind input="js3_button13" />
 </action>
 <action name="v_view_mode">
  <rebind input="js3_button17" />
 </action>
```

XML Dump of an action map

XML Format
Mappings are sent to the game using XML formatted files.

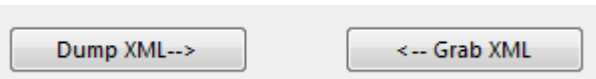The XML Area is where you may find the mapping after hitting the 'Dump' button.

[Dump XML-->]   [<-- Grab XML]

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 Ac-tionMaps here. The program may just break if it encounters something unex-pected!

Action maps

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.

(…\StarCitizen\Public\USER\Controls\Mappings)

Action map region of the program

From here you may first chose a map, then 'Load' the action map – 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

Select one of Your action maps

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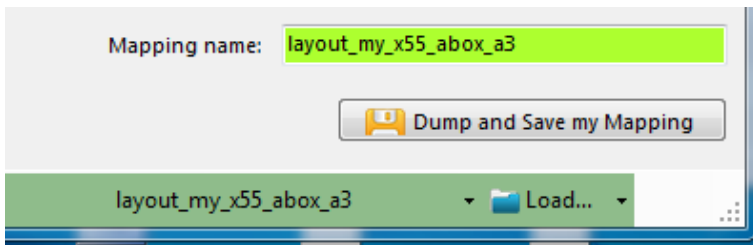

Action map loading options
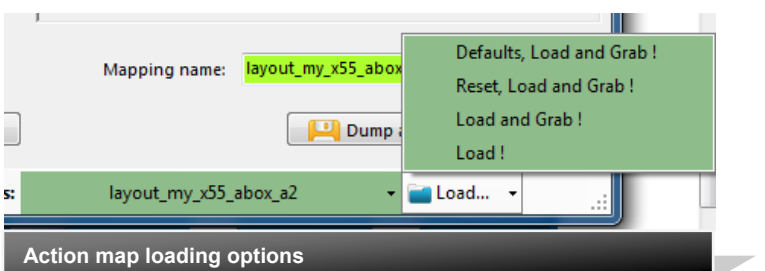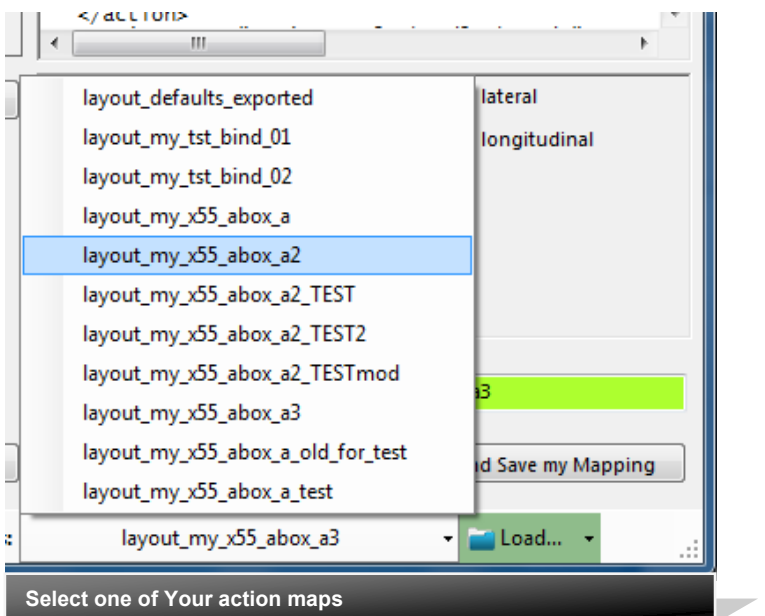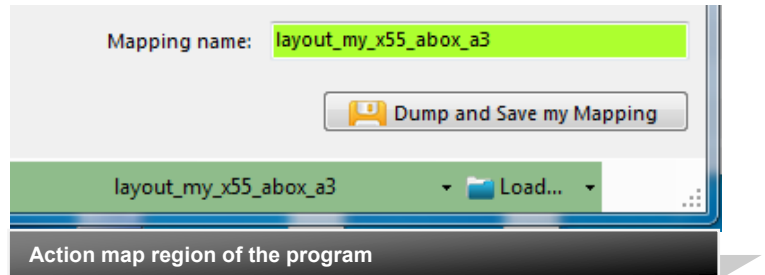
Your Actionmaps

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\Public\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 ..
