World of Joysticks Keyboard & Mouse Emulator

Standard Edition 1.57 - User Guide

The Xbox 360 standard gamepad from Speedlink was taken as example in this manual. All the gamepad and application controls are numbered and this numbering will be used in the following description.
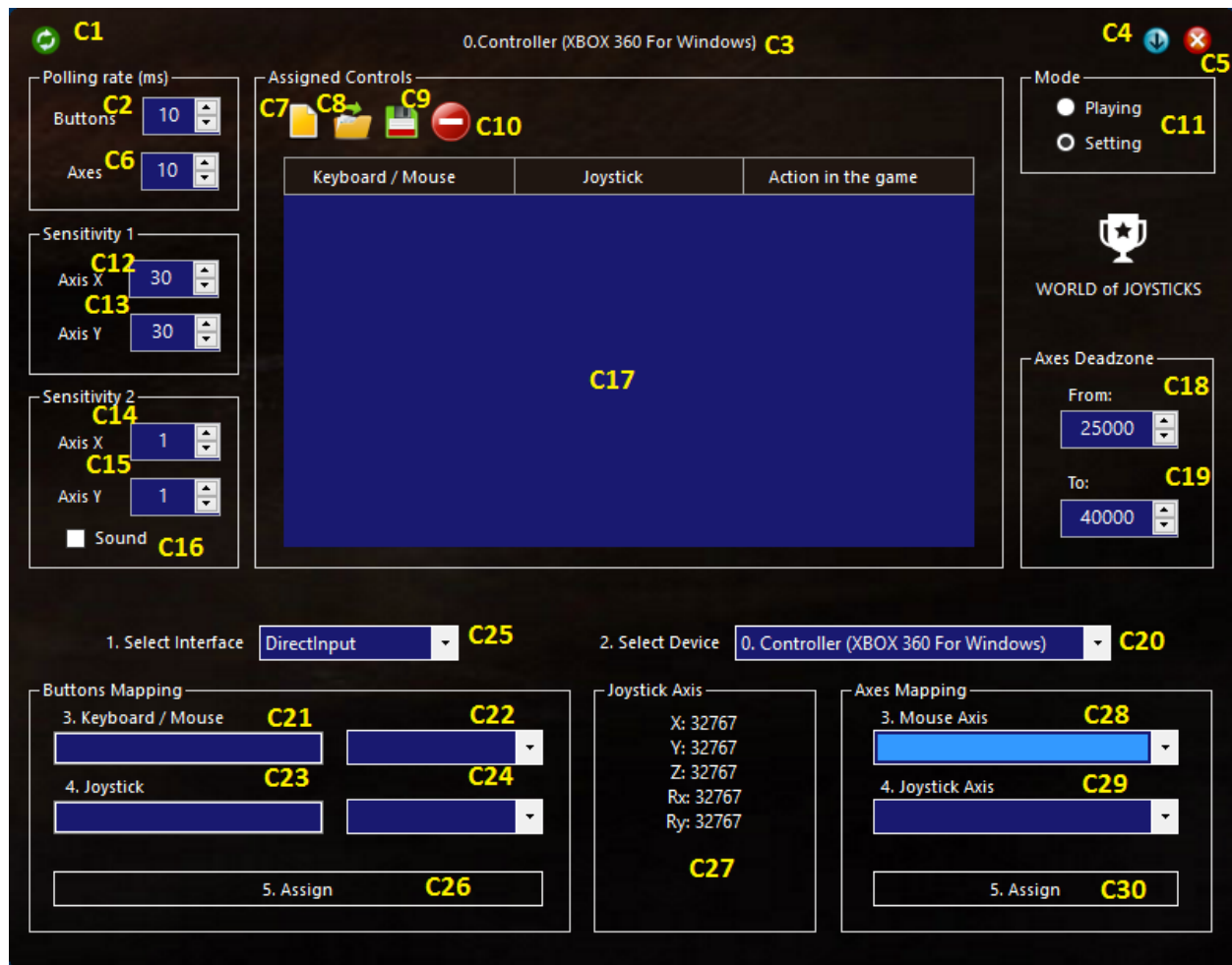
Top View

Front View

User Interface of WoJ Emulator application

1. **Connecting to Joystick .**

a) Connect one or more joysticks to PC before starting WoJ Emulator.

b) It is recommended to install the drivers of your joysticks from the CDs of web-sites of manufacturers. For many joysticks Windows installs its own standard driver by default, but you have to take in account that device name in the standard driver and driver from manufacturer can be different, therefore WoJ Emulator probably won't be able to apply configuration created with a different driver.

