

LLJoy

Version 1.0

Operation Manual

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Introduction

Thank you very much truly for selecting LLJoy.

This manual is written basic instructions of how to use LLJoy.

LLJoy is a software to emulate keyboard operations and mouse operations by joysticks. The purpose of this software are to assist playing at games and to operate more easily by a handicapped user.

What can this software do?

- * keyboard emulations by joysticks.
- * mouse emulations by joysticks.

LLJoy acts not only simply emulation but also it is possible to change the output contents by methods of the following joystick conditions.

- * Changed output content by pressing by time.
- * Changed output content by the level of stick and a pushed button.
- * Changed output content by combining by pressing other buttons.
- * Changed output content by the number of pressing same button.

It is possible to make the changed output contents at the various situations because the condition can combine by selection.

Please understand usage and disclaimers and enjoy by this software.

Then I am glad if you felt useful at playing games and other software by using this software.

2016, 2017 KUSIDATE

1. System Requirements

This software running under these systems.

OS : Windows XP / Vista / 7 / 8 / 8.1 /10, both x86 / x64 are OK.

Runtimes : “.Net Framework 4.0”

“ Visual C++ Redistributable for Visual Studio 2015 (x86)”

Please download both “.Net Framework 4.0” and “Visual C++ Redistributable for Visual Studio 2015 (x86)” in (C)Microsoft homepage.

.Net Framework 4.0” is needed by WindowsXP / Vista / 7 user. over Windows8 version were already installed by standard.

“.Net Framework 4.0 ”

<https://www.microsoft.com/en-us/download/details.aspx?id=17718>

“Visual C++ Redistributable for Visual Studio 2015”

<https://www.microsoft.com/en-us/download/details.aspx?id=48145>

this software require “vc_redist.x86.exe” file.

DirectX is needed only by WindowsXP.

<https://www.microsoft.com/en-US/download/details.aspx?id=35>

It is a possibility that the Windows Smart Screen obstructs installation of this software over Windows8 version. In this case, please invalidate the Windows Smart Screen and use this software.

If you run applications with administrator privileges then you run LLJoy at administrator privileges. In some web games became administrator privileges after booting quietly. If you are these situations, please try running with administrator privileges, again.

2. Screens

2.1 Main Window

When first start LLJoy, displayed this window.

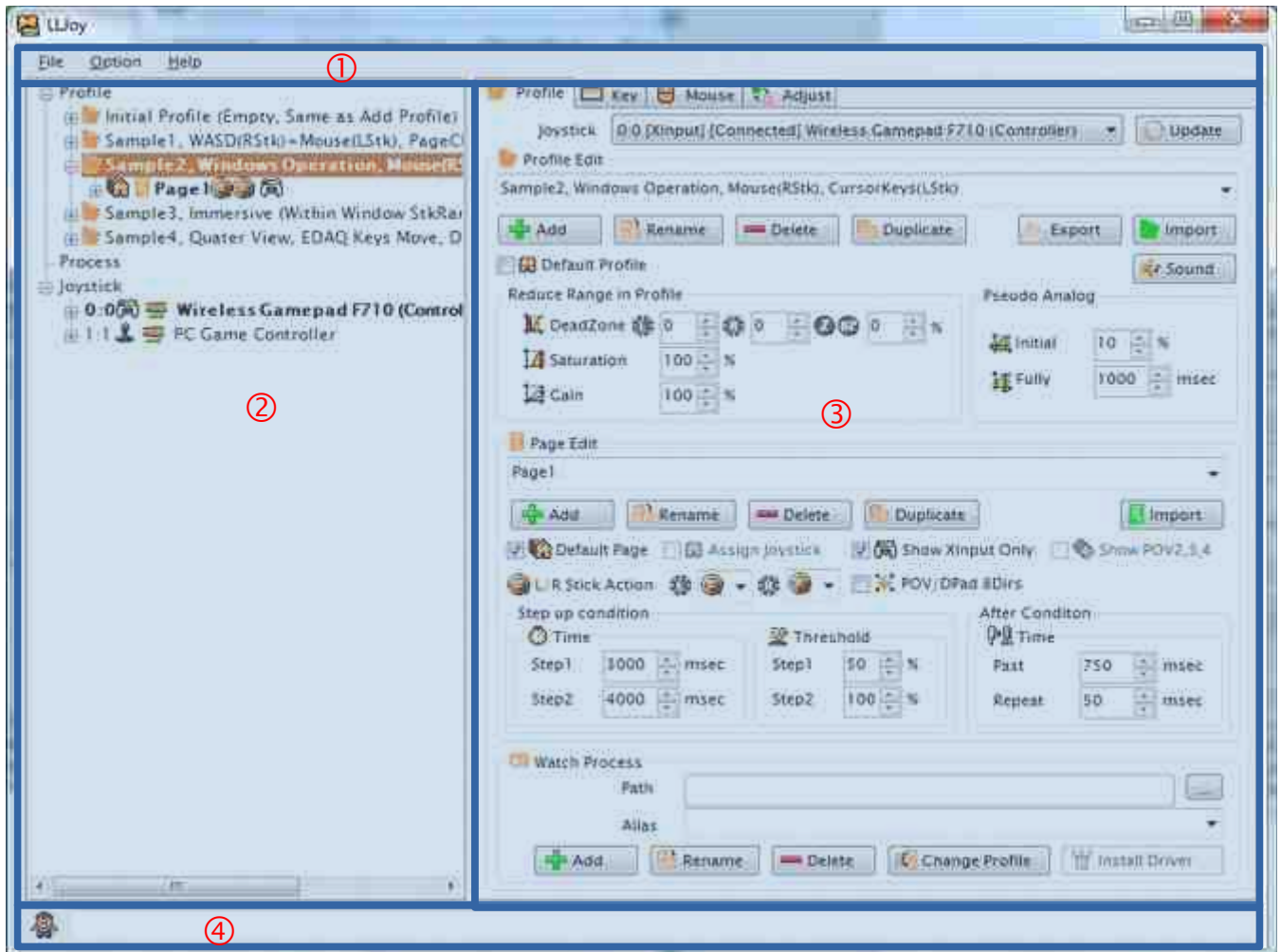


Figure 2-1-1 Main Window

Main screen is separated loosely.

- ① Menus
- ② Information Tree.
- ③ Setting Tabs
- ④ Status Text

By choosing a setting tab and clicking the item from a right tree.

Displayed contents of each setting tab are switched over.

- * Profile / Page / Process edit
- * Edit of the key emulate function
- * Edit of the mouse emulate function
- * Joystick adjustment

The Status Text indicates running status of profile and menu action.

This software is resident software. It is not the end of this software even if you close this window.

If you want the end of this software, please select exit in menu at main window or task tray.

2.2 Task Tray Icon

After it starts, an icon as “LLJoy Manager” is registered in the task tray.

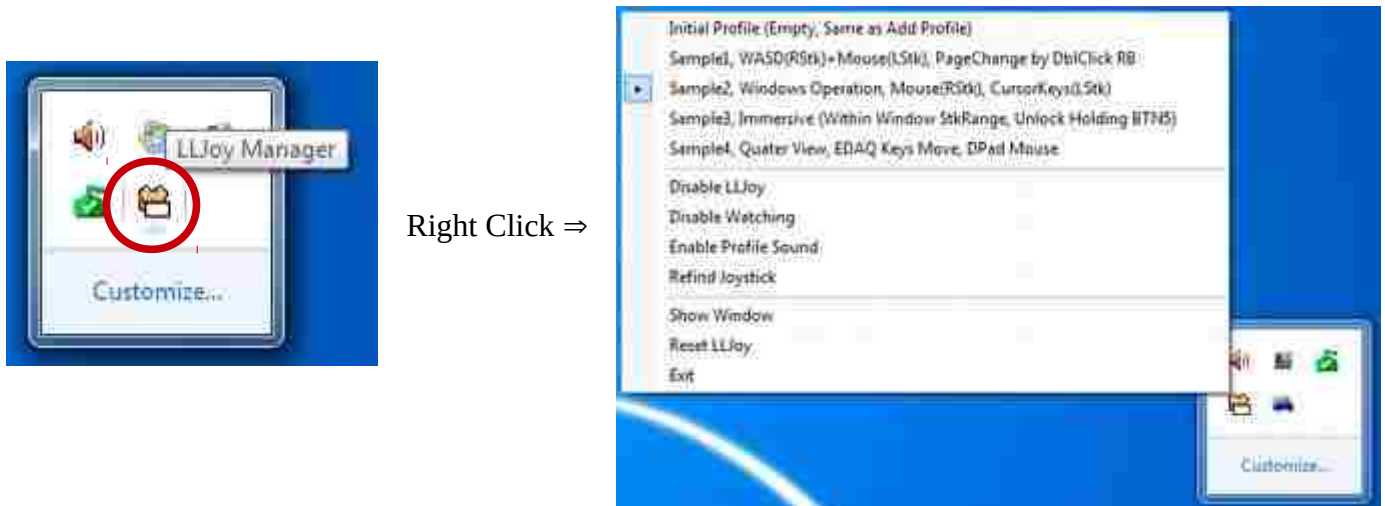


Figure 2-2-1 Icon and Context Menu

This icon is double-clicked by the left button of the mouse, a main screen is indicated.

It is right-clicked, a context menu like the above is indicated.

You can do the following by this context menu.

- * Change in the profile which exists already
- * Temporary Suspend LLJoy
- * Temporary Suspend Watching Process
- * Selection of playing a sound or not, if switched profile.
- * Re-detection of joysticks
- * Show the Main Window
- * Reset of LLJoy
- * Exit of LLJoy

2.3 Way of Adding new Profile.

Here, show how to set up a basic profile using the XInput joystick.

I want to set up the following configuration examples.

W/A/S/D keys with left stick

Mouse movement with right stick

Mouse Left / Right buttons with Left / Right Trigger buttons

Z/X/C/V keys with 1/2/3/4 (as A/B/X/Y) buttons.

(1) Disable Watching Process.

First, select "Disable Watching". It is safety for ignoring automatic profile selection when switching windows.

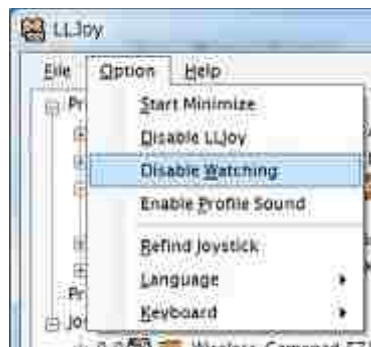


Figure 2-3-1 Disable Watching Process.

(2) Enter a new profile name

Erase a currently name of profile in order to enter a new profile name.

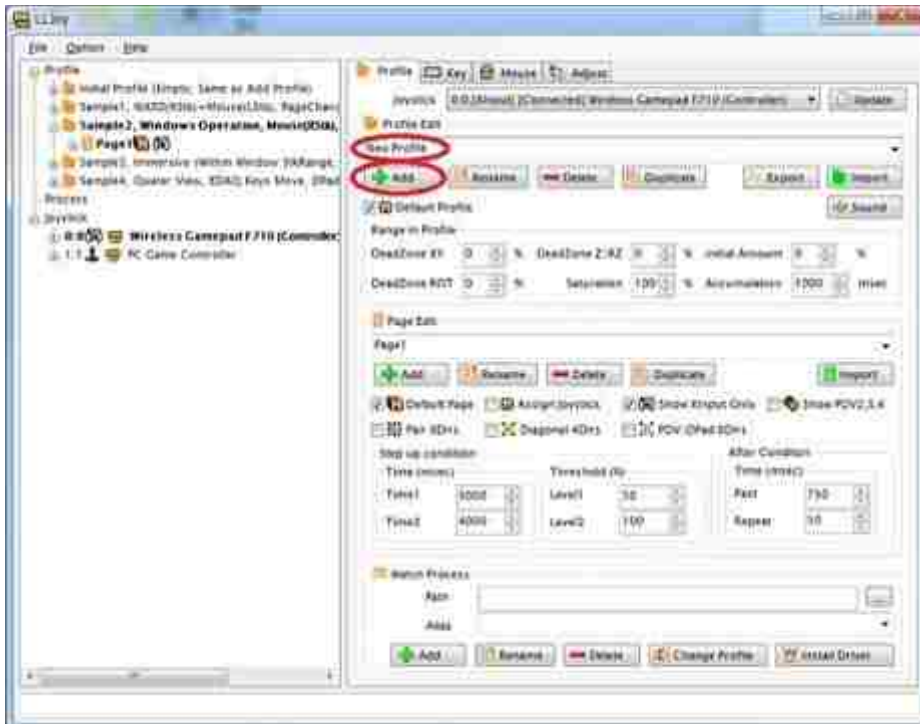


Figure 2-3-2 Enter a new profile name

Erase a currently name of profile in order to enter a new profile name. After you enter the profile name, then press "Add" button below. It is added the new profile if the name is not exist.

(3) Import WASD Keys

Please click the "Page1" of the automatically added page.

This operation is for page selection.

And please click the name of "Key" at tab control after page selection.

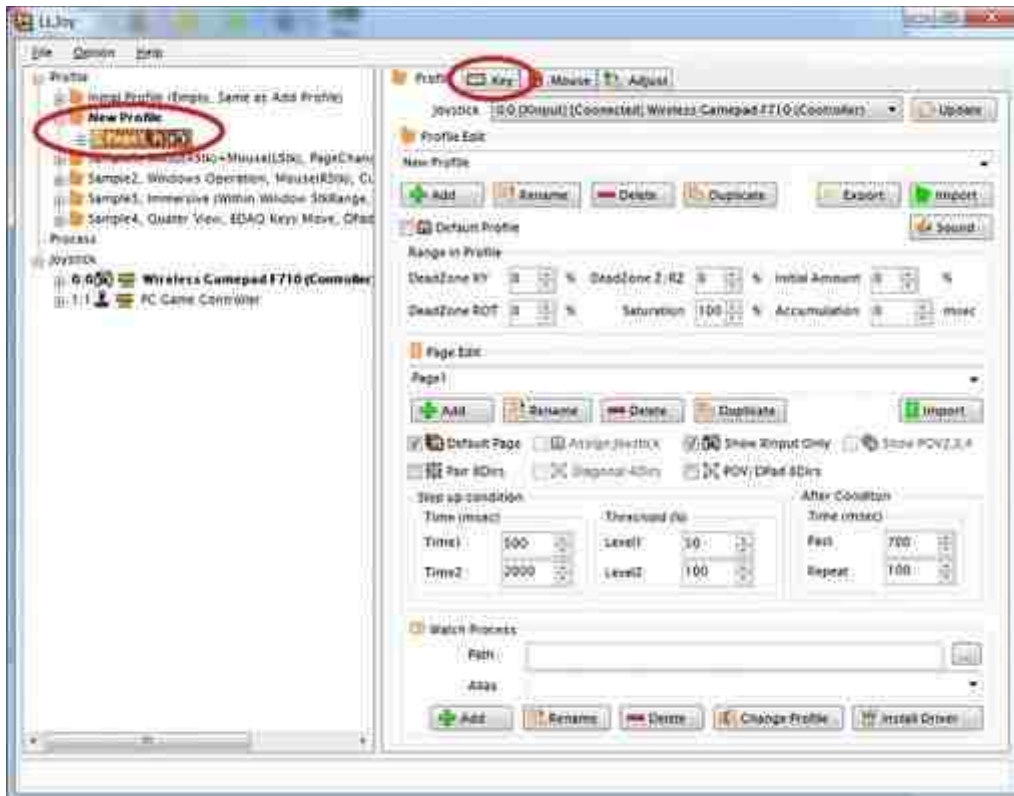


Figure 2-3-3 Page selection and display Key Edit screen.

