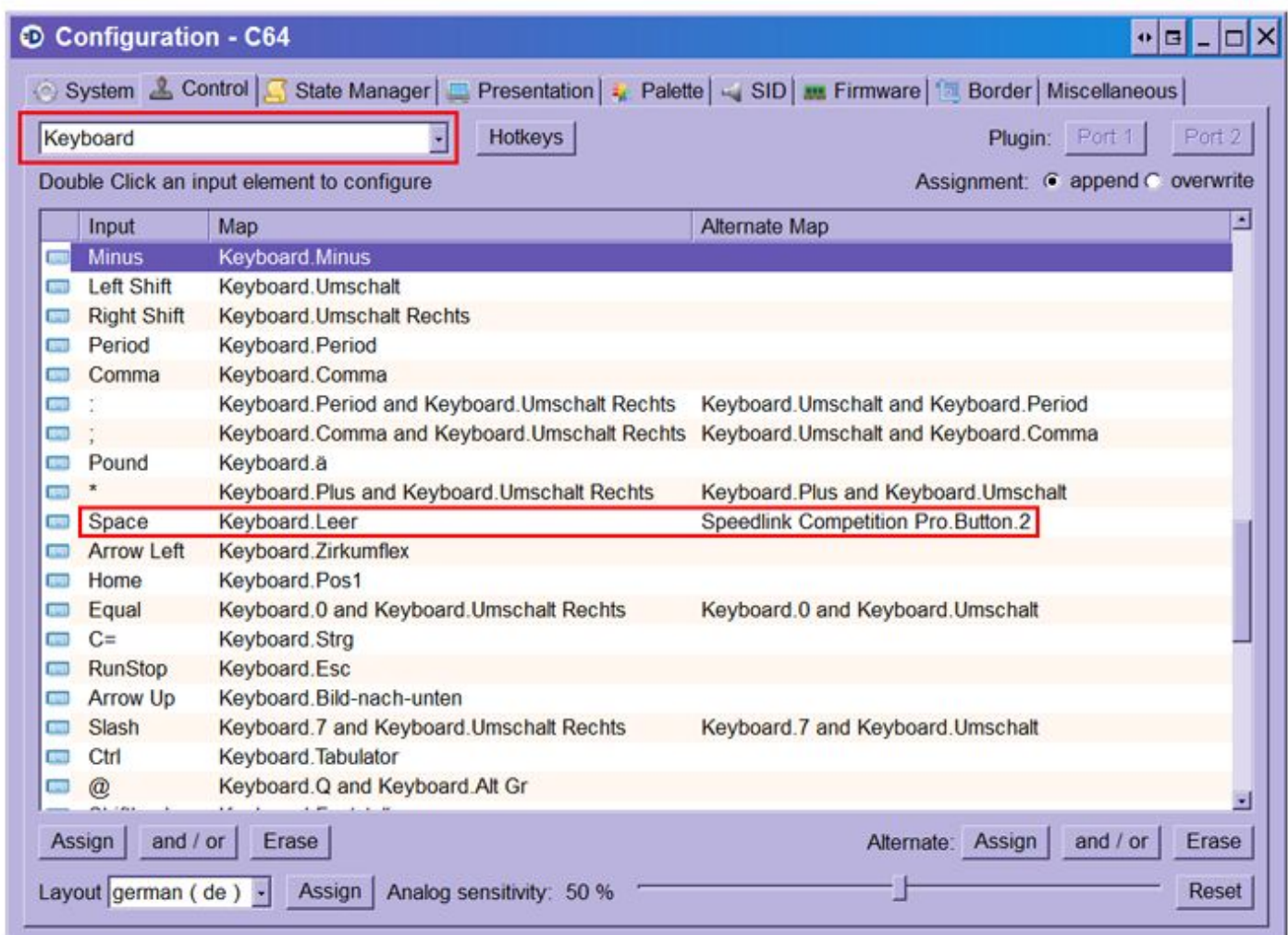


How to map keys to a controller and what is possible?