However you always will be able to create the separate configurations for different drivers.

c) Start WoJ Emulator. Choose an interface by [**C25**] selector. DirectInput – it is universal interface for any gaming controllers but it does not support vibration for Xbox 360 devices. XInput – it is special interface from Microsoft for Xbox 360 devices, in this mode they support vibration and their triggers control independent axes. If you are going to use a Xbox 360 controller – choose XInput, for all other cases choose DirectInput.

Different interfaces cannot be mixed in the common configuration. For playing with different devices simultaneously always choose DirectInput. XInput mode supports up to four Xbox 360 controllers simultaneously. After choosing interface application will find all the relevant devices and will display them in the [**C3**] label and [**C20**] selector. But if application was started before connecting the joysticks – press the [**C1**] button to refresh connection.

2. **Investigate the functionality of your Joysticks.**
   First of all you have to select a joystick by [**C20**] selector. It is possible to mix the assignments for multiple joysticks in the single configuration, to play with multiple joysticks simultaneously. In this tutorial we'll see how to assign controls for the single device but you can do the same for others after switching [**C20**] selector.
   Push the sticks of you joystick [**A1, A3**] and all the buttons, some of them can behave as axes. Take a look at the panel [**C27**], it displays all the available axes. You have to identify all the axes in order to use them for assignments.
   In this device apart from 2 sticks (X,Y и Rx,Ry) you have a triggers [**B1, B2**] for Z axis (+/-).
   Note: Special system buttons for switching modes for each model of joystick also can influence on the assignment of axes and buttons, therefore please choose the most suitable mode first.
   In this gamepad system buttons are [**A6, A7**]. Also this device has the regular buttons [**A4, A5, A8, A9, A10, A11, B3, B4**] and Point of View (POV) switch [**A2**].

3. **Assignment of Keyboard Button to Joystick Button.**
   a) Click by mouse in the field [**C21**] to set focus.
   b) Press a key on the keyboard, its name will be displayed in the field [**C21**].
   c) Click by mouse in the field [**C23**] to set focus.
   d) Press a joystick button, its name will be displayed in the field [**C23**].
   e) Press the [**C26**] button in order to assign, assigned pair will be displayed in the table [**C17**].
   f) Optionally you can click on the last column of [**C17**] table to add inline the title of this action in the game.

4. **Assignment of Mouse Button to Joystick Button.**
   a) Click by appropriate mouse button in the field [**C21**], the name of pressed mouse button will be displayed in the field [**C21**].
   b) Click by mouse in the field [**C23**] to set focus.
   c) Press a joystick button, its name will be displayed in the field [**C23**].

d) Press the button [**C26**] in order to assign, assigned pair will be displayed in the table [**C17**].

e) Optionally you can click on the last column of [**C17**] table to add inline the title of this action in the game.

5. <u>**Assignment of Mouse Wheel scrolling direction to Joystick Button.**</u>

a) Click by mouse in the field [**C21**] to set focus.

b) Scroll by mouse wheel Up or Down, its name will be displayed in the field [**C21**].

c) Click by mouse in the field [**C23**] to set focus.

d) Press a joystick button, its name will be displayed in the field [**C23**].

e) Press the button [**C26**] in order to assign, assigned pair will be displayed in the table [**C17**].

f) Optionally you can click on the last column of [**C17**] table to add inline the title of this action in the game.

6. <u>**Assignment of Virtual Button for switching axes sensitivity modes to Joystick Button.**</u>

a) Select the "Sensitivity 1/2" item from the [**C22**] selector , its name will be displayed in the field [**C21**].

b) Click by mouse in the field [**C23**] to set focus.

c) Press a joystick button, its name will be displayed in the field [**C23**].

d) Press the button [**C26**] in order to assign, assigned pair will be displayed in the list [**C17**].

e) Optionally you can click on the last column of [**C17**] table to add inline the title of this action in the game.

7. <u>**Assignment of Mouse Moving Direction to Joystick Button.**</u>

a) Select a mouse moving direction (Up, Down, Left, Right) from the [**C22**] selector , its name will be displayed in the field [**C21**].

b) Click by mouse in the field [**C23**] to set focus.

c) Press a joystick button, its name will be displayed in the field [**C23**].

d) Press the button [**C26**] in order to assign, assigned pair will be displayed in the list [**C17**].

e) Optionally you can click on the last column of [**C17**] table to add inline the title of this action in the game.

8. <u>**Assignment of Keyboard or Mouse Buttons to POV Joystick Switch direction.**</u>

All the elements were assigned to joystick buttons in the steps 3, 4, 5, 6 and 7 you can assign to POV joystick switch [**A2**].

For this press an arrow or intermediate position of POV joystick switch [**A2**] instead of joystick button.