This screen is the "Key Edit screen".

Please click "Import" button below this screen.



Figure 2-3-4 Key Edit screen and display Import Editor

This screen is "Import Editor".

Please select "Group" radio button. Already registered in groups will become available.

Please select

“Group Sample01, LStick WASD move...”

from the drop-down list that appears in right.

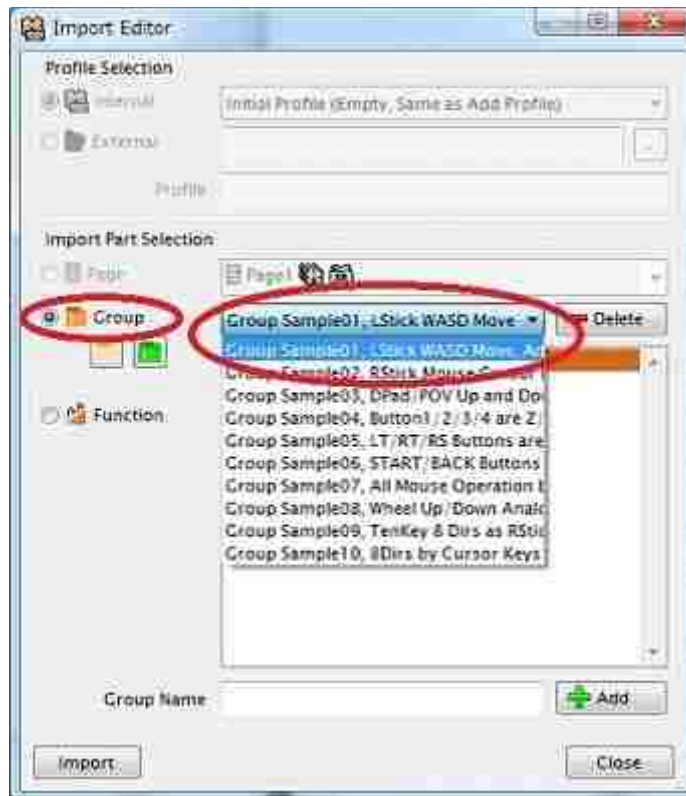


Figure 2-3-5 Import Editor screen and WASD selection

Display registered emulation functions after selected item from the list.

Please click all items from this list with holding down CTRL key. Finally press the "Import" button.

You can select individually from registered emulation functions on a group.

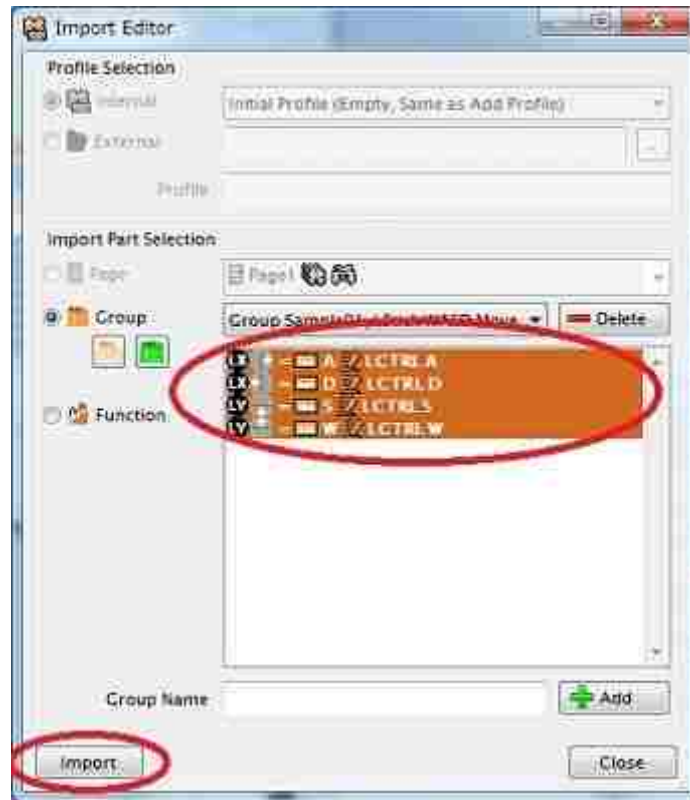


Figure 2-3-6 Multiple selection of emulation functions

The confirmation dialog of "overwrite OK" or "Cancel" will open after pressing the "Import" button. If you clicked "OK", so import your selected functions to page.

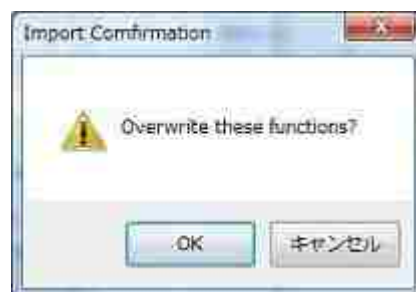


Figure 2-3-7 Confirmation Dialog

You are able to operate "Import Editor" screen again after this dialog disappeared.

(4) Import Right Stick mouse functions

Let's set to mouse settings from the same screen, continuously.

Please choice "Sample Group02, RStick Mouse Cursor..." from drop-down list.

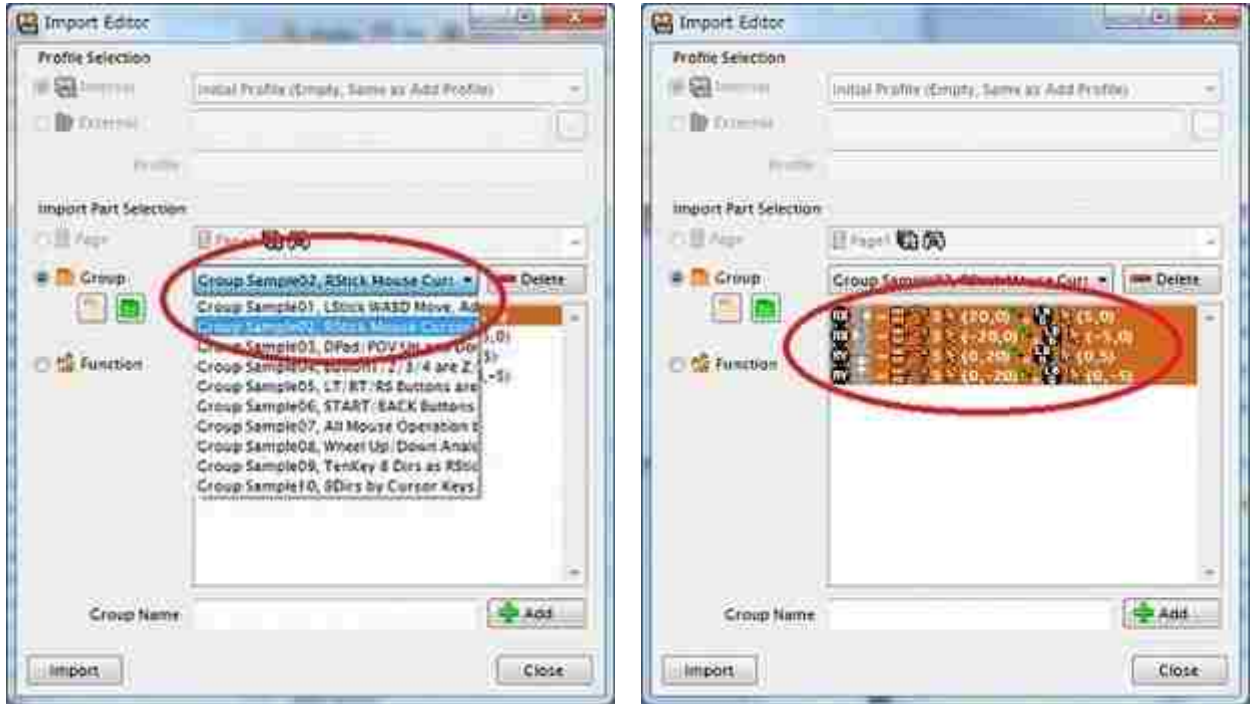


Figure 2-3-8 Selection of Mouse movement emulation functions

In passing, import the wheel operation.

Please choice "Sample Group03, DPad/POV Up and Down..." from drop-down list.

And please click all items from this list with holding down CTRL key. Finally press the "Import" button.

Also, click "OK" at confirmation dialog.

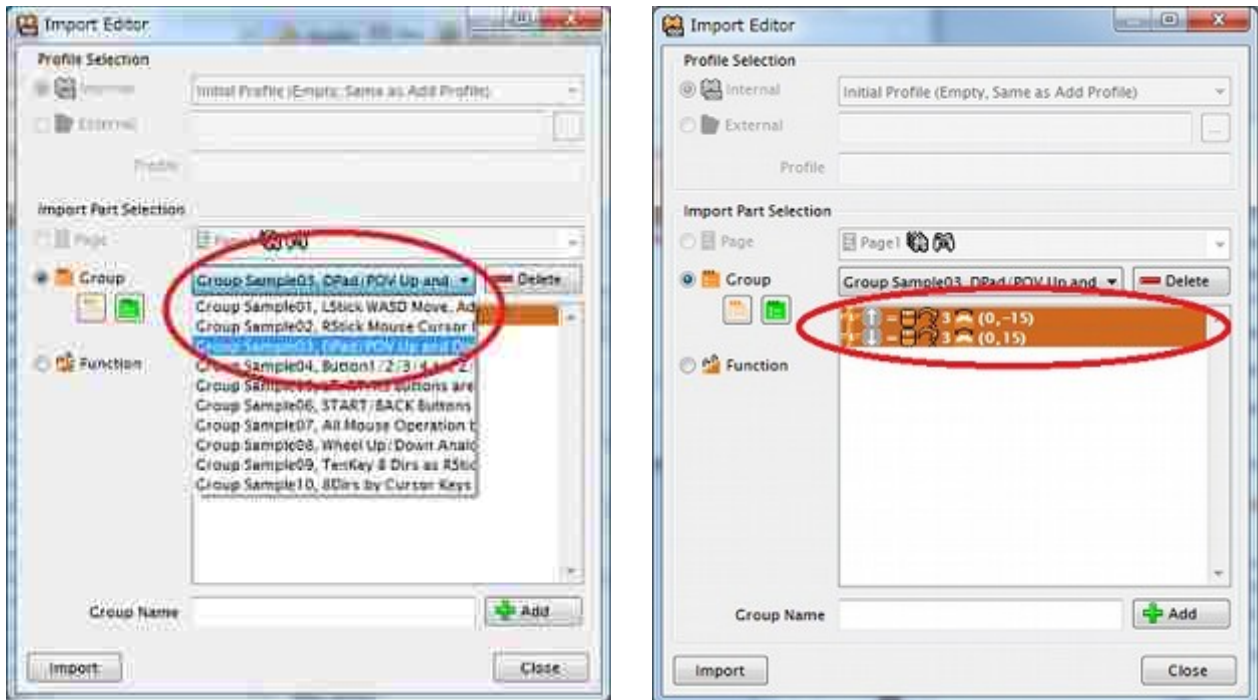


Figure 2-3-9 Selection of Mouse wheel movement emulation functions

Import is finished at this time. Please close the "Import Editor" screen by pressing "Close" button.

(5) Confirmation Imported Functions

Again, you look at the tree. You'll see registered functions in bulk at the tree by "Import Editor".

Ends here the import WASD keys and mouse move related.

Next, you continue to register one by one.

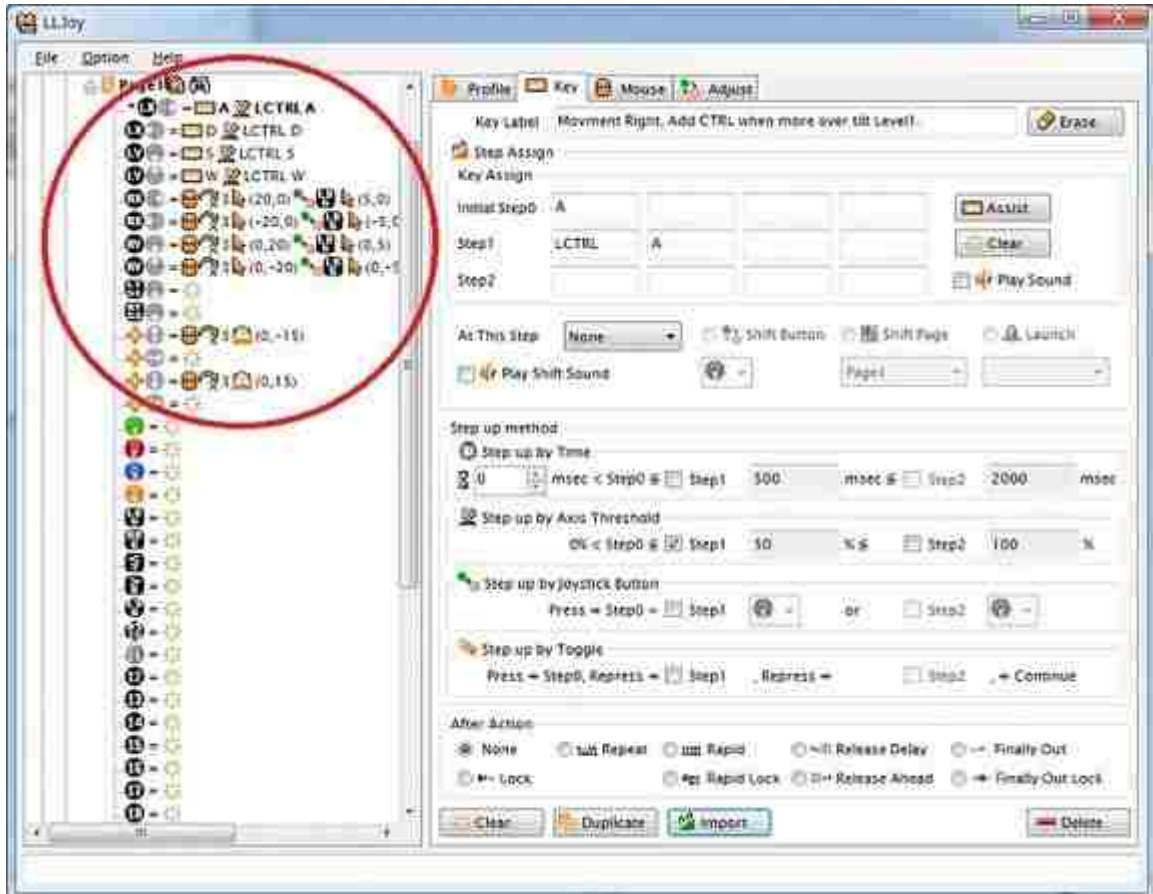


Figure 2-3-10 Confirmation of Imported emulation functions

(6) Setting L/M/R button of mouse

First of all, assign to the left click on left trigger.

Please click the left trigger button. the left trigger button is "LT/SL1" icon as displayed on the tree.

When emulation function is not assigned nothing, first open the "Key Edit" Screen.