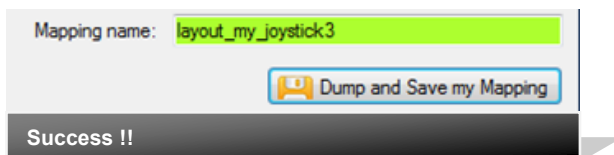
A successful Save will show the green flag

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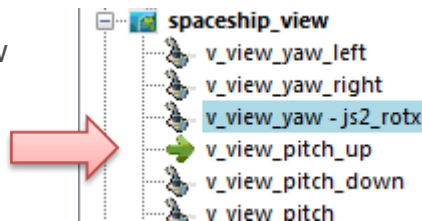
The table can be filtered with either text and/or the checkboxes
(Note: those filters are not linked with the ones for the main action tree)

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

Clicking the leftmost (empty) column sorts the table along the initial Actiontree order.
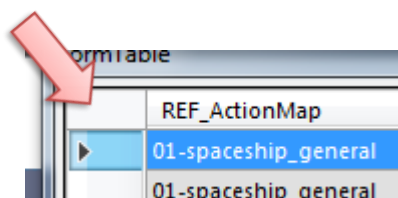
Fast Blending with a table

Edit Blending

The only editable item in this table is "Blended". First enable edit with the checkbox. Then click on any of the checkboxes in the 'Blended' column.

Undo will revert, Accept carries all the changes to the main tree but they are not saved yet.

V2.25 added:

Blend All

Will blend all VISIBLE and unmapped entries i.e. use the checkboxes / filters to limit the visible items.

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

Note: there is an oddity when changing 'Blended' 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 blending 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

Read about Blending also later in this document..

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

Space for future use ...

checking from bottom to top.

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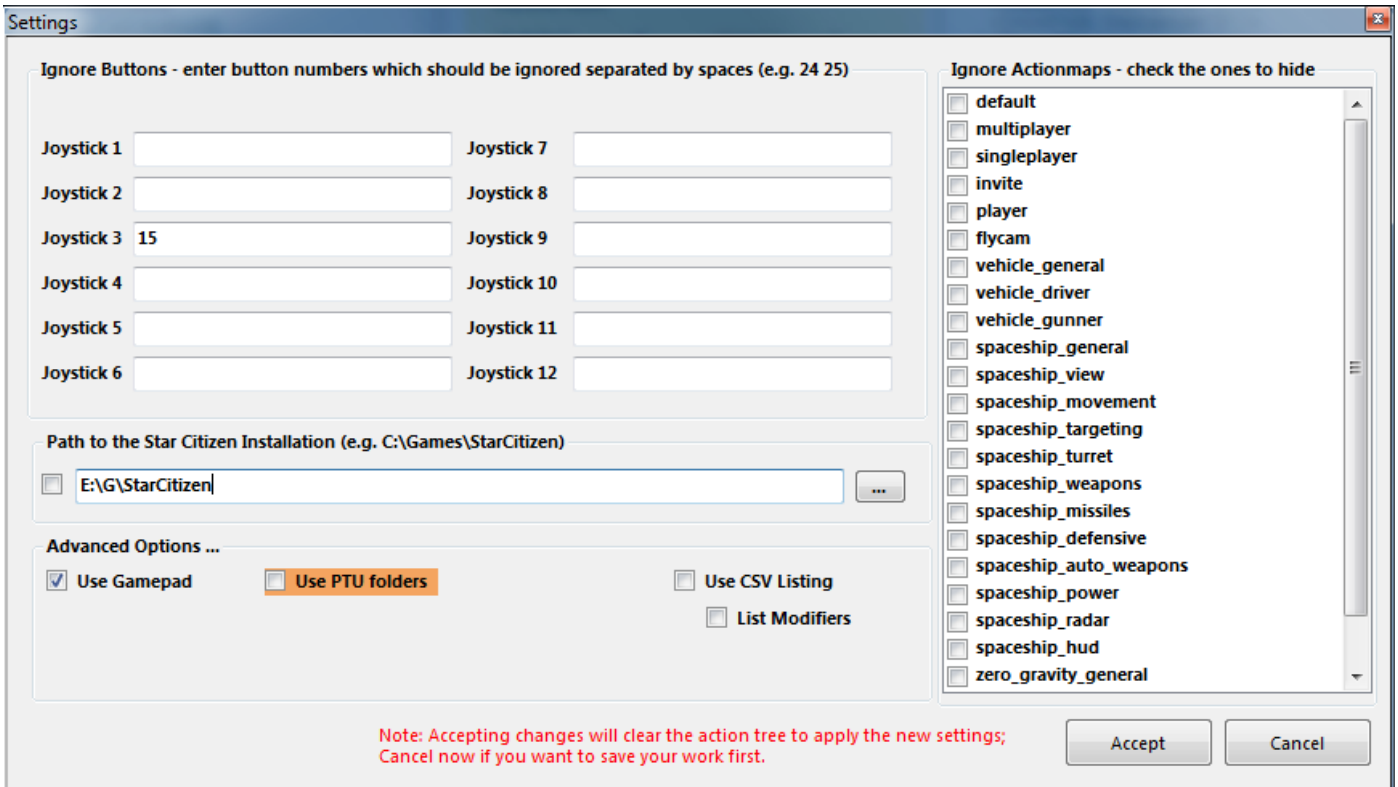
There are a number of setting you may need to do for efficient working..