Assign 8 directions of POV switch (Up, Down, Left, Right, UpLeft, UpRight, DownRight, DownLeft). You can assign few actions for intermediate directions, e.g: Up and Left for UpLeft. (to move vehicle UpLeft by pressing the intermediate switch position)

9. **Assignment of Keyboard or Mouse Buttons to direction of Joystick Axis (+ \ -).**
   All the elements were assigned to joystick buttons in the steps 3, 4, 5, 6 and 7 you can assign to direction of joystick axis (increase or decrease). For this choose a direction of axis from the list [**C24**] instead of joystick button. As a result pressing the stick or trigger of your joystick will behave as button instead of behave as axis.

10. **Assignment of Vibration to any Joystick control in the DirectInput mode.**
    Choose the "Vibration" item from the list [**C22**]. If you don't see this option in the list – your device does not support vibration or you are using Xbox 360 gamepad.
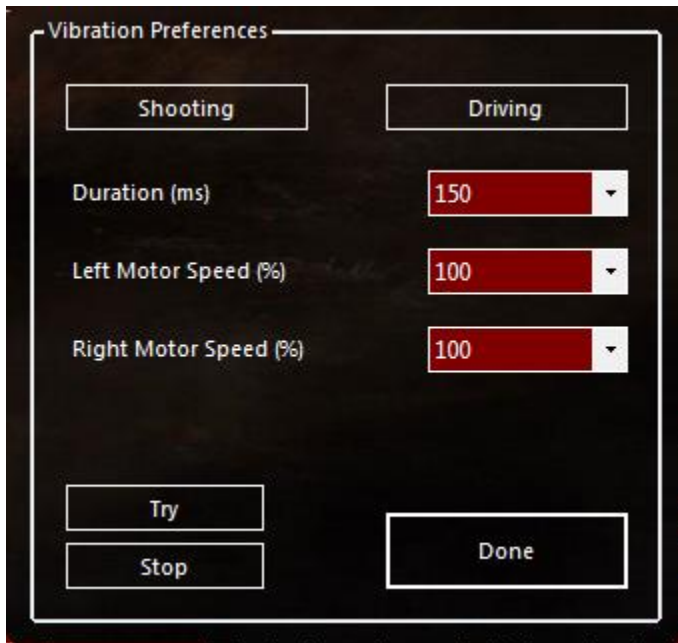   It opens the modal window of Vibration Preferences:
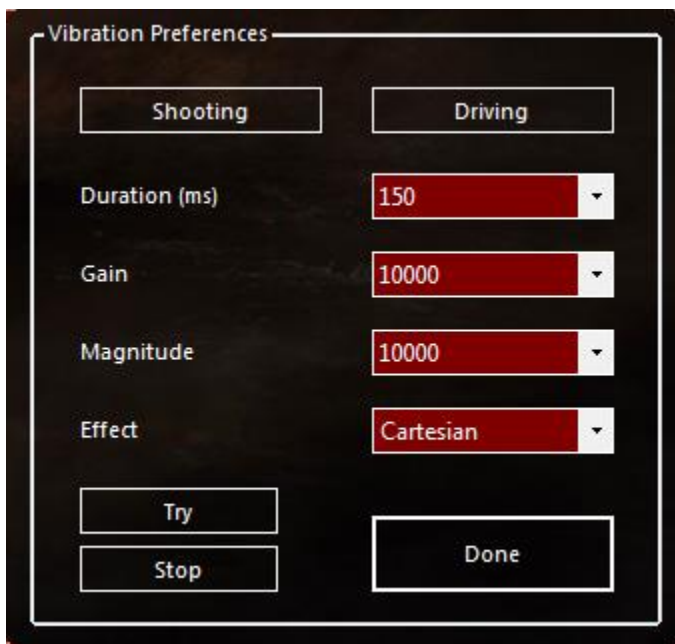
Here you can choose two predefined settings of vibration: for shooting and for driving of cars, tanks or other vehicles. Also you can adjust vibration manually using four selectors. After adjustment press the "Try" button to verify your settings. At the end press the "Done" button, it closes the modal window and vibration code-name will be displayed in the field [**C21**]. Now you can choose any control of your joystick using [**C23**] or [**C24**] and assign vibration by [**C26**] button and add the comment in the last column of [**C17**] table.

11. **Assignment of Vibration to any Joystick control in the XInput mode.**

Choose the "Vibration" item from the list [**C22**].
It opens the modal window of Vibration Preferences:

Here you can choose two predefined settings of vibration: for shooting and for driving of cars, tanks or other vehicles. Also you can adjust vibration manually using three selectors. After adjustment press the "Try" button to verify your settings. At the end press the "Done" button, it closes the modal window and vibration code-name will be displayed in the field [**C21**]. Now you can choose any control of your joystick using [**C23**] or [**C24**] and assign vibration by [**C26**] button and add the comment in the last column of [**C17**] table.