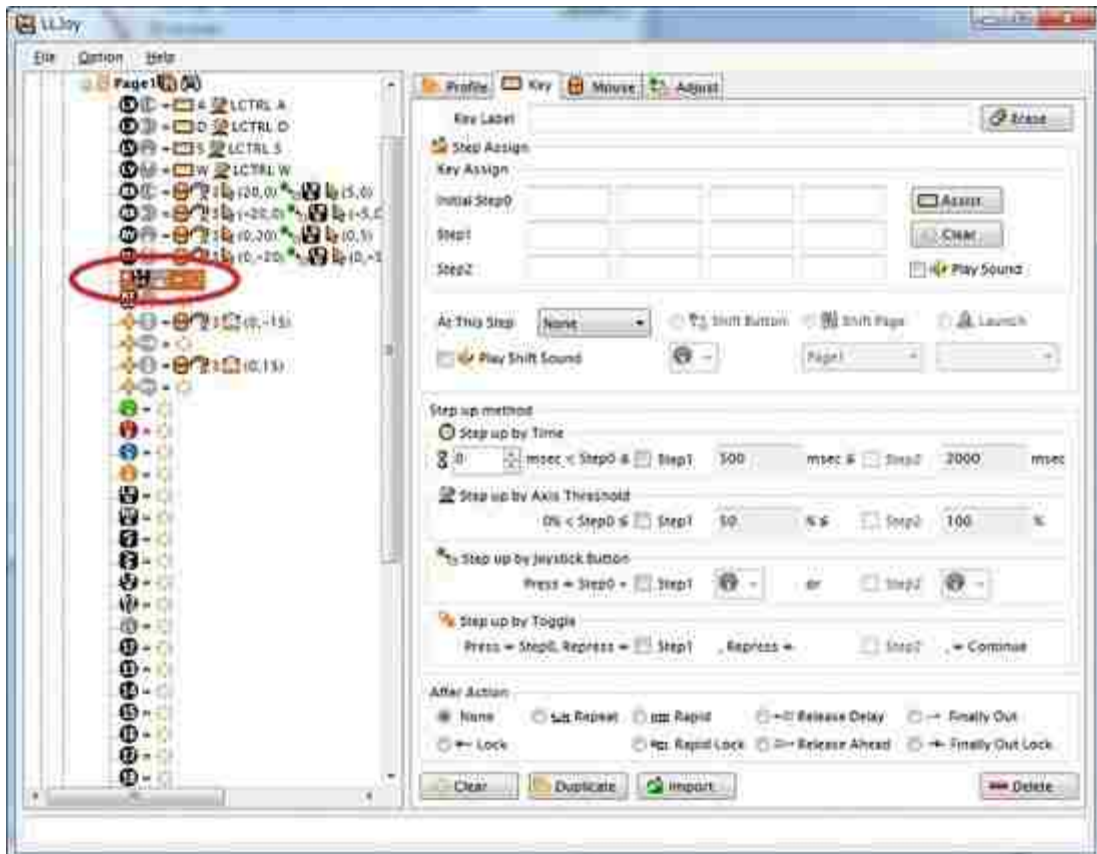


Figure 2-3-11 Confirmation of the Left Trigger button

Next, Click the "Mouse" from the tab.

This screen is "Mouse Edit screen".

Please mark the "Left" checkbox on the screen.

When not ready for input, try switching "Key" tab and "Mouse" tab.

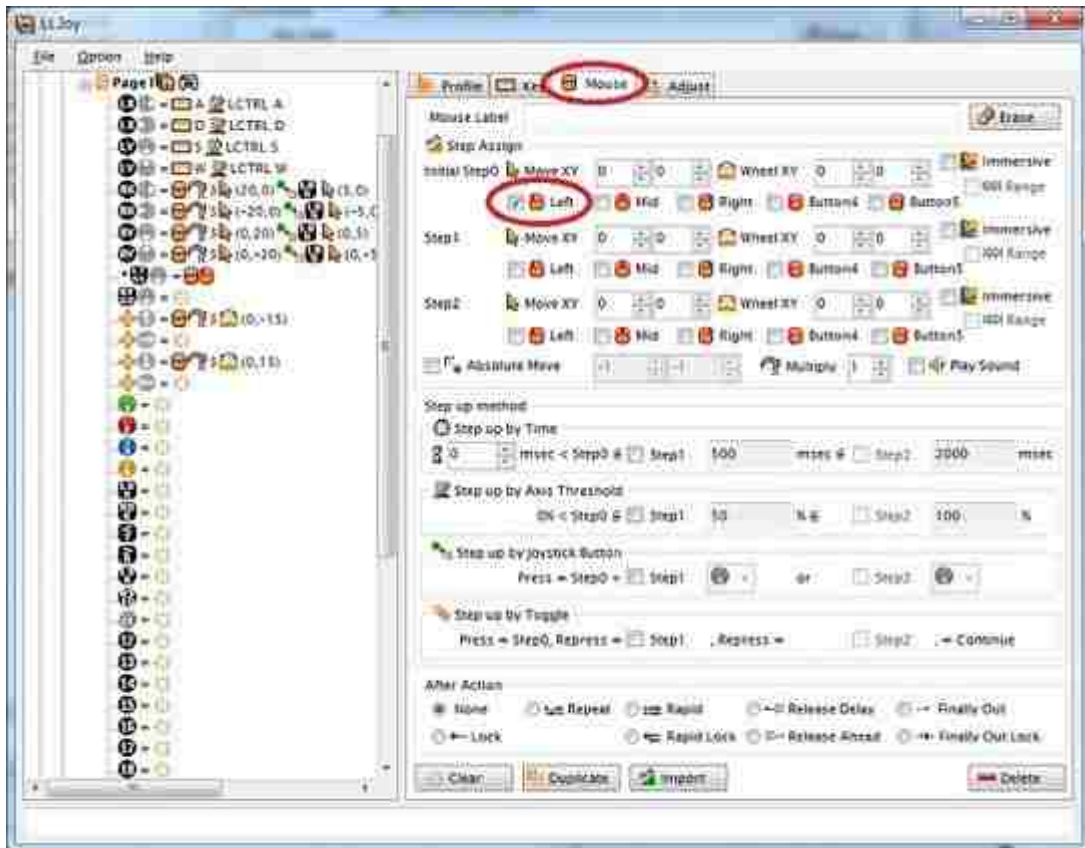


Figure 2-3-12 Marking the Mouse Left Button

Selects a button of colored orange when RS button pushed from the tree.

Click "mouse" from the tab for switching "Mouse Edit" screen.

Marks the "Mid" checkbox on the same line.

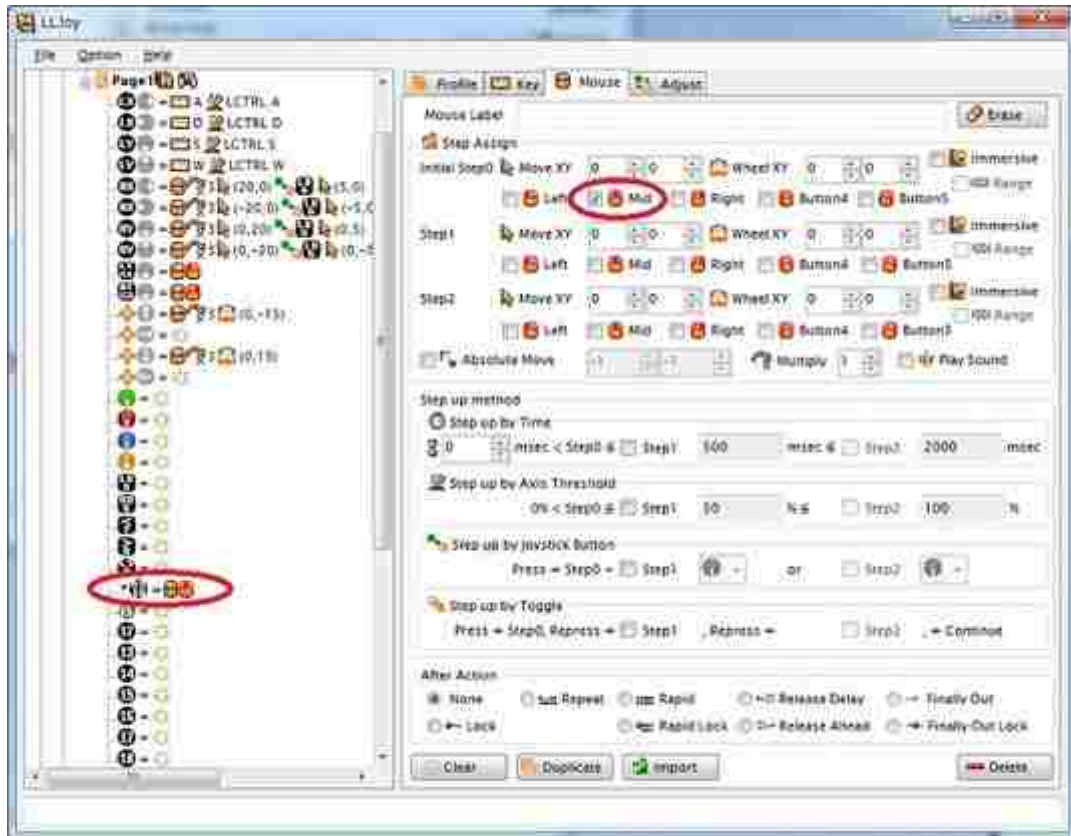


Figure 2-3-14 Marking the Mouse Middle Button

(7) Setting ZXCVC Keys

Assign Z Key to "A" Button.

Select the "Button1" from the tree after colored orange when pressed "A-button".

When emulation function is not assigned nothing, first open the "Key Edit" Screen.

Please click the text box by labeled "Initial Step0" on the screen.

Then from the keyboard, press "Z" key. Case does not matter.

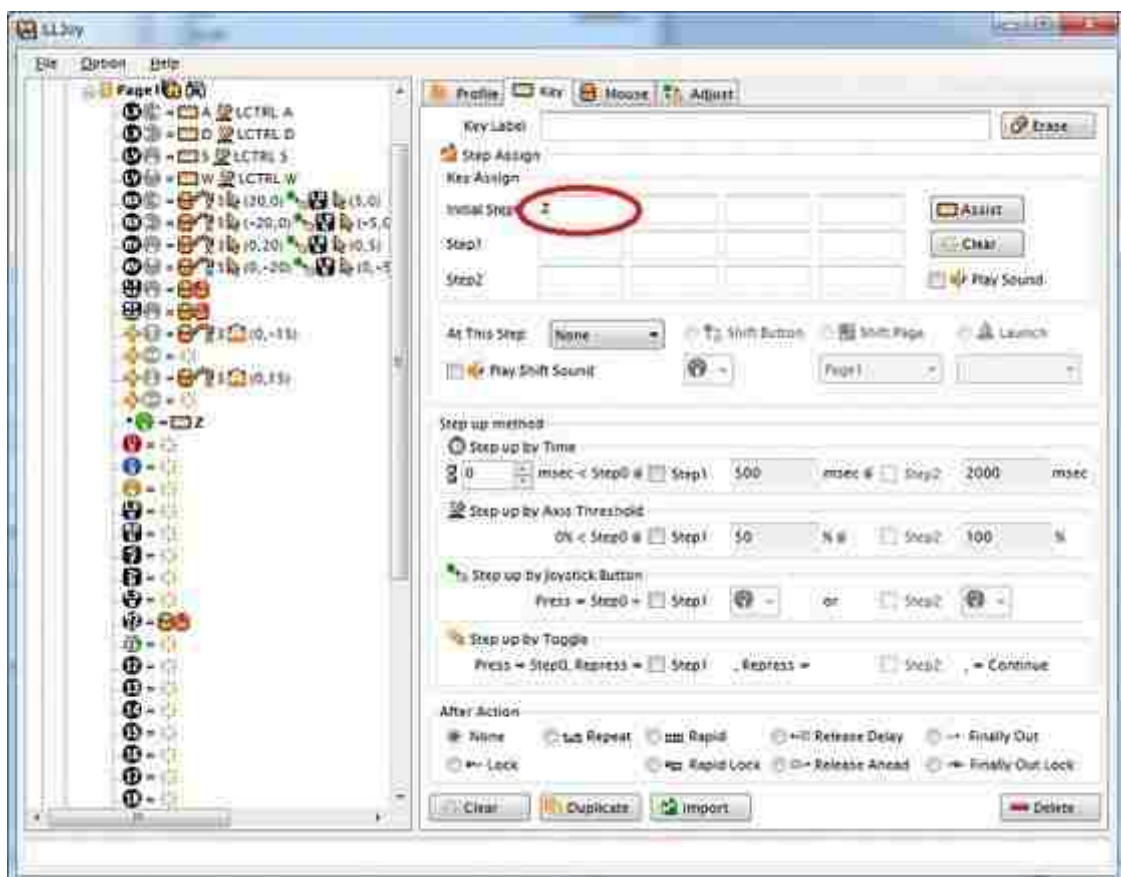


Figure 2-3-15 Setting Z Key.

Let's set the key as well, continuously. B Button(="Button2") -> "X" Key

X Button(="Button3") -> "C" Key

Y Button(="Button4") -> "V" Key

...

You will assign the other key if necessary.

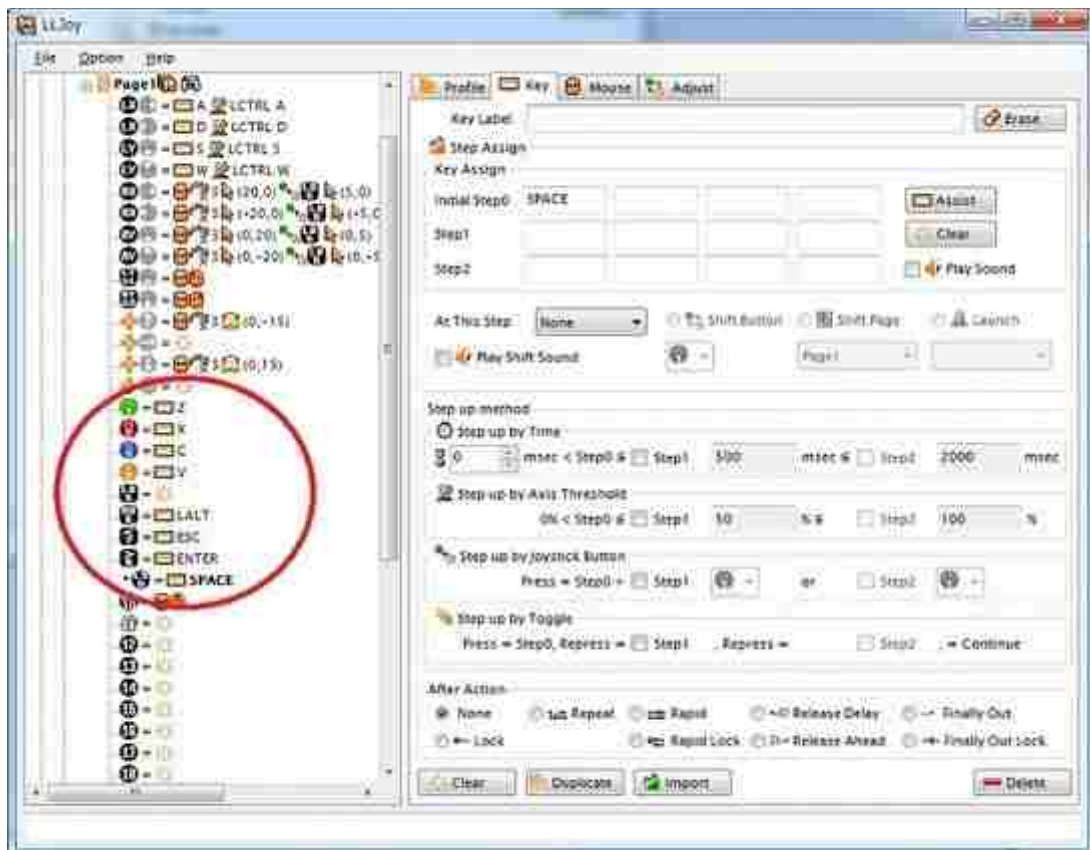


Figure 2-3-16 Setting Other Keys.