Some C64-games have special functions on certain keyboard-keys. For example a lot of shooters use the Space-Bar, besides the normal joystick/gamepad control, for special features in the game.

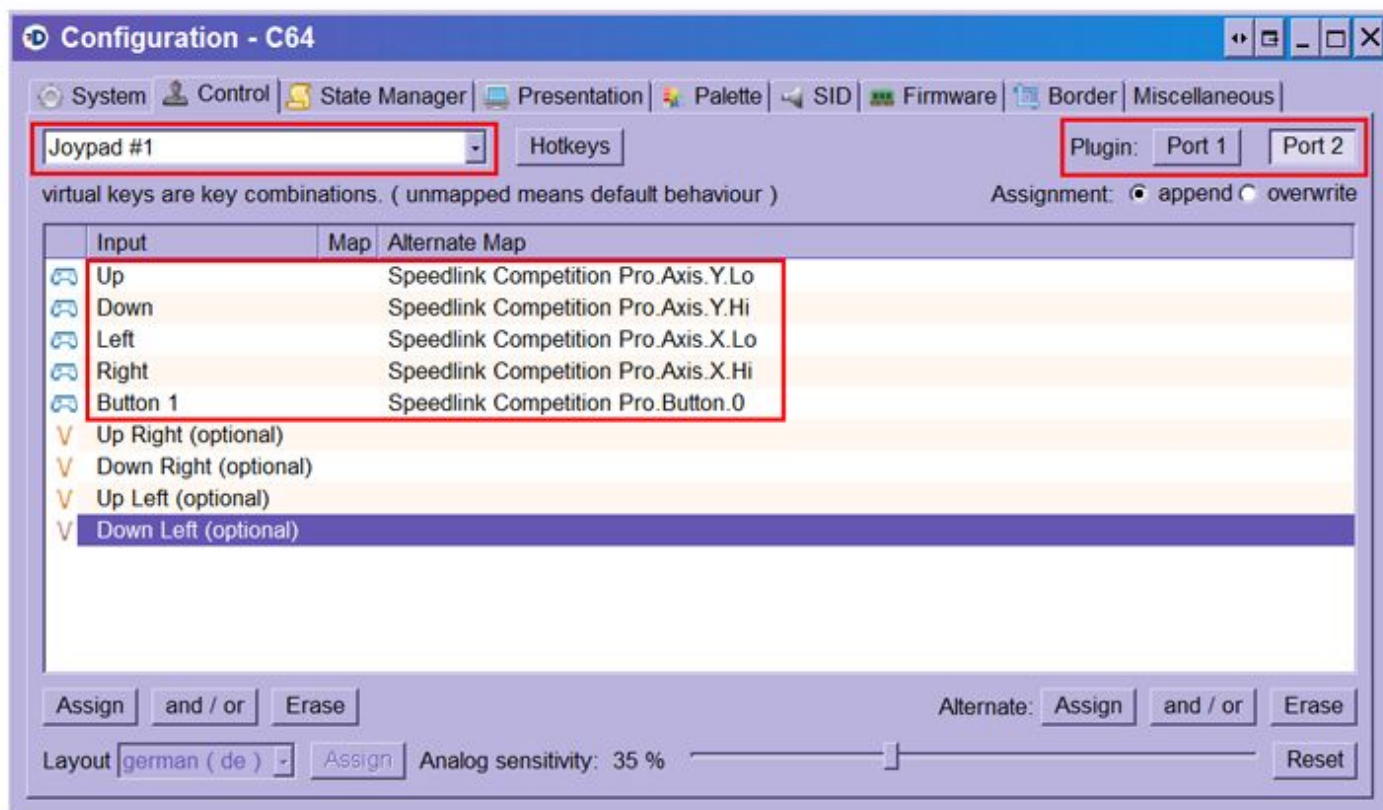
In Denise you can map all keys to functions (buttons/directions) on your controller. Here are some examples of how this works.

In this screenshot, SPACE is mapped to a button on the controller:



To do this we go in the menu "Control / C64 configuration" and there we select "keyboard" in the field. Move to the key we want to map and press "assign", either in the column "map" or in "alternate map".