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
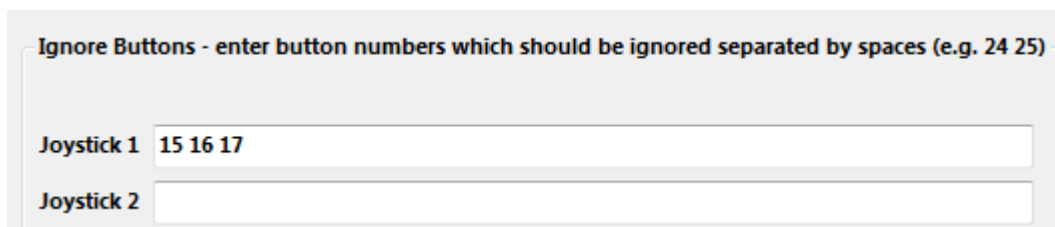
Ignore Action maps

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.
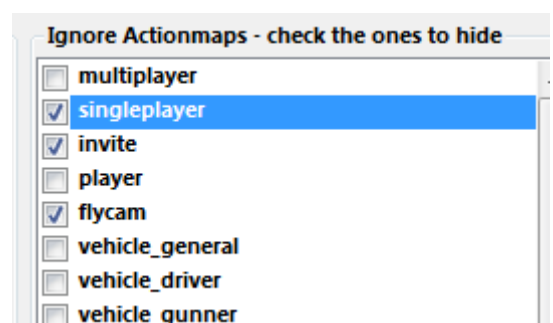
Settings (2)

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
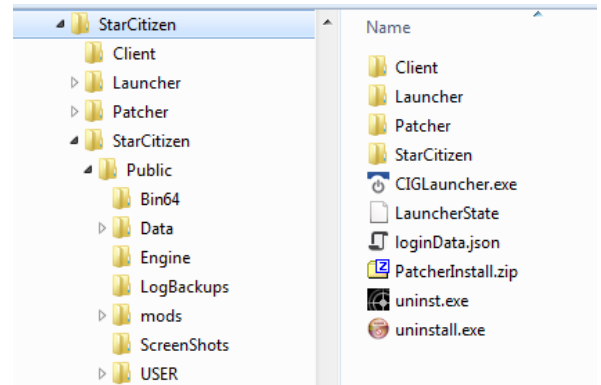
Use Gamepad

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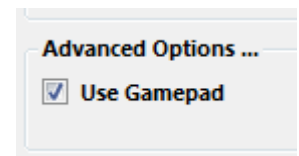
Using PTU Folders

In general the program finds its files in the Public subfolder of the Game installation path. If you are running PTU and want to work with the Test environment - check this box
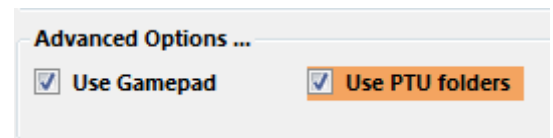
Changing to and from PTU requires a restart!
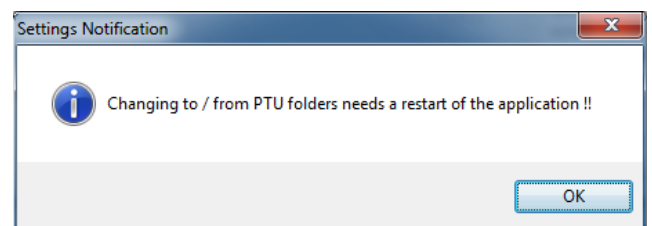
Once in PTU mode the program indicates this as shown below
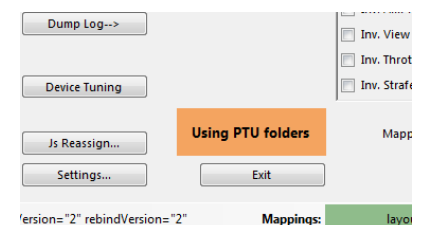
V2.25 added:

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

(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.