Usually a XInput joystick shown below.

Button5	LB Button
Button6	RB Button
Button7	BACK Button
Button8	START Button
Button9	Left Stick push(LS Button)
Button11	GUIDE Button

In the screen examples have shown below.

LB Button	No assigned
RB Button	"LALT"(Left ALT) Key
BACK Button	"ESC" Key
START Button	"ENTER" Key
LS Button	"SPACE" Key

Set is over. Thank you for your hard work.

Check in Notepad or games that work.

3. Functions

3.1 Profile / Page / Watching Process Edit

3.1.1 Switch Profile Tab

Please choose the “Profile” from tabs.

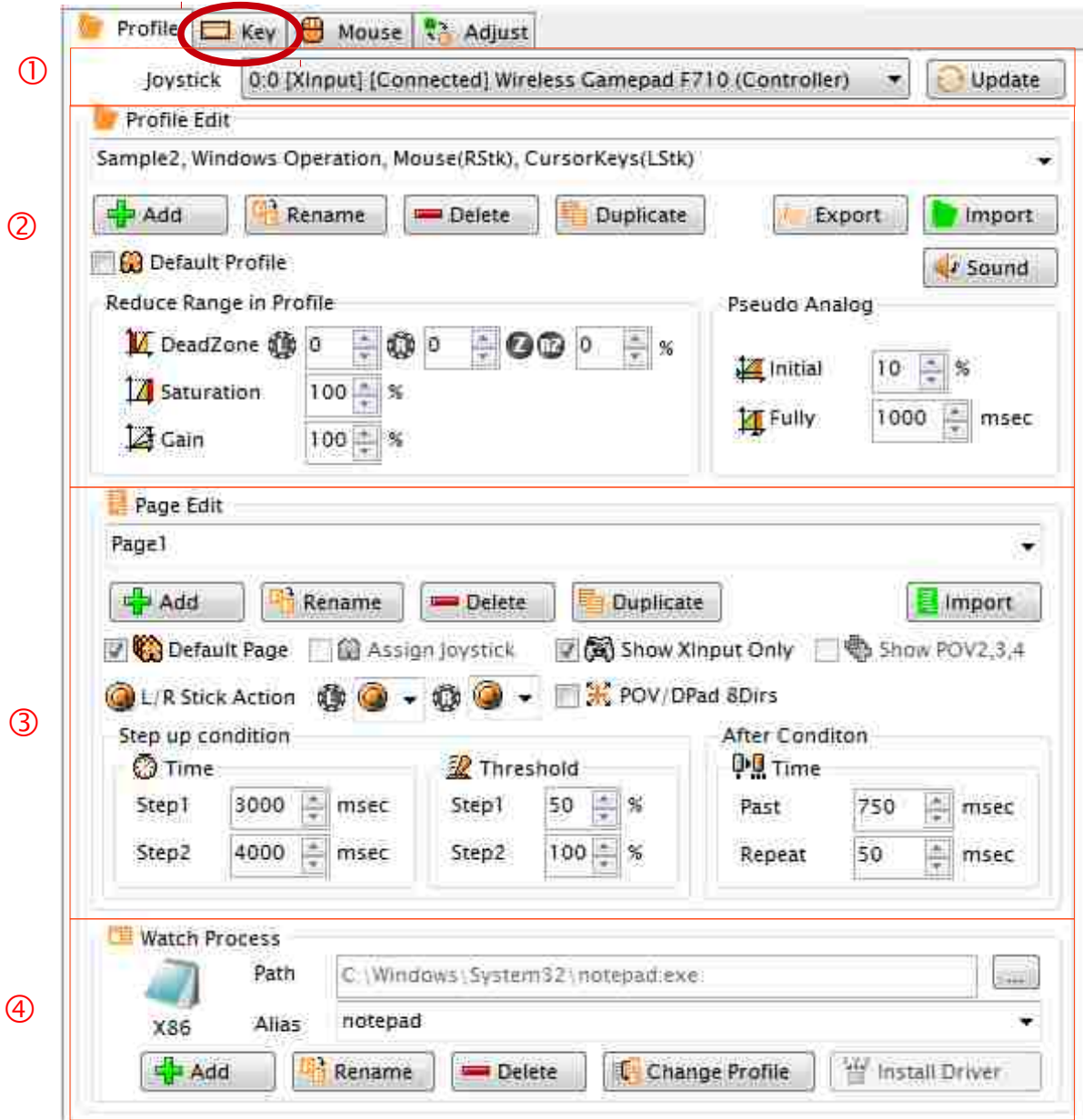


Figure 3-1-1 Profile Tab

A profile is the unit of each settings for applications.

It is divisible roughly 4 parts a figure of the previous page. The Profile Tab has 4 settings.

① Joystick choice

② Profile Edit

③ Page Edit

④ Process Edit

Next, explains these parts.

3.1.2 Profile Edit

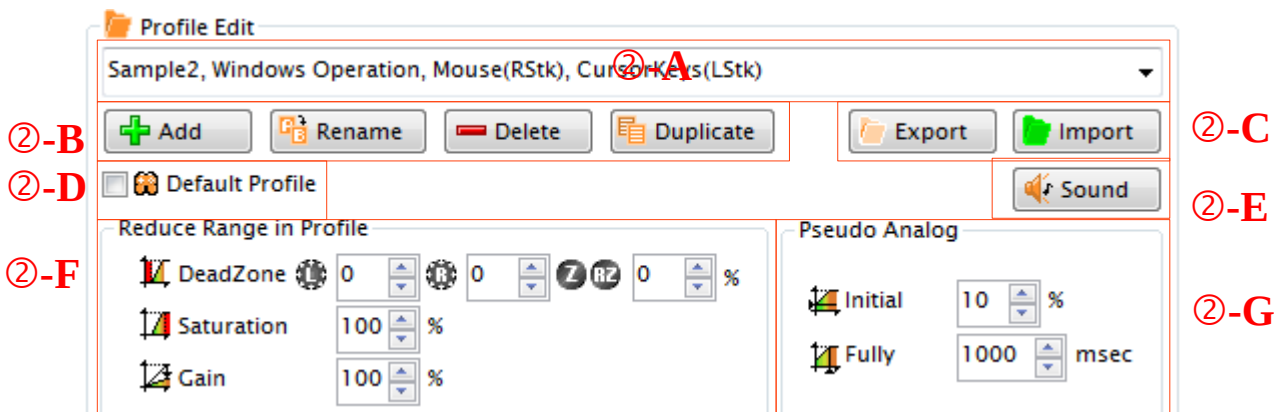


Figure 3-1-2 Profile Edit

There are 6 input parts for profile edit.

For all except both ②-A and ②-B uses when required.

For test, please input a name at ②-A, and click Add button in ②-B.

In the case, It is need to input a name at not displaying of Left Tree Information.

Could a profile be added?

The profile added here is also added to the icon screen automatically, and it can be chosen now.

An added profile is in the chosen state.

②-A can choose name input and a profile.

②-B buttons are for a profile, “Add” / “Rename” / “Delete” / “Duplicate” operation.

When you “Add” button pushed after you input a not overlap name, A profile can created newly.

②-C are importing profiles via files and exporting.

Also, this exporting functions is enabled after the license registration.

These functions mention later.

②-D can choose this profile is first which has started.

If you not choose profile, then software automatically choose a last profile on the screen.

When you checked this, a left tree indicates this icon.

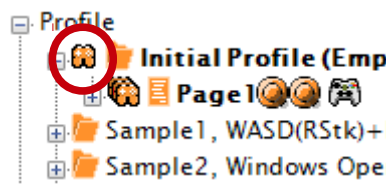


Figure 3-1-3 Default Profile Icon

②-E can establish the sound used by this profile.

When this button is pressed, the following dialog displayed.

You press "..." button, then a WAV or a MP3 sound file can be chosen.

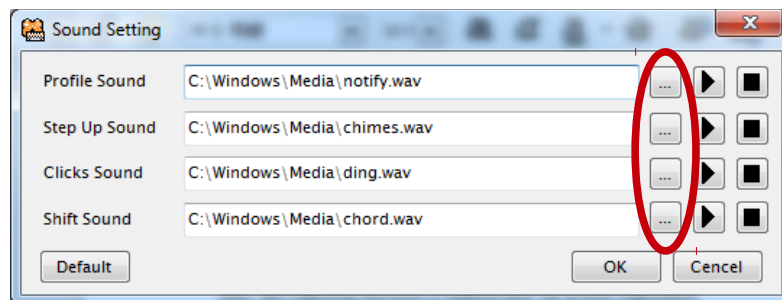


Figure 3-1-4 Sound Setting Dialog.

The sound which can be designated?

The sound used by Profile Change.

The sound used by Step Up

The sound used by Clicks

The sound used by Shift Function

4 kinds which are so. There is the explanation after section.

Right side buttons are playing to test the sound and stopping.

If you pushed “OK” button, commit to the profile.

And “Default” button is to back to initial sounds. “Cancel” button keeps previous sound setting.

②-F are means on this Profile running...

* The “Dead Zone” set 0% until lacking this percent

* The “Saturation” set 100% after over this percent

* The “Gain” use if you want to increase the input in the diagonal direction of the XY axis.

“DeadZone”s have separately each a pair of axis.

* Lstick (mainly XY on XInput) analog axis

* Rstick (mainly on Xinput, RX / RY on DirectInput) analog axis

* Z/RZ (mainly right stick on DirectInput with no assignment)

about The “Gain”

In LLJoy, stick to full tilt horizontally or vertically to get 100% of the input has been designed. And stick to full tilt diagonal to get approximately 71% of the input.

If you want to get margin, please set 120.

If you want to get 100% of diagonal, please set 150.

②-G are Pseudo analog settings.

* The “Initial” is first percent in pseudo analog.

* The “Fully” is milliseconds becoming full percentage.

The accumulation of digital joystick input in pseudo analog is this under graph.

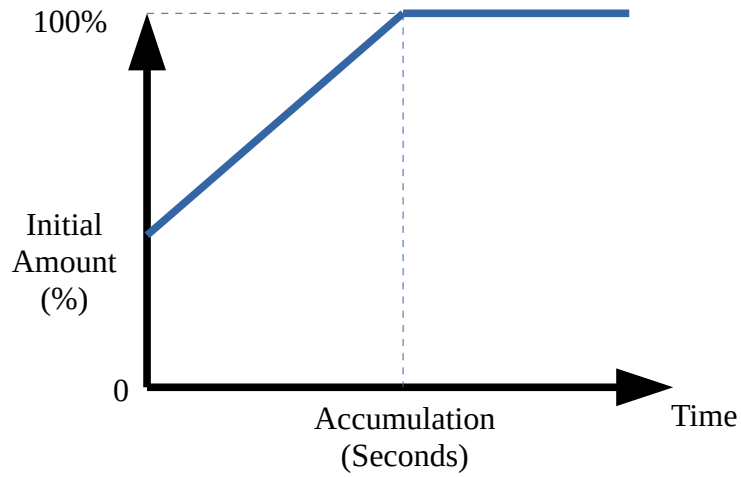


Figure 3-1-5 Initial Amount and Accumulation Graph

Import profile and Export

Press the "Import" button and displays following the dialog.

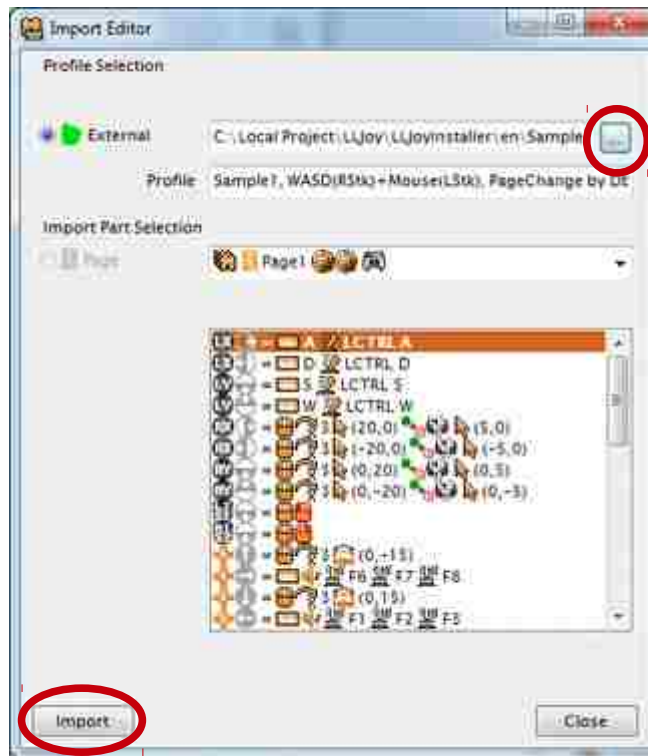


Figure 3-1-6 Profile Import Screen

After pressed the "..." button as the red circle on the screen, The standard file open dialog in Windows opens. From here, you select a exported profile (as LLJoy special file with *.prf extension). This operation will be import temporarily for display.

In this state, press the "Import" button in the dialog. Then import the profile including all pages and all emulation functions at once. Already if you have the same name of profile, a imported profile name will be renamed to original name + "(1)". If necessary, change the profile name.

After select a profile that you want to export, press the export button, and opens The standard file save dialog in Windows. Please input file name and save.

The export button will be enable after the license registration.

For Versions prior 0.9.0 user

In new installations, samples are registered in the initial profile. If the reference sample for overwrite install is user-created data, acquisition work profile and group is required.

If you don't require sample profile and group, so registration is not required.

The installation directory contains 4 profile sample files and a group file.

In a standard installation,

If the 32-bit OS

C:\Program Files\LLJoy

If the 64-bit OS

C:\Program Files (x 86)\LLJoy

Please copy "*.prf" files and a "*.grp" file to another location.

Samples works at XInput. if you want to use these sample by DirectInput, please assign similar XInput axes and buttons. Samples includes the following.

Sample1.prf :

WASD Keys + Left Stick Mouse, Page shifting when double clicked RB button.

Sample2.prf :

Windows Operations, Right Stick Mouse, Left Stick is cursor keys.

Sample3.prf :

Immersive Mode (Mouse movement with in window, unlock while pushing button5)

Sample4.prf :

for Quater View game, only diagonal movement, DPad mouse operation.

In addition, group registration sample from Version 0.9.0 includes. Group sample is explained at emulation functions sections.

3.1.3 Page Edit

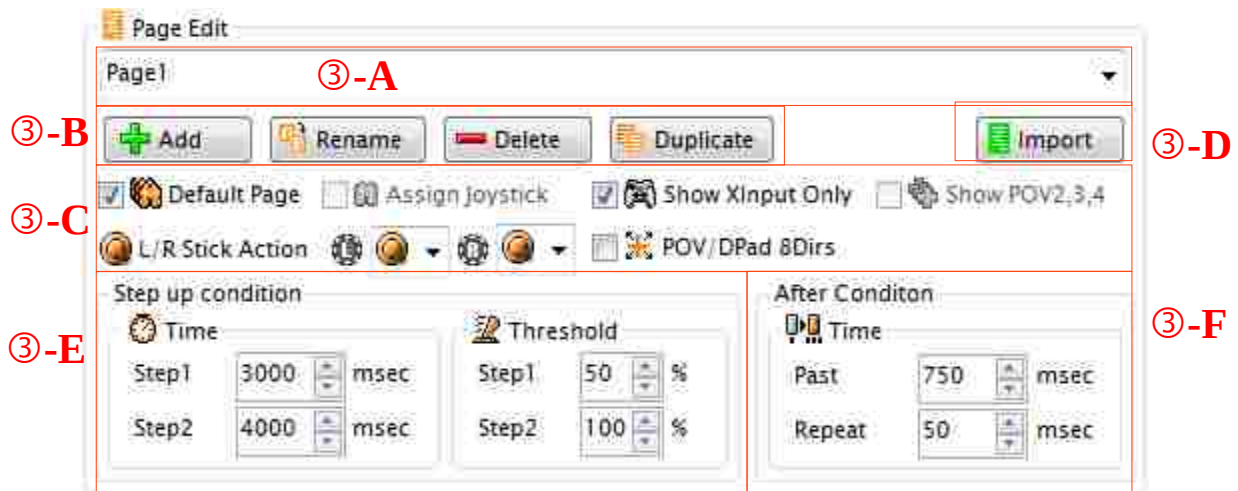


Figure 3-1-7 Page Edit

The page is meaning the unit of emulation functions in the profile. The emulation function is assigned the processing both buttons and sticks to emulate either a keyboard and a mouse.