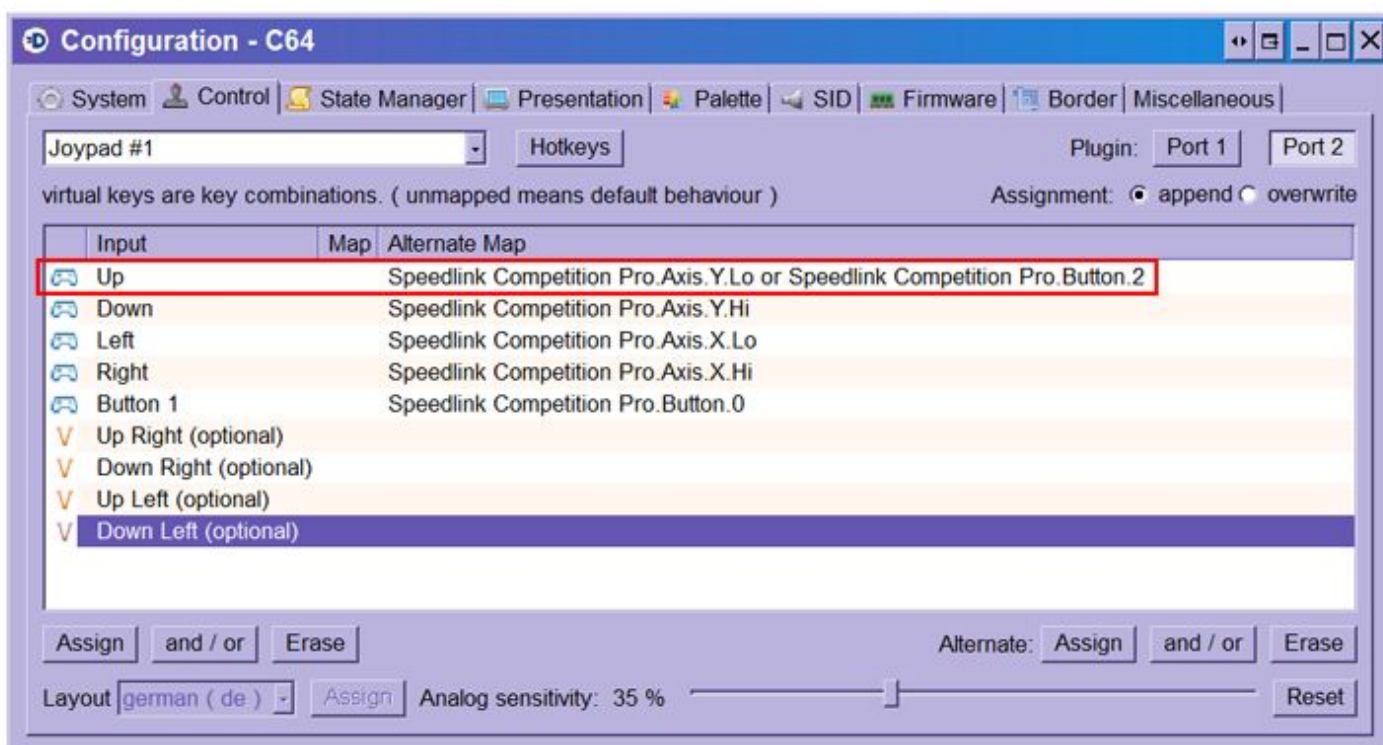
Now we have to map the rest of the functions of this joystick/gamepad in one of the two "joypad#" menus:



The last thing we must do, is choosing a Joyport for this Joystick and we are ready to play. Everything essential is marked "red" in the screenshot above.