Note: Tuning will only recognize mapped controls
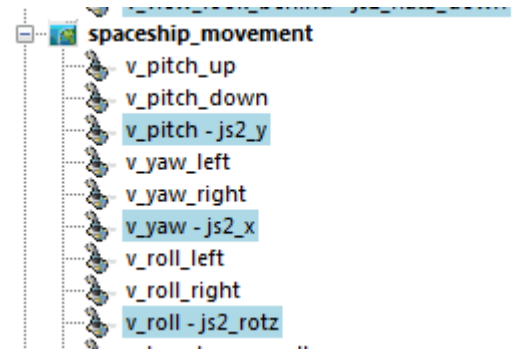
Hit the 'Device Tuning' button to open the tuning window
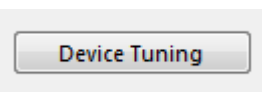
How to...

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 only.

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

Activating a tuning parameter will activate too

Parameters must be 'checked' to be used — **3**

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: — **2**

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 Tuning 3/3

Hints ...

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

- Load a map using 'Defaults'

- Hit 'Dump List'
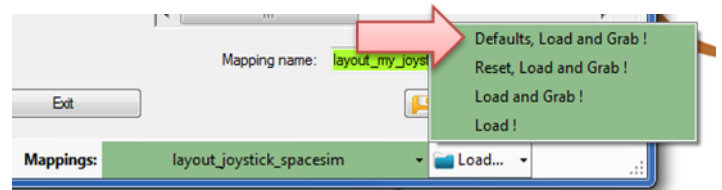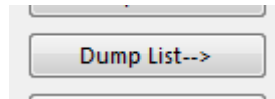
   … Gets you the complete list of commands in use if you load that map in game

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

- The mapping filter checkboxes can be used to limit the listed items
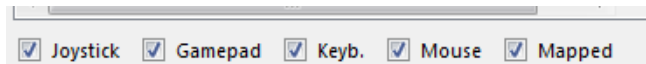
```
*** spaceship_auto_weapons
 v_weapon_toggle_ai                    . kb1 _ slash               . [1] Use Profile

*** 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             # [2] double_tap
 v_power_throttle_up                   . kb1 _ np_add              . [1] Use Profile
 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
```

V2.18 added:

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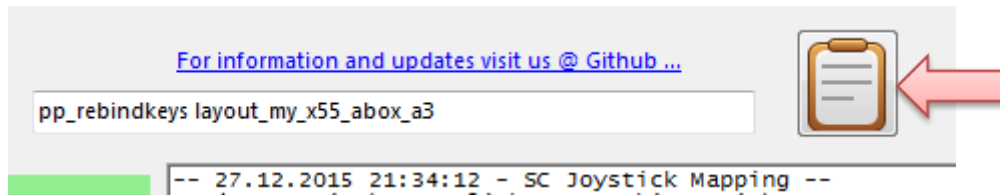
- Clicking the Notepad icon top right copies the pp_rebindkeys command into the Clipboard – from there just Ctrl-V it into the SC console..

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 'Blend' that action for the keyboard to ignore it in the game
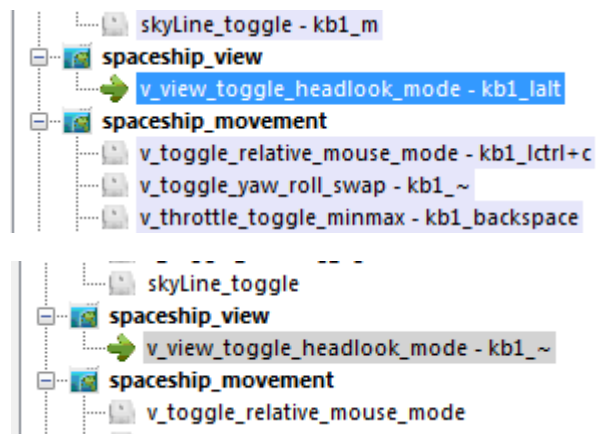
Hints ...

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

V2.22 added:

- Hit 'Dump Profile'

  `Dump Profile -->`

  Action Filter:

  Profile: DataXML defaultProfile

  … Gets you the complete used defaultProfile in the right window

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

```xml
<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"  pressT
  <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="-
     <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"  U
       <optiongroup  name="fps_view_yaw"  UILabel="@ui_COFPSViewYaw"  UIShowSensitivity="1"  UIShowInvert
      </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"  UIShowInve
      </optiongroup>

      <optiongroup  name="flight_view"  UILabel="@ui_COFreeLook"  UIShowSensitivity="1"  >
```
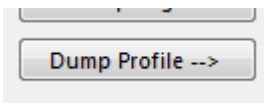
Hints ...

Space for future use ...

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