When a profile is added, first page is added automatically. The name will be "Page 1" automatically.

③-A can do name input and page choice.

③-B buttons are for a page, "Add" / "Rename" / "Delete" / "Duplicate" operation.

At least 1 page is necessary to a profile. When the last page deleted, all emulation function do not start. So attention is needed.

③-C has 6 checks, you can assign the indicate choice of contents and a joystick in the page.

"Default Page"

It is the first page when started at this profile.

" Assign Joystick"

It will be the first page of the joystick shown to the Profile Edit screen upper part.

The joystick which has no joystick exclusive pages basically starts the joystick emulation function from the "Initial Page". The page which became joystick exclusive use starts only the choice joystick from here.

"Default Page" and "Assign Joystick", it is exclusion use.

"Show XInput only"

It shows items only of XInput Joystick and hides all items of DirectInput joystick. "Show POV2,3,4" is exclusion use.

"Show POV2,3,4"

It shows all POVs of DirectInput Joystick . "Show XInput only" is exclusion use.

"L/R Stick action"

Left stick and Right stick in different working range you can choose.

Choice on Left and Right sticks are as follows. A operation other than analog XY reacts only selected area.



Figure 3-1-8 The selection list of L/R Stick Action.

"POV / Dpad 8Dirs"

It processes each 8 directions by POV and D-Pad.

After chosen, it indicates same icon at the next of a page name in the right tree.

③-D is the button to open Import Editor for importing page at once.

Import Editor is explain later.

③-E, it is entry of the step up condition use for this page.

The time and The threshold inclination can be set and be common condition time and threshold in this page.

The time condition is used by step up condition of each emulate functions.

The threshold condition is used by step up condition of each emulate functions.

And this threshold condition is used by both analog joystick input and digital accumulation.

The step up condition is explanation later.

③-F, it sets common processing time performed after each emulate functions by this page.

After each emulate functions, repeat waiting time and rapid interval time are set by here.

This setting is used for the following.

- * Repeat After "Past" time, Repeat using "Repeat" time for the repeat interval
- * Rapid Rapid using "Repeat" time.
- * Ratio Pressing/Releasing ratio using "Repeat" time.
- * Release Ahead Release after the "Repeat" time even if you have been holding a button.
- * Release Delay Release after the "Past" Time.
- * Rapid Lock Rapid using "Repeat" time.

3.1.4 Watching Process Edit

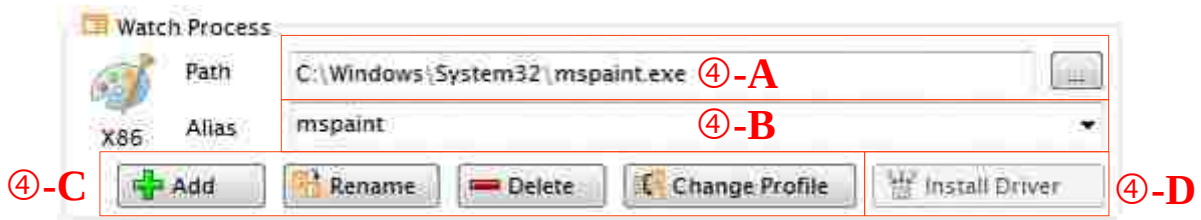


Figure 3-1-7 Watching Process Edit

A process is other Windows software application. When a foreground process switches, this function will choose a profile automatically.

When 4-A clicked "..." button of the side, an executable file choice dialog is displayed.

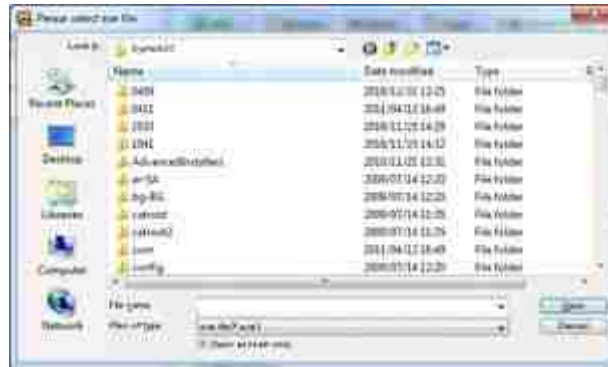


Figure 3-1-8 Executable File Choice Dialog

An icon displays that a file is chosen as follows, and the execution file name is picked out, and LLJoy enter a part of an alias name of 4-B.

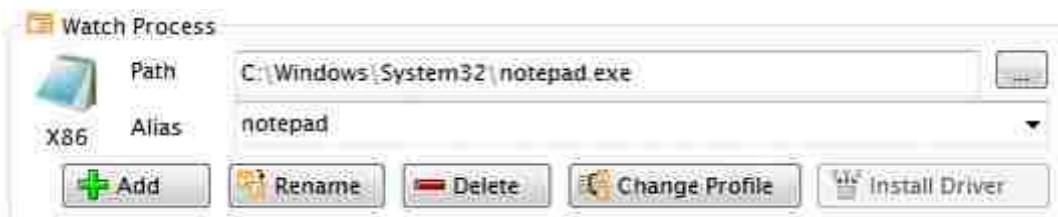


Figure 3-1-9 Icon and Process Alias Name

After Add button at 4-C is clicked in this state, the Profile will be chosen automatically by switching foreground process to a registered process.

The process can assign only profile. A profile can be shared by other processes.

④-B displays the file name of the registered process by a list.

A profile of other processes can also be edited by changing here.

④-C can change the alias of a registered process, the elimination and the profile chosen automatically.

④-D is, a registered process can do installation of a masking driver and uninstallation.

When judging whether it is installation already automatically and being already installed, I switch over to an uninstallation button.

Addition to "watch process" is necessary for driver.

The masking driver

The driver who makes LLJoy and bridging of application application corresponding to XInput. Generally the proxy driver are called. Only when application used XInput, it is effective.

if you want to confirm "whether or not your application supported Xinput", please see manual of your application.

To install this driver can do the following thing.

* It is blocked to emulate key and mouse in LLJoy to application.

This is prevent function for application reacting to both a keyboard and a joystick.

* DirectInput can be changed to Xinput.

LLJoy is to not classify and to treat DirectInput and Xinput. So it is possible to change to XInput from DirectInput.

* It is possible to change the joystick number of application recognized.

The joystick number is treated only by the logical number in LLJoy.

So It is possible to change an number by joystick edit screen in the following.

3.2 Key Emulate Function Edit

3.2.1 Switch Key Emulation Tab

Choose the “Key” from tabs.

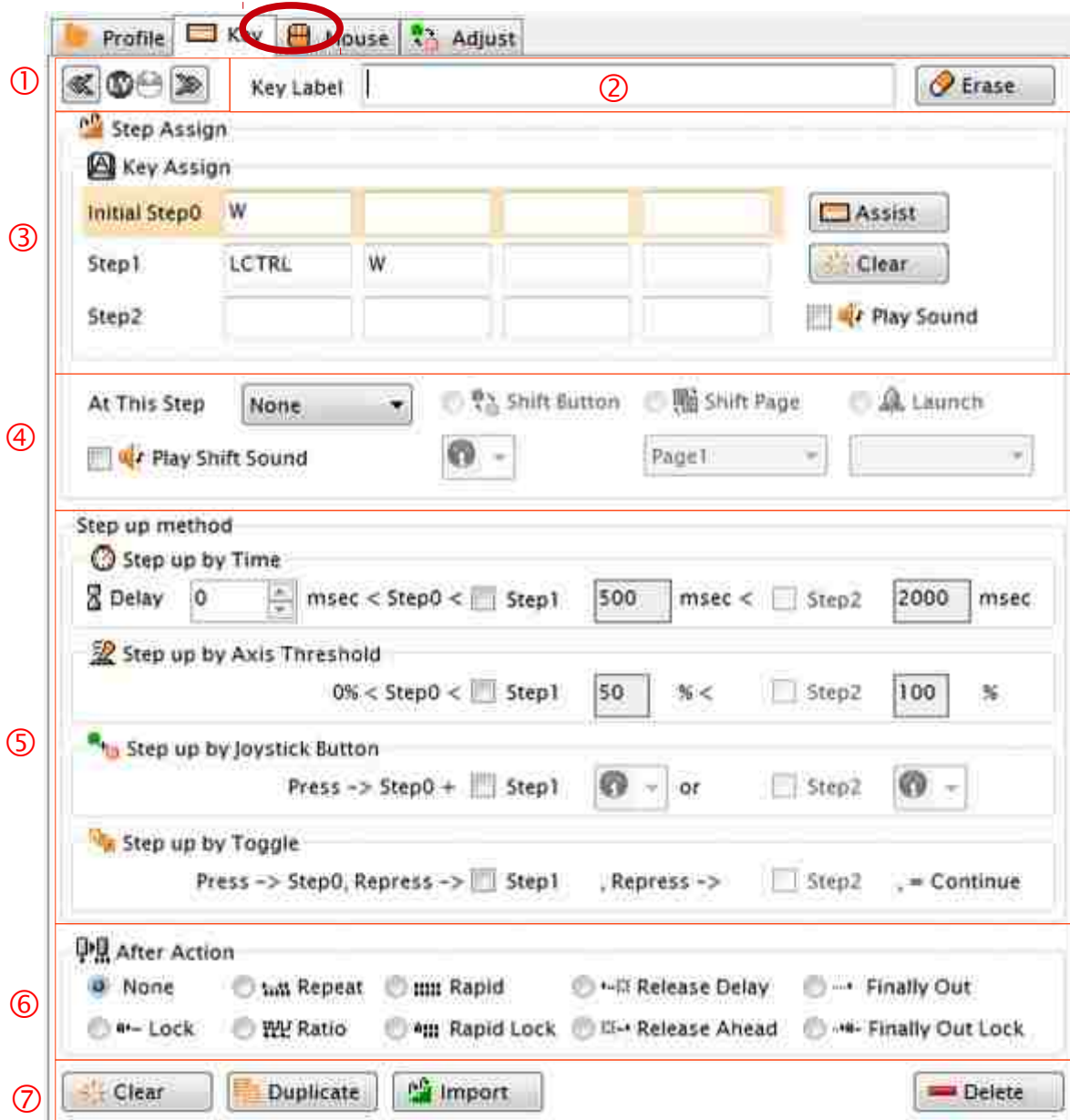


Figure 3-2-1 Key Emulate Function Edit

There are 7 input parts for Key Emulate Function edit.

- ① is currently selected function of a axis or a button.
- ② is this function label.
- ③ is a key input text box area.
- ④ is shift setting in step up.
- ⑤ is step up condition setting.
- ⑥ is repeat setting after action.
- ⑦ clear and duplicate, delete key emulation setting.

When a tab is chosen, the situation of the tree to the screen right changes as follows.

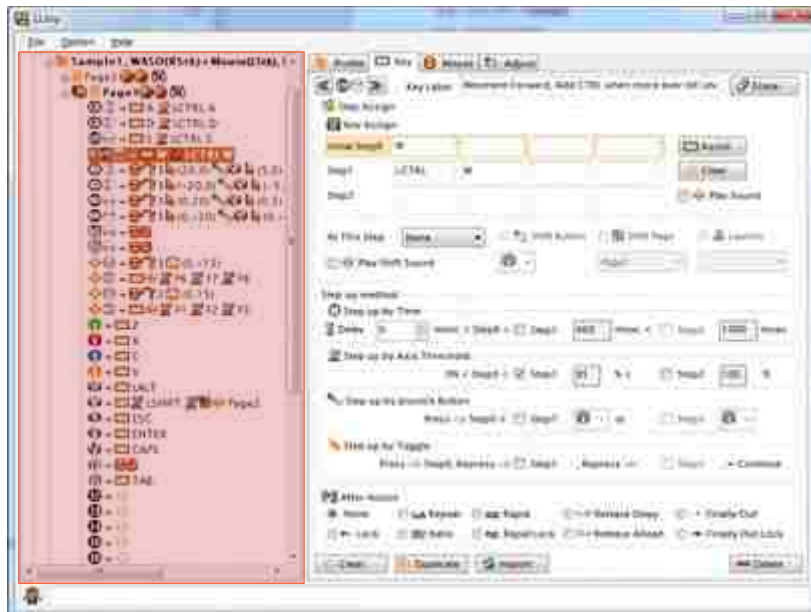


Figure 3-2-2 Choice of a target of the Emulate Function

A part of a page of a right tree is expanded, and the tree to which choice can be changed is expanded. When the item of this tree is clicked, a key input screen can be input. The clicked item is made the target of its emulate function.

3.2.2 Currently Selected Function



Figure 3-2-3 Currently Selected Function

This is the currently selected function. Does not decide kind of key or mouse until you set anything in this Edit Screen.

And it selects a previous function within a page after pushing left side button, and it selects a next function within a page after pushing right side button.

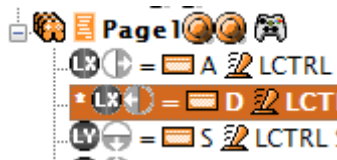


Figure 3-2-4 Selected Function in the left side tree.

In the left side tree, the selected function icon is "*" character added with the top of line.

3.2.3 Key Emulation Function Label



Figure 3-2-5 Key Emulation Function Label

In this box, you can name of this function. For example if you set to name to buton1.

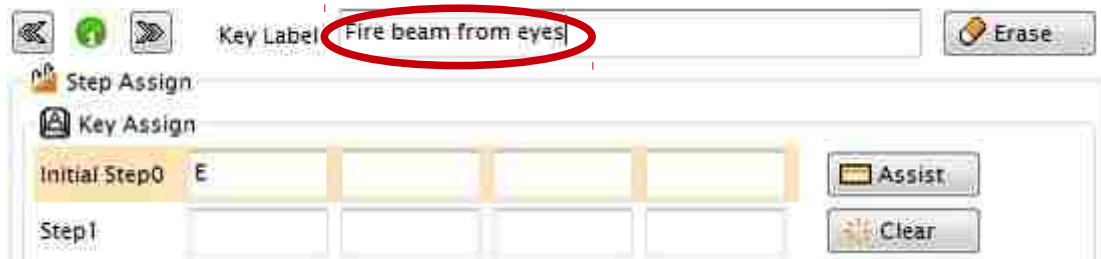


Figure 3-2-6 Label example

It is more clear to understand by a labeled emulation. And the labeled emulation is displayed as TreeView at follow figure.



Figure 3-2-7 Labeled Function.

3.2.4 Key Input at Key Emulate Function



Figure 3-2-8 Key Input

The key used by the key emulate function is established here. Please make it a condition of a blank column place to be not used. A blank column doesn't output a key and also accepts it.