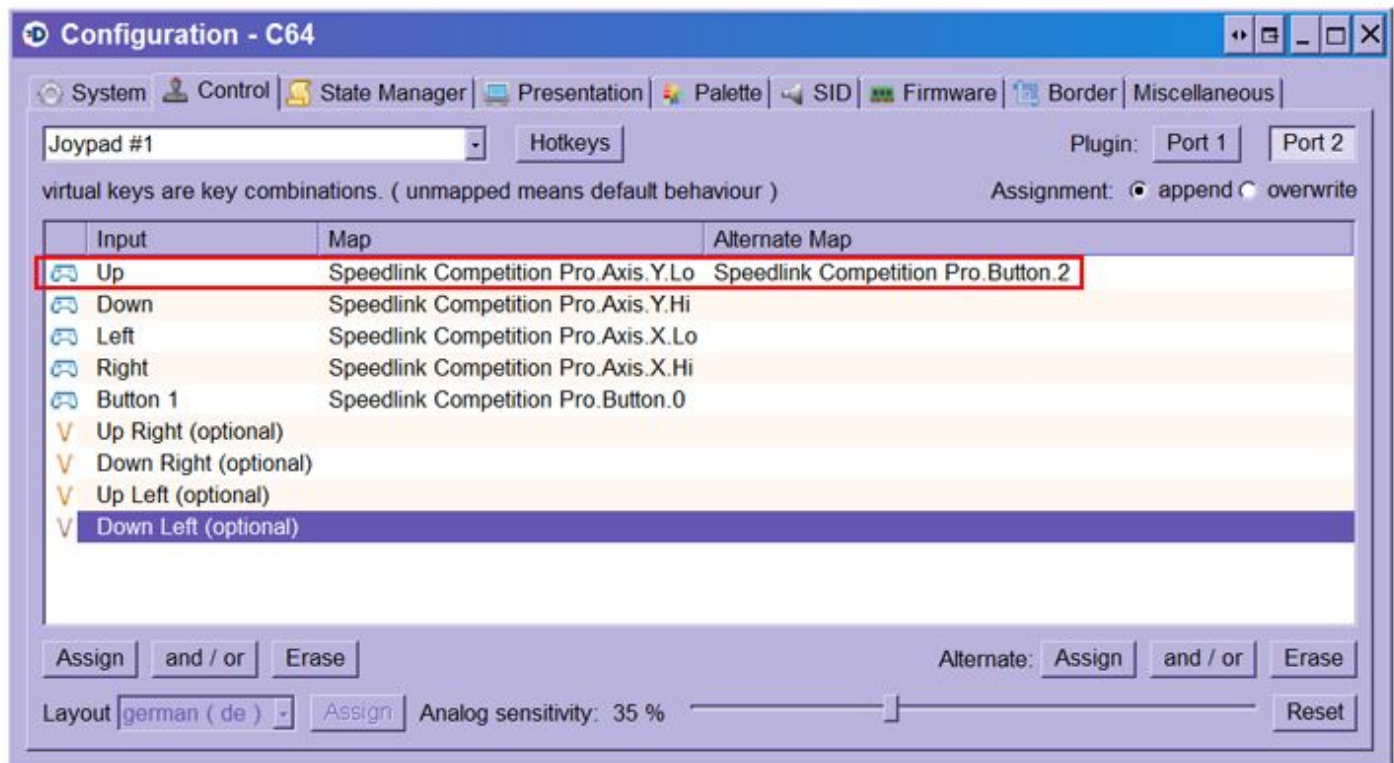
Users of Gamepads often have the problem in C64 jump-and-run games, that it's necessary to "steer up", when the player-sprite should jump and that it don't work, to jump with a click on the second or third button on their gamepad.

Here an example how to map "up" on a button, additionally to still have it on steer-up:



Here both commands are mapped in the "alternate map" column, with an "or" command in the middle. For this we have the key "and/or". If we would set it to "and", the sprite would only jump, when both things at the same time would be clicked, the button-2 and "up" on the controller. But for our mapping we need, to set it to "or".