Key output at each step is shown in orange under the mouse cursor.

③-A inputs the key used by an initial step 0.

③-B inputs the key used in step 1.

③-C inputs the key used in step 2.

③-D create another window and list of the special keys which cannot input out of the keyboard.
And a key can be input from there.

③-E can clear all input keys, if you failed in key inputs.

③-F can choose to play sound or not, when step up and down by this emulate function.

For outputting key at the same time, you can input 4 keys with each step.

When a box is clicked by a mouse, it will wait for inputting key with cursor blinking. And you input key at this situation, the key is displayed, a cursor shift to a box next to the same step.

When you push a button or tilt a stick of a joystick, the emulate function will start. Then you release a button or release a stick of a joystick, the emulate function will stop.

Actual key emulate movement

the actual key emulate movement was inputted by each step, a key will be pressed in order.

For example, assume they Button1 is clicked from a tree and it was input as follows.



Figure 3-2-9 Key input example

If the Button1 is pressed in this case, it presses "LSHIFT" key first. and next it presses "W" key in order.

If it became to step1 in this situation, it keep only pressing the "W" already pressed, and release "LSHIFT".

And also, if it reverted to step0, keep pressing the "W" already pressed, and press "LSHIFT".

Finally, the Button1 is released, it releases "W" first, and next it releases "LSHIFT" key in reverse order.

3.2.5 Setting Condition of “Step up”

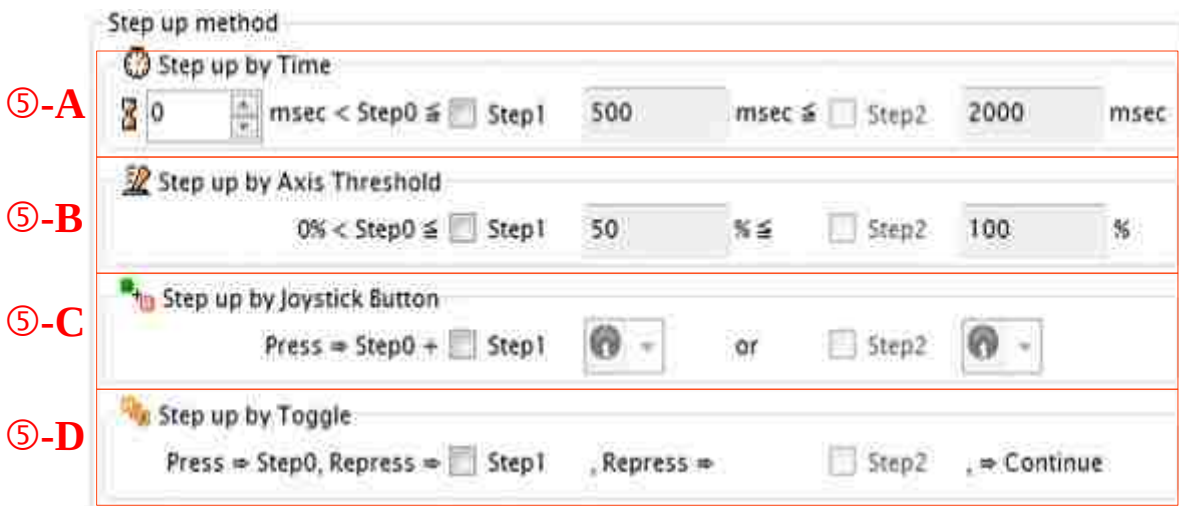


Figure 3-2-10 Conditions of Step up

here it chooses required "step up" conditions.

You can use everything of conditions. However, if you choose some conditions, a step is raised only when choose conditions are formed completely.

⑤-A is time condition setting

If you want to delay emulation, please input delay time at the box next to the hourglass.

When time has passed, the condition to raise a step can be formed.

When step1 is checked, it'll be step1 after the step1 time has passed.

When step2 is checked after step1 was checked., it'll be step2 after the step2 time has passed.

⑤-B is thresholds condition setting

When the analog level or the accumulation level reached the threshold, it can raise a step.

For example at the upper screen,

When step1 checked, it will be step1 after tilted stick half.

When step2 checked after the step1 was checked, it will be step2 after tilted stick fully.

⑤-C is combination button setting

For example at a follow screen.

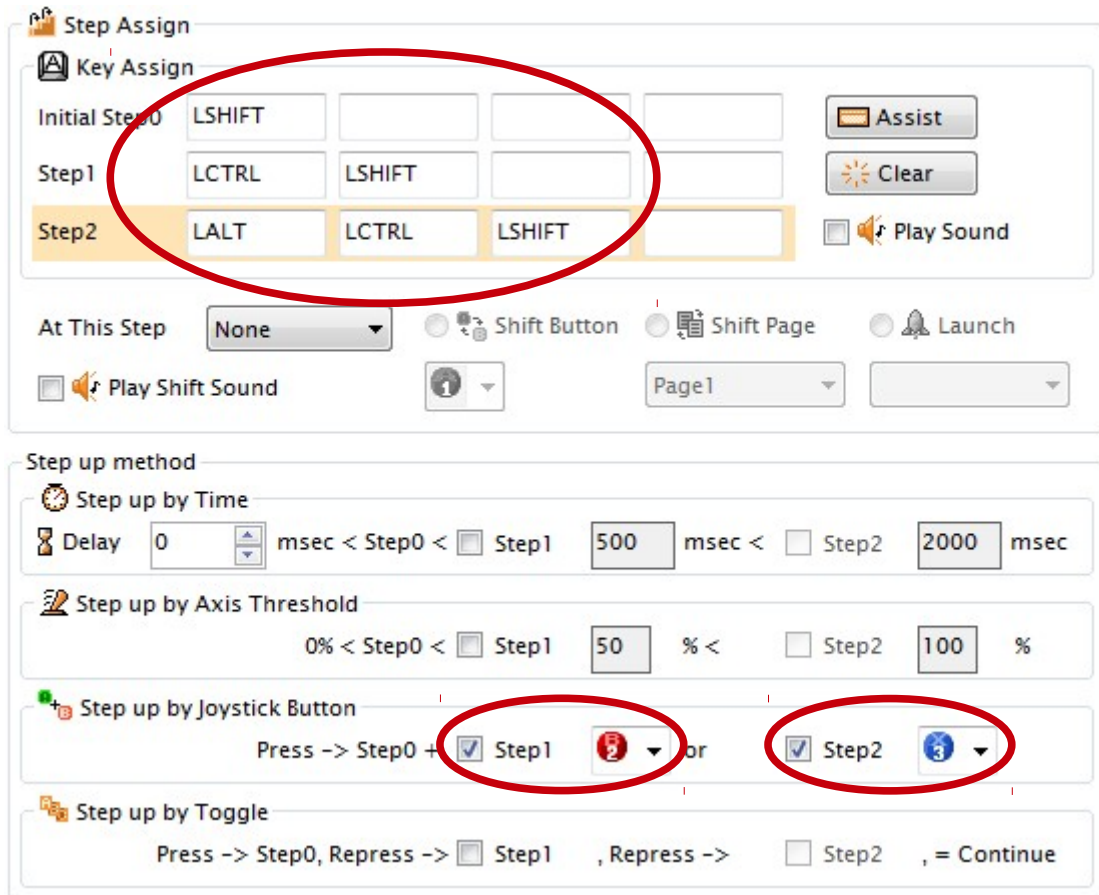


Figure 3-2-11 Button Combination example

First pressing button1, it will be step0 and press "LSHIFT" key.

If you just pressed button2, it will be step1 and additional press "LCTRL".

If you just pressed button3, it will be step2 and additional press "LCTRL" + "LALT".

The priority are upper step and previous buttons.

So also, whether button2 already set another condition, when Button1 was pressed before Button2 was pressed, Button1 emulate function will act first and Button2 emulate function will not act.

⑤-D is toggle condition settings.

When you check step1, then the step1 toggle will be active.

And when you check step2, then the step2 toggle will be active, too.

While you push a button or you tilt axis stick of the joystick, the key emulate function keeps step. after you released a button or stick, this function is waiting for next pressing or tilting, time is unrelated.

after released, you push a same button or you tilt same axis stick, then raise step checked. if it was a last step, restarting from initial step at next time.

Example.

at the Button1, Initial Step has “1” key, Step1 has “2” key, and Step2 has “3” key,

And they was checked Step1 and Step2 of toggle.

This situation, when you pushed the Button1 everytime.

It changes key emulation as under follow.

”1” key ⇒ ”2” key ⇒ ”3” key ⇒ ”1” key ...

Explanations after section,

When copying of the key emulate function is used, the number of toggle can be increased endlessly.

The special condition setting by clicks

When you set time condition and toggle condition at the same time, the toggle part changes as follows.

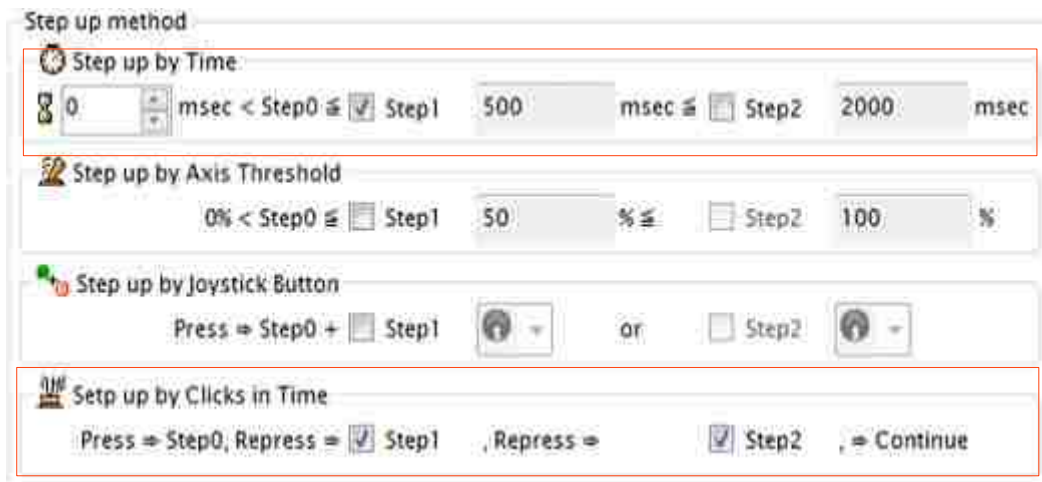


Figure 3-2-12 Clicks condition setting

When the next is pushed in designation time, Steps are raised by the number of pushing in time. So-called double-click and triple click.

example of a screen above-mentioned, it will be step0 when keeping or releasing a button after pressing after 500msec. it will be step1 when keeping or releasing a button after pressing 2 times in each 500msec. it will be step2 after pressing 3 times.

if it was a last step in time, restarting from initial step at next click.

If you checked "Play Sound", it plays a sound every clicks.

Example, previous page screen.

Button1 push ⇒ after past 500msec

⇒ Initial Step

Button1 push ⇒ release and push in 500msec

⇒ after past 500msec

⇒ Step1

Button1 push ⇒ release and push in 500msec

more release and push in next 500msec

⇒ after past 500msec

⇒ Step2

Explanations after section,

When copying of the key emulate function is used, the number of clicks can be increased endlessly.

3.2.6 Repeat setting after Action



Figure 3-2-13 Repeat setting after action

The setting which changes a repeat setting after action is performed here.

While pushing key or tilting stick with the key emulate function in the state, you can choose to add key repeat or to add rapid pushing.

Pressed keys by the joystick button or axis can be changed for the following.

- * None The buttons and axis intact.
- * Repeat The key and mouse are pressed by using the "Repeat" interval time after the "Past" time and released
- * Rapid The key and mouse are pressed by using the "Repeat" interval time and released
- *Release Delay The key and mouse will be released after the "Past" time from the released joystick button and axis.
- * Finally Out The key and mouse finally output the current step data when released the joystick button and axis.
- * Lock Keeps the last key and mouse at the released time. When next push and tilt, releases it.
- * Ratio The ratio between pressing and releasing is depended on analog level.
- * Rapid Lock Keeps the last rapid key and mouse. When next push and tilt, releases it.
- * Release Ahead Releases keys and mouse before releasing the button or axis.
- * Finally Out Lock Keeps the finally output key and mouse. When next push and tilt, releases it.

Recommend both the "Release Delay" and "Finally out" are the duplicated function.

(Example) "Release Delay"

Button1 advance duplicate. Specify ALT key on the upper Button1 in the tree and select "Release Delay". And specify TAB key on the next Button1 in the tree.

These settings accomplishes the task switching in Windows by both holding ALT key and pressed TAB keys.

"Release Delay" is counted the time by from the last releases.

(Example) "Finally Out"

Button1 advance duplicate. Specify "A" key on the upper Button1 in the tree. And specify "B" key on the next Button1 and select "Finally Out". Output "A" key when Button1 is pushed. Then output "B" key when Button1 is released.

(Example) "Ratio"

X right to suppose you set "A" key. And the cycle is repeating every 100msec.

When tilted to 10%, repeat these pressing "A" key 10msec and releasing 90msec.

When tilted to 50%, repeat these pressing "A" key 50msec and releasing 50msec.

When tilted to 100%, keep pressing "A" key.

In the application depend on the pressing time, it is similar to the analog output by key.

(Example) "Release Ahead"

The duplicate button 1 advance.

Sets the "A" key at the first button1.

Sets the "B" key and Selects "Release Ahead" at the next button1.

When pressed the button1, output both "A" key and "B" key.

If you are holding the button1, releases "B" key after elapsed the repeat time.

3.2.7 Shift function setting

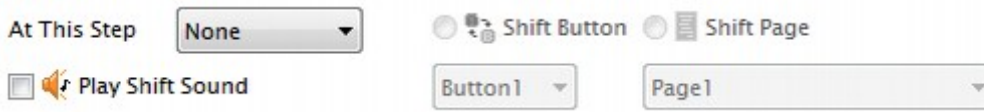


Figure 3-2-14 Shift function setting

This is the function which changes the key conversion function by each step for the other functions, not key output. When "At Step" is chosen, the following choices are indicated.

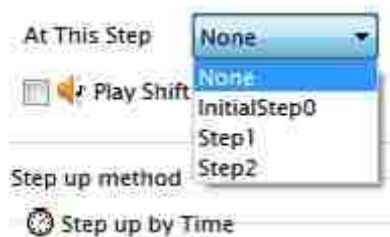


Figure 3-2-15 Shift Step Selection

After a step is chosen, key inputs of a step is masked as shown in the following figure, and the shift button and the shift page can be chosen.

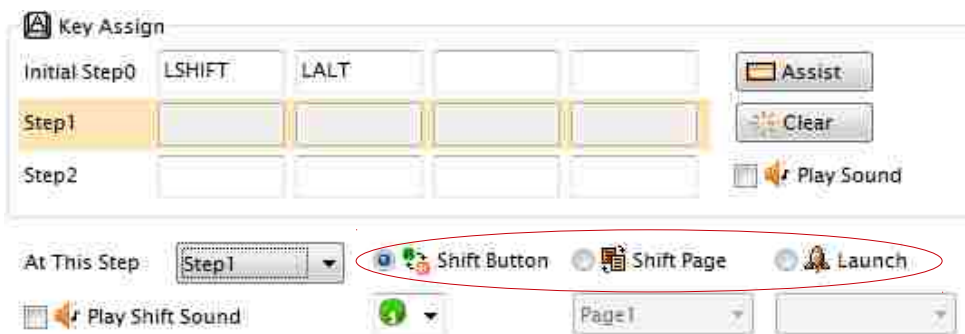


Figure 3-2-16 Shift Function Selection

Choosing the Shift Button at this time, and choosing Button 1 to 24, an optional button can be pushed. When choosing the shift page, it's possible to change for the change function of the different page temporarily.

If you choose condition, the shift occurs by ...

- * by the time past when choosing time condition.
- * by the Level when choosing threshold tilting or accumulation.
- * by the button when choosing combination button.
- * by the toggle when choosing toggle input.

It is necessary to keep pushing last push while shifting

- * by the clicks when choosing clicks input.

It is necessary to keep pushing last push while shifting

Also, if you checked "Play Shift Sound", it plays sound on each shift as selected it in profile setting.

3.2.8 Clear and Duplicate, Import and Delete the function.

You able to clear/duplicate/delete the “key emulate function” in here.



Figure 3-2-17 Clear / Duplicate / Import and Delete Buttons

“Clear” button

Everything is released Of the key emulate function. Only the key emulate function is cleared. After clearing, it will allow the mouse emulate function.

“Duplicate” button

The key emulate function is duplicated. Only the key emulate function can be duplicated.

It's possible to make some key emulate function by the same button and axis.

“Import” button

Imports the key emulation function from other profiles or pages, groups.

This function, see 3.2.7

“Delete” button

The copied key emulate function is deleted.

When it's the last key emulate function, the same action as a clear button is done.

About duplicated key emulate functions.

- Keyboard and mouse combination

In case you want to use to combine both keyboard and mouse, you use to duplicate.

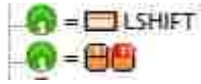


Figure 3-2-18 Keyboard and Mouse Combination

If you have assigned as shown in the figure above, it outputs both "LSHIFT" key and left clicking on mouse.

- Special duplicating the step up by toggles input and the step up by clicks

The total number is calculated by the whole in the button of the joystick and axis.

Example.

Beforehand, the key conversion function of the empty is copied and the following key conversion setting is done.



Figure 3-2-19 Copied toggles and clicks

That it's done this way...

Button1 is toggle inputs to emulate each 1 to 9 key.

And more than 9 times, it returns to 1.

Button2 is click inputs to emulate each A to I in time.

And more than 9 times, it returns to A.

* It's classified every button axis, so be mixed, and do not place a toggle and a click on a button axis of the same joystick.

3.2.9 Import Editor

This section explain the Import Editor.

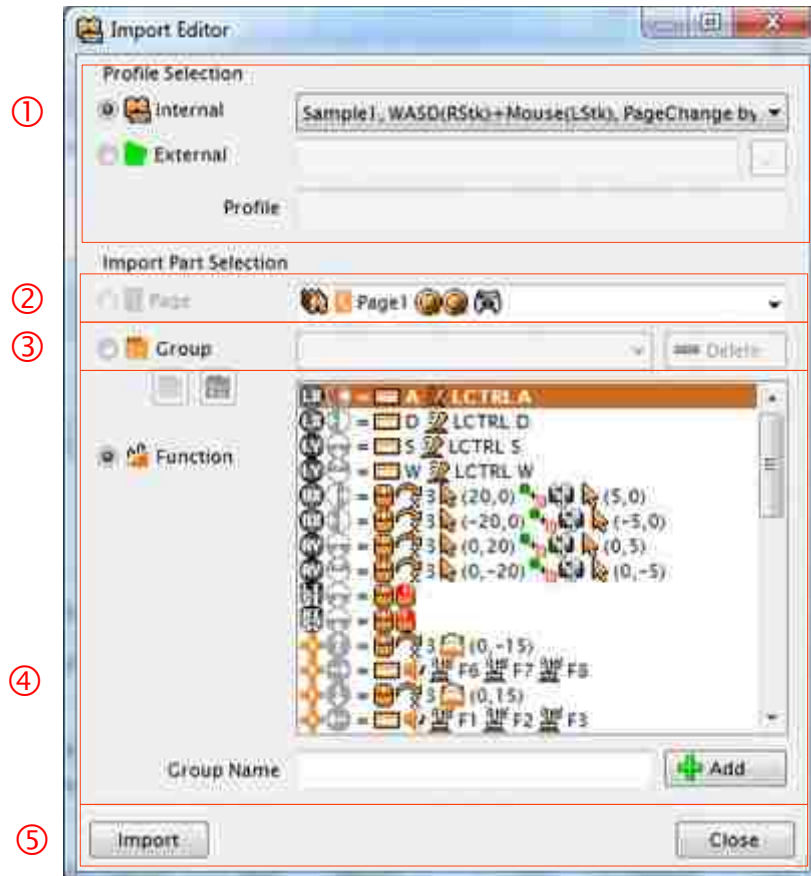


Figure 3-2-20 Import Editor

There are 5 parts for the Import Editor.

- ① Profile selection
- ② Page selection
- ③ Group selection
- ④ Emulation Function selection
- ⑤ Import button and Close button

① Profile selection

You can select these...

- * Internal profile: as already registered in the LLJoy
- * External profile: provided in the exported file.

If you select Internal profile from DropDownList, displays page and emulation functions within the profile.

If you select External profile, press the "..." button next. This button open a standard Windows file selection dialog. After selection a file of a exported profile, and displays both pages and emulation functions.

If you selected Internal profile and External, Group selection is not available.

② Page selection

Displays a page at DropDownList in Internal profile or external.

If you re-select a page, emulation functions re-displays too.

Group selection is not available.

③ Group selection

If you select the Group, it will display already registered functions as Group in LLJoy.

And both Profile selection and Page selection are not available.

You re-select a group, emulation functions re-displays too.

Also, a group can Export to a file, and Import from a file.

Enabled these buttons after Group selection.



Figure 3-2-21 Export Group and Import

Import is for green button, and Export is for orange button. Both buttons open a Windows standard file selection dialog.

Also, this exporting button is enabled after the license registration.

Multiple selection is possible from list of emulation functions in a group.

* Choices individual by holding down CTRL key and left-clicking on mouse.

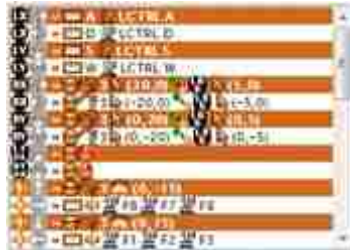


Figure 3-2-22 Choice Individual

* Choices area by holding down SHIFT key and left-clicking on mouse.



Figure 3-2-23 Choice Area

To delete a currently selected group by clicking "Delete" button.

While selecting functions. you enter new group name and you can register new group after pressing "Add" button.

④ Function selection

If you select "Function", it will display already registered functions in a page.

Group selection is not available.

Multiple selection is possible from list of emulation functions in a group.

* Choices individual by holding down CTRL key and left-clicking on mouse.

* Choices area by holding down SHIFT key and left-clicking on mouse.

While selecting functions. you enter new group name and you can register new group after pressing "Add" button.

⑤ Import button and Close button

Press "Import" button after selecting emulation functions from profile and pages. And show dialog and wait your confirmation.

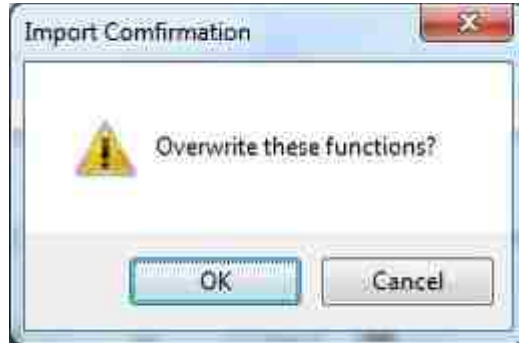


Figure 3-2-24 Confirmation dialog

If you press "OK", import functions currently page and back to Import Editor.

If you press "Cancel", and do nothing and back to Import Editor.

Closes Import Editor after you press "Close" button.

3.3 Mouse Emulate Function Edit

3.3.1 Switch Mouse Emulation Tab

Choose the “Mouse” from tabs.

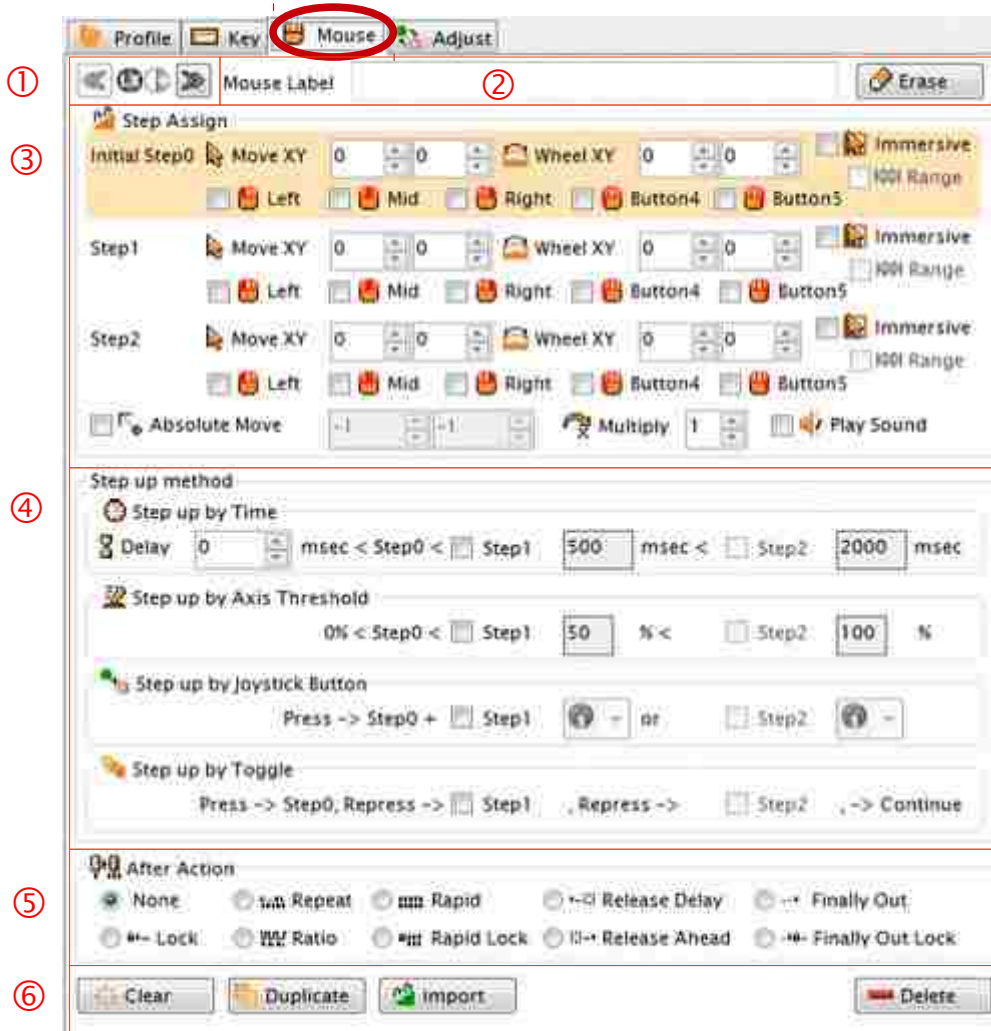


Figure 3-3-1 Mouse Emulate Function Edit

There are 5 input parts for Mouse Emulate Function edit.

- ① is currently selected function of a axis or a button.
- ② is this function label.
- ③ is the amount of mouse movements, and the mouse button.
- ④ is step up condition setting.
- ⑤ is repeat setting after action.
- ⑥ clears and copies, import and delete mouse emulation setting.

When the location of “None” where nothing is established first is chosen, Because key emulate function setting is indicated.



Figure 3-3-2 Before mouse setting

Click a Mouse Tab once again.



Figure 3-3-3 Selected mouse setting

After doing some setting at the mouse emulate function, it is indicated the mouse tab automatically.



Figure 3-3-4 After mouse setting

3.2.2 Currently Selected Function

Please see 3.2.2 Currently Selected Function. This is same feature.

3.3.3 Mouse Emulation Function Label

Please see 3.2.3 Key Emulation Label. This is same feature.

3.3.4 Editing the amount of movements and buttons of mouse

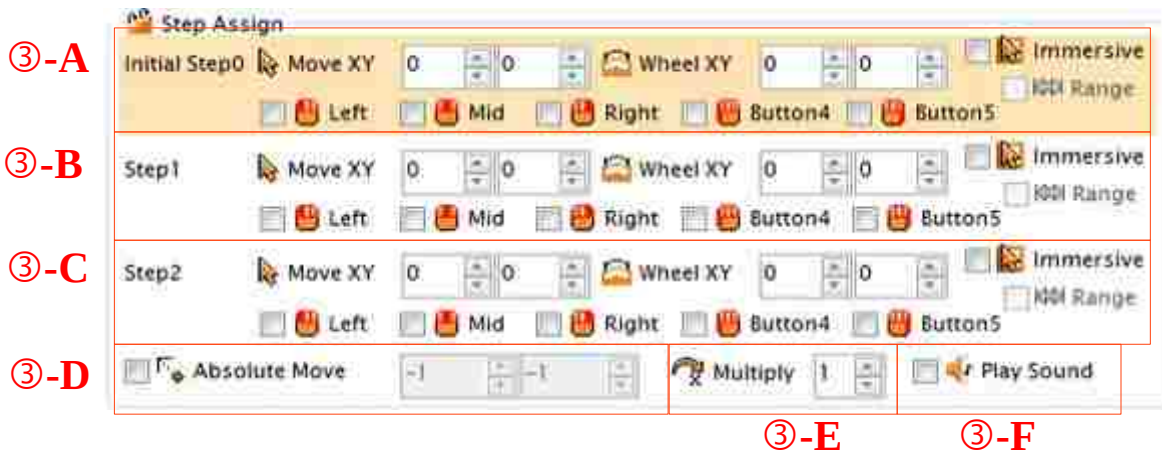


Figure 3-3-5 the amount of movements and buttons of mouse

Here is by setting of the amount of movements and buttons of mouse.

③-A are conditions of the amount of both movements and wheels of mouse, buttons of mouse by an initial step.

The Immersive mode is the mode to move a mouse only in the foreground window.

The Range option can be chosen by choosing the Immersive mode. this option is the moving of cursor from end to end in the window by tilted stick level.

③-B for are conditions by an step 1

③-C are conditions by an step 2.

③-D is absolute movement of all steps(the location in the screen).

③-E is the magnification through all steps. it is not simple magnification, it is quadratic coefficient calculation.

③-F can choose to play sound or not, when step up and down by this emulate function.

All amount of mouse movements, amount of wheel and button of the mouse are output at the same time. When there are amount of mouse movement, amount of wheel at other sticks and buttons, the output is totaled result.

Example.

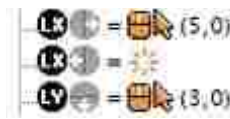


Figure 3-3-6 Mixed mouse movements

If it was the above example, when the X of a joystick and the Y axis were 100%, mouse X amount of movements 8 is output.

Button4 or Button5 of the mouse is same as XBUTTON1 or XBUTTON2 respectively.

The absolute action is moved the mouse of cursor to there of the screen first. next, it emulate both to move mouse and to push button.

In order to do a small movement of a mouse, when axis tilt is great, big movement. When axis tilt is small, small movement. The relation between the magnification and output is shown by the following chart.