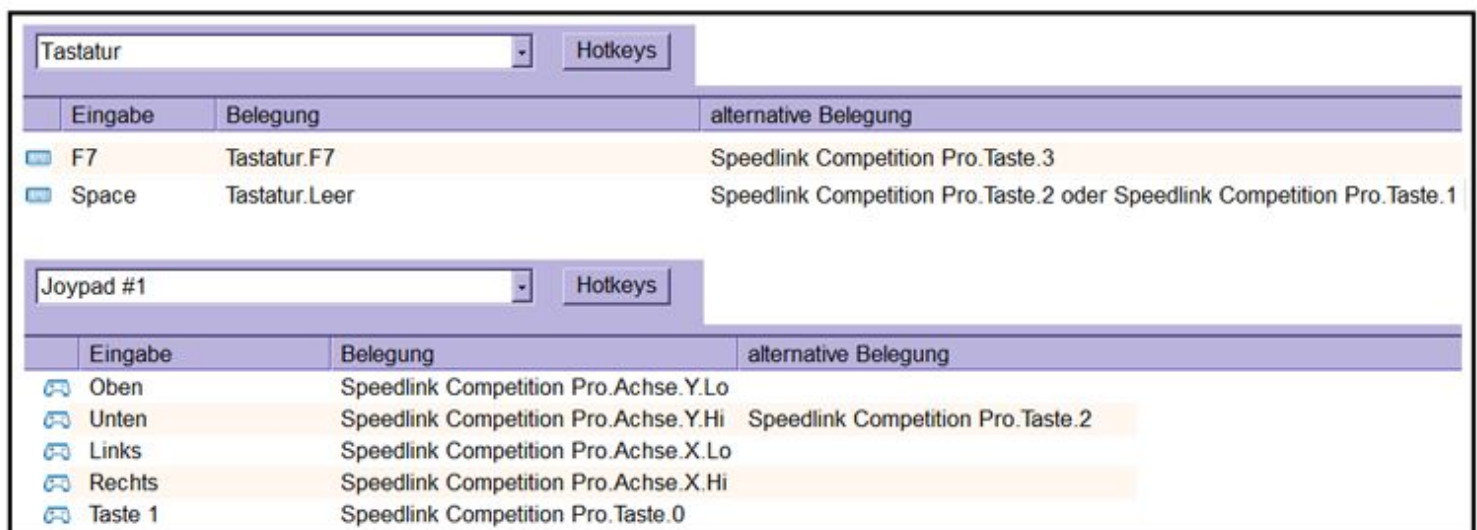
Exactly the same result like in the screenshot above, we get, when we map like this:



Here the mapping is divided into two columns, but the endresult is the same like in the screenshot before. The two columns provide an overview, if you have mapped several controllers at the same time.

It's also possible to make double-assignments on one button or one direction. An example of a game in which this could make sense, is "Turrican". On an original C-64 machine, when the player wants to transform into the wheel, he must first steer down and then press the Space-Bar on the keyboard. These two commands can be mapped together on one button and allows the user, to transform into the wheel immediately, when the player presses this button. Also the other keys that have a function in "Turrican" can be mapped on the controller.

A good buttonmapping for this game could look like this:



This then give the following mapping in "Turrican":

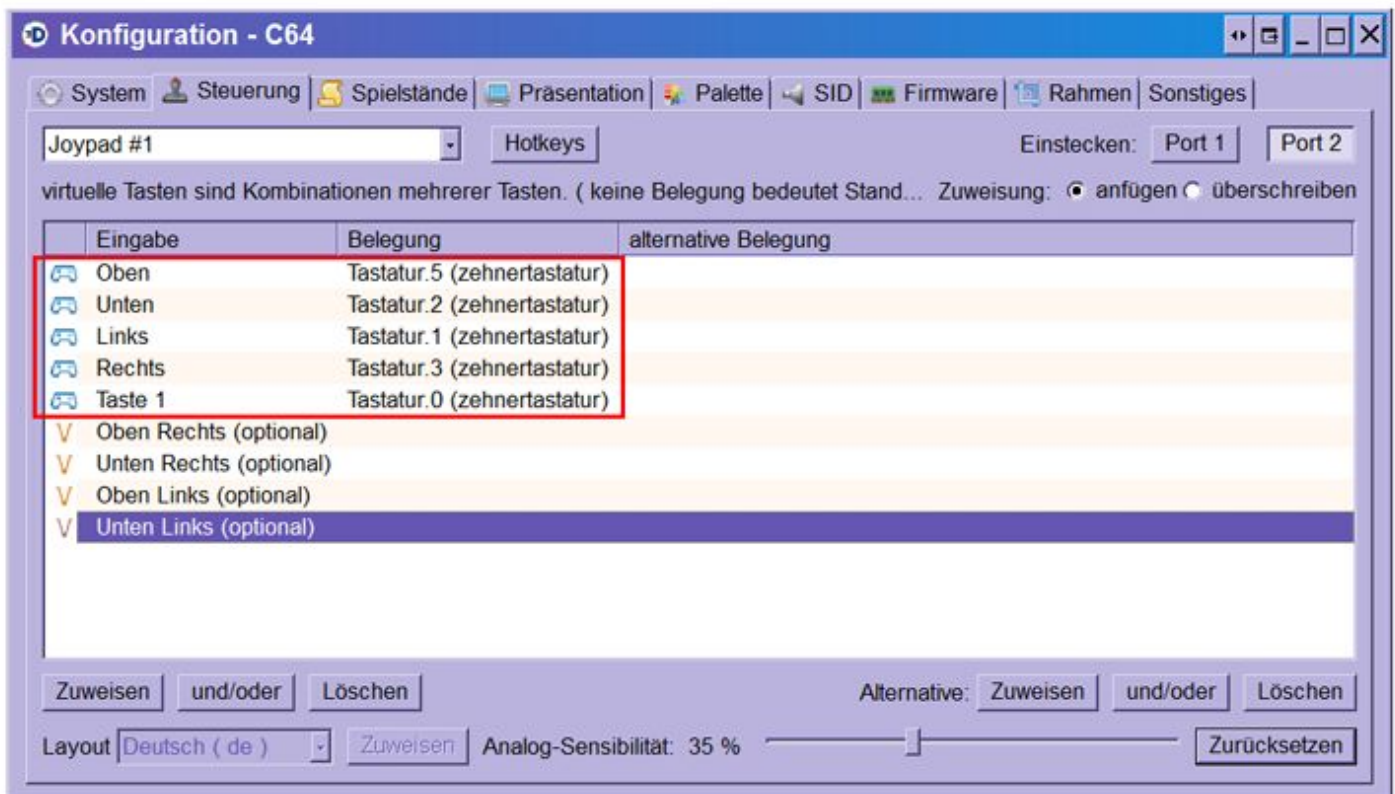
- * left/right/up/down = sprite movement (as usual)
- * firebutton 0 = normal fire in the game
- * firebutton 1 = shoot the power-lines (space-bar)
- * firebutton 2 = turning into the wheel (down and space-bar)
- * firebutton 3 = throw a grenade (F7)

Here we have the double-assignment on firebutton-2 then. Alot different mappings are possible. Even Hotkeys can be mapped to a button or a direction on the controller, if needed.

There are some games which don't offer joystick/gamepad control at all. Like for example the game "Jake the Snake" that can only be controlled by keyboard out of the box. It's possible, to map all needed keys to the controller for having joystick-control in such games.

Nevertheless, some of the games do not tolerate it, when keys are mapped to a direction on the controller and at the same time, this controller is mapped in one of the Joypad# menues. Then the movement with the mapped keys don't work at all in these games and it's necessary first, to deactivate the joyport, on which this controller is mapped. This can simply be done by clicking on the [port] functions in the two joypad# menues.

The last example shows, how a keyboard-joystick can be mapped. Senseful for users, who don't have a controller at hand, but want to try out a game by moving the sprite with the keyboard:



It make sense here of course, to use keys for the mapped joystick-functions, that don't exist on a real C64-machine, otherwise those keys, on which the joystick is mapped, can not be used in the normal way anymore. If the keyboard-joystick is mapped to the cursor-functions, these functions can not be used any longer, therefore the Numpad is a good solution for mapping those functions, like in the screenshot.