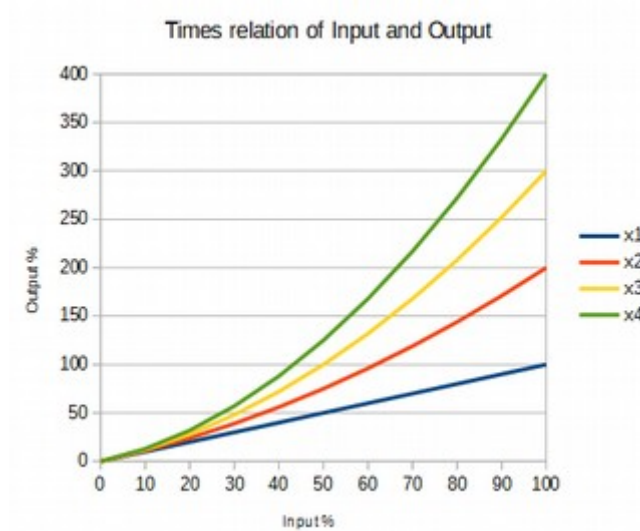


Figure 3-3-7 Relation of Input and Output

A wheel output is of how many times to change a wheel notch during a second at X and Y. If it was 1, it becomes once during a second.

Recommended mouse movement will be operated by a digital axis and a button, about 15 counts. When operating by an analog axis, x2 is smoother movement than x1 at the magnification setting.

3.3.5 Setting Condition of “Step up”

See '3.2.5 Setting Condition of "Step Up"'. The function is identical.

3.3.6 Repeat setting after Action

See '3.2.6 Repeat setting after Action'. The function is identical.

The function is identical, but it is for only a mouse button.

3.3.7 Clear and Duplicate, Import and Delete the function

See '3.2.8 Clear and Duplicate, Delete the function'.

The function is identical, but it is for only the mouse emulate function.

After clearing or deleting, it will allow the key emulate function.

About import, please see 3.2.9 Import Editor.

3.4 Joystick Adjustment

3.4.1 Switch Joystick Adjustment Tab

Choose the “Adjust” from tabs.

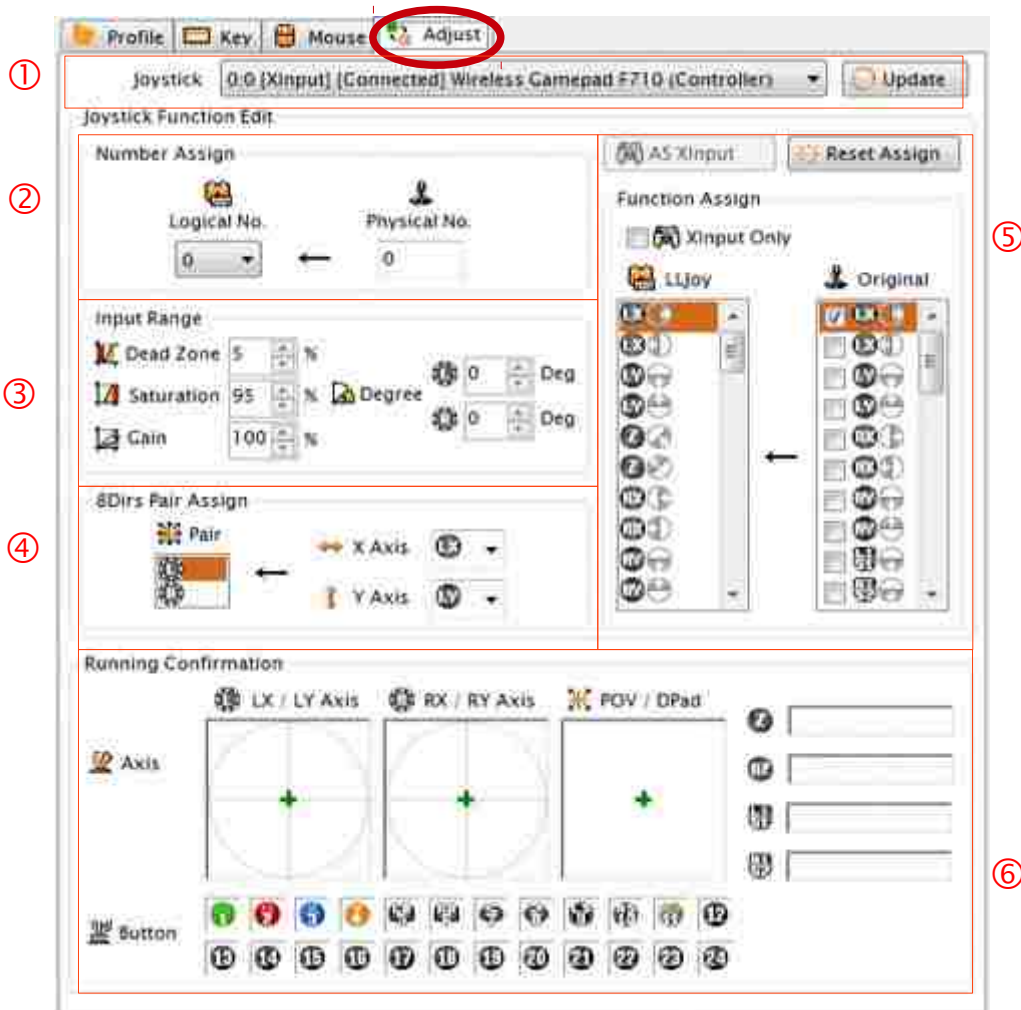


Figure 3-4-1 Joystick Adjustment Screen

There are 6 adjustment parts for this screen.

- ① are a select list and a refresh button of a joystick.
- ② is logical number assignment of a joystick.
- ③ is an adjustment of physical range of a joystick.
- ④ is axis assignment of either XY pair or ROT pair.
- ⑤ is assignment from physical inputs to logical inputs.
- ⑥ is confirmation of the operation state of the joystick.

Setting here will be common setting by all profiles.

3.4.2 Joystick selection and Refinding Joysticks

A joystick is selectable by "(1)-A" click as follows.

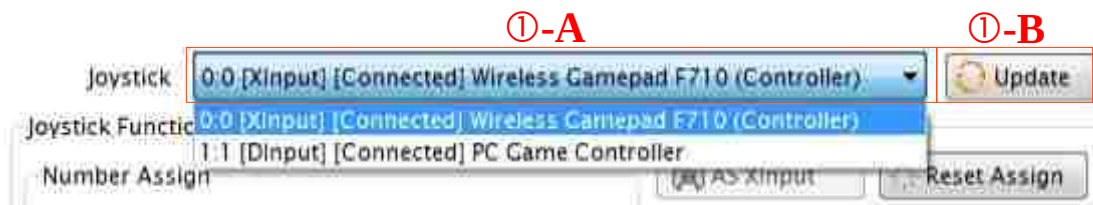


Figure 3-4-2 Joystick Selection

①-A indicates the contents of a joystick.

The left number by ":" is detected physical joysticks. The right number by ":" is the logical number. Next is the Joystick name.

And next is either Xinput (XInput Device) or Dinput (DirectInput Device). A right text separated by "/" is either connected or disconnect state. "Disconnect" will indicate that it was used before. And the physical joystick will indicate "-".

By an example above-mentioned

0:0	logical number 0 and physical number 0.
[Xinput] [Connected]	Already connected and Xinput Device.
Wireless GamePad F710	The joystick name.

(From version 1.0.1, become reversed the logical number representation and the physical number, please note)

①-B detects a joystick once again.

a wireless joystick cannot be detected after the power was turned off without operation. It is possible to detect by pressing this button after the power turned it on again.

3.4.3 Assignment Logical Number of a Joystick

LLJoy deals with the joystick by the logical number.



Figure 3-4-3 Assignment Logical Number

After joystick was assigned the logic number, it's possible to assign a joystick to page.

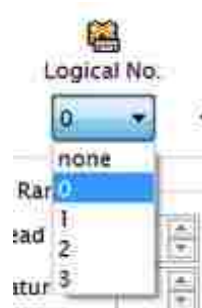


Figure 3-4-4 Logical Number Selection

3.4.4 Adjustment of Physical Range

A physical range of each joystick is narrowed here.

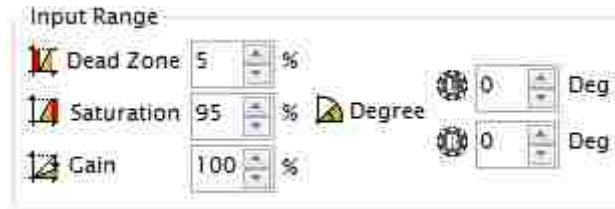


Figure 3-4-5 Physical Range Setting

If the axis level did not become 0 when it is the center of axis. this percentage is raised by the dead zone, it is possible to drop it on 0.

If it was the joystick which cannot acquire the maximum level in the tilted state, the maximum level can be detected by it will lower percentage of saturation.

In LLJoy, the range of the 0%-100% is recalculated in the narrowed territory.

Therefore when setting the dead zone to 5% by this setting, the location of the 5% is handled as 0% logically. Equally, when setting the saturation to 95% by this setting, the location of the 95% is handled as 100% logically.

The profile will use these logical range.

And you can adjust at the gain if you want to 100% when diagonal tilted. Unlike the gain in the Profile Edit Screen, this setting affect to all profile.

In some joysticks, has a mistaken angle. Or if you want to need a slightly offset. In this case, adjust the angle either the left stick angle or the right stick angle.

It is easier to adjust of each item while moving the stick.

3.4.5 Assignment of Pairs

This is selection for either XY pair or ROT pair assignment at 8 direction.

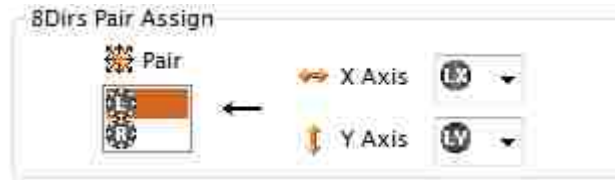


Figure 3-4-6 XY Pair or ROT Pair Assignment

When you do not want to change an logical axis, it is possible to choose the combination axis used at 8 direction at the special using.

A way of exchange logical axis is explain later.

3.4.6 Assignment of Logical Inputs from Physical Inputs

It is possible to assign both the logical axis and the logical buttons from both the physical axis and the physical button.



Figure 3-4-7 Logical Inputs from Physical Inputs

A left side list is logical inputs, and a right side list is physical inputs. LLJoy processes all by logical inputs.

It is possible to assign a joystick DirectInput to XInput equivalence directly.

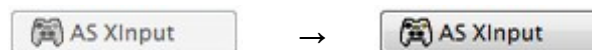


Figure 3-4-8 Button changes at DirectInput

A button changes as above at DirectInput. When this button is pressed, it assigns axis both RX and RY, and both TriggerL and TriggerR buttons.

Example: If you want to treat RX axis with Z axis.

First, RX+ is chosen from the left side list. Next, you check Z+ from the right side list.

And RX- is chosen from the left side list equally. Next, you check Z- from the right side list.

Finally you move Z axis, and you can confirm RX axis moved in LLJoy.

You can assign both only the negative direction and only the positive direction. And it's possible either to generate a button from axis data or to generate axis data from a button. Therefore, You can use the accumulation function and handle digital input like analog input.

3.4.7 Confirmation of Joysticks.

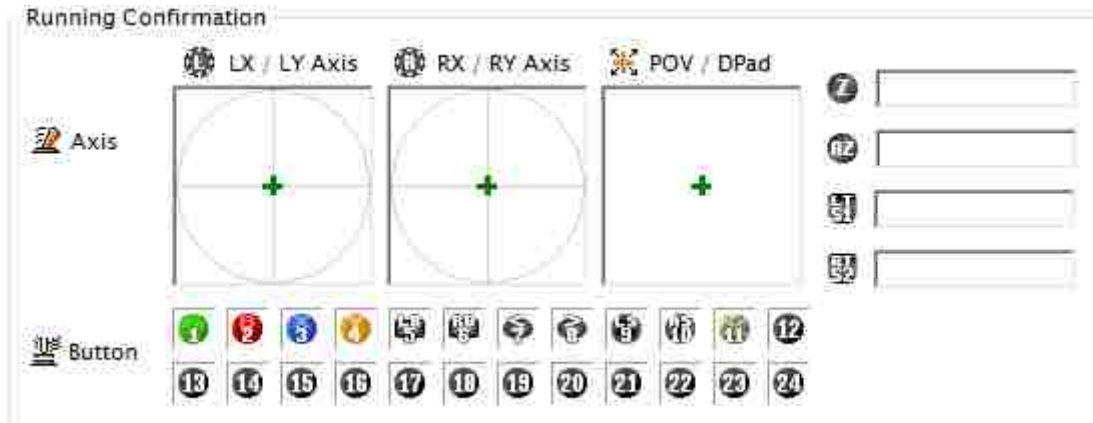


Figure 3-4-9 Confirmation of Joysticks

Each displayed contents will be the data generated from logical input.

Therefore, you can confirm running of your assignment successfully or not.

And, digital inputs are reflected with accumulation, you can confirm its running.



Figure 3-4-10 Colored digital Accumulation 0% to 100%

If you set both 0% of initial amount and over 1 second accumulation at Profile Edit. The color of buttons are changing by accumulation at above figure.

The color is green at 0%, and the color is red at 100%. The middle will be the color which mixed the red color with green.

3.5 Menu

The menu on the screen consists of File menu, the option menu and help.



Figure 3-5-1 Menu

3.5.1 File Menu

A File menu includes Save Profile / Reload Profile / Exit Application.

Profiles is not saved automatically, so when change conditions, please save it.

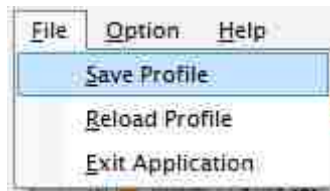


Figure 3-5-2 File Menu

3.5.2 Option Menu

A option menu includes Start Minimize / Disable LLJoy / Disable Watching / Enable Profile Sound.

And "Refind Joystick" function as same as other screen.

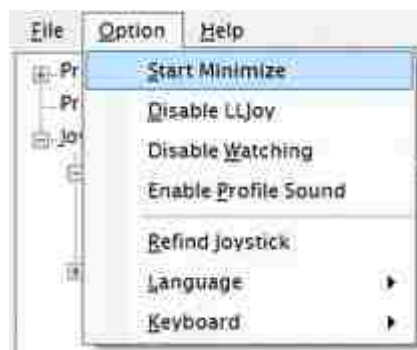


Figure 3-5-3 Option Menu

Other functions are able to change displaying language and change keyboard type.

3.5.3 Help Menu

You can reset LLJoy here and do the report when abnormality was here.

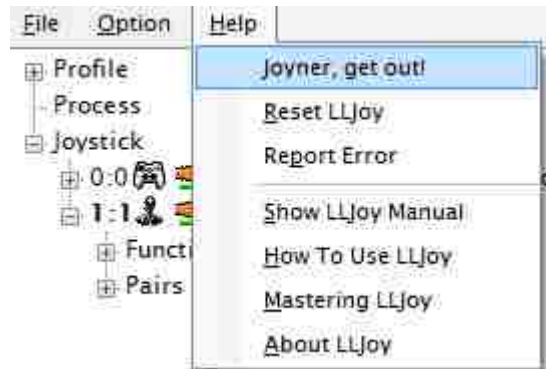


Figure 3-5-4 Help Menu

If Mr.Joyner (left-down corner icon) bothered you, please select "Joyner, Get out!".

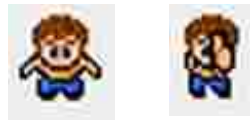


Figure 3-5-5 Mr. Joyner animation icon.

When purchasing this, the license registration is at "About LLJoy". Input a right mail address and please press a license button. When a license file is right, an expiration date for use disappears.

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