12. **Assignment of Mouse Axis to Joystick Axis.**

   a) Choose an axis of mouse from the list [**C28**]. Selecting Inverted axis can be useful in the flight simulators.
   b) Choose an axis of joystick from the list [**C29**].
   c) Press the button [**C30**] in order to assign, assigned pair will be displayed in the list [**C17**].
   d) Optionally you can click on the last column of [**C17**] table to add inline the title of this action in the game.

13. **Assignment of Radio functions to Joystick controls.**

   All the Joystick functionality available in the [**C23**] and [**C24**] controls can be assigned to the following functions of radio-player form the [**C22**] list:

   Radio Play (toggle Play\Stop), Radio Pause (toggle Pause\Resume), Radio Stop, Radio Next, Radio Previous, Radio Mute, Radio Volume Up и Radio Volume Down.

14. **Assignment CMD Commands to Joystick controls.**
    a) Choose the "Cmd" item from the list [**C22**]. It opens "Command Prompt" window:
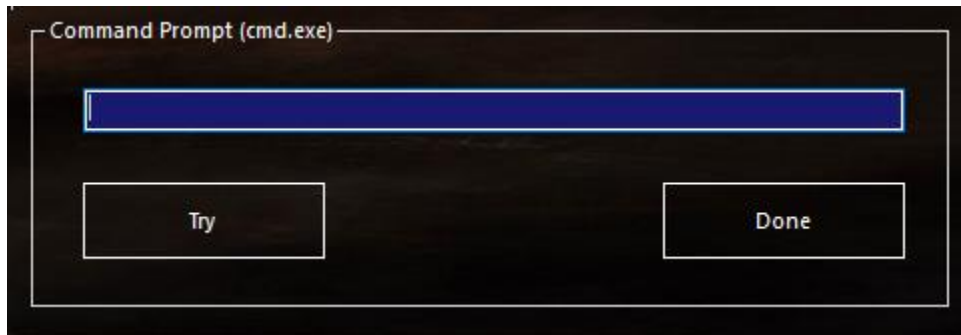
    b) Type any Windows Command (e.g: "calc" to open Calculator)
    c) If can press "Try" button to check your command line in the external console window.
    d) Press "Done" to select this command.
    e) Now you can choose any control of your joystick using [**C23**] or [**C24**] and assign selected CMD command by [**C26**] button and add the comment in the last column of [**C17**] table.

15. **Changing the Polling Rate of joystick for keyboard and mouse simulation.**
    You can change the polling rate of your joystick for keyboard (buttons) by selector [**C2**] and for mouse (axes) by selector [**C6**]. There are two separate threads for processing keyboard and mouse events. Set these values from 1 to 100 milliseconds experimentally.

16. **Changing sensitivity of Mouse Axes by specially assigned Joystick Button.**
    We've already assigned the virtual button in the step 6.
    Now we can set the sensitivity of mouse X and Y axes for each of two modes using selectors [**C12, C13**] and [**C14, C15**] accordingly. It is recommend to set lower values in the second mode to use it for precise aiming.
    To remember that second mode was activated during playing you can enable the specific sound by checkbox [**C16**]. You can replace the sound file according to your taste, "sound.wav" is located in the installation folder.

17. **Axes Threshold of Joystick.**
    This option you need only if some Axis with central position does not return to initial state (usually 32767) after releasing the stick.
    Check for the maximal value of this error in both directions and according to it set the appropriate values for selectors [**C18, C19**].
    As a result between assigned values will be dead-zone for all the axes of joystick.

There is no separate thresholds for each axis because it is usually < 8% and does not influence on the gaming process.

18. **Two main modes of WoJ Emulator application.**
You can switch between Working and Assignments modes using switch [**C11**].
In the working mode the panel of assignments is hidden.

19. **Working with configuration files.**
Application uses the configuration files in the XML (UTF8) format.
a) Press the [**C7**] button to create a new configuration.
b) Press the [**C8**] button to load an existing configuration.
c) Press the [**C9**] button to save the configuration.
Attention please!
Application saves in the configuration file not only your assignments but also the values of all the adjustment selectors, so if you changed something and didn't save the configuration – application will suggest you to save it.
Also in the configuration file saved the interface type and joystick(s) name(s) reported by drivers. Application automatically selects suitable interface after loading the configuration.
d) Application allows you to delete from the list one or more assignments.
For this you have to mark them by mouse in the list [**C17**] and press the [**C10**] button.

20. **Additional user interface functions.**
a) Button [**C2**] opens the application web-site.
b) Button [**C4**] minimizes the application window.
c) Button [**C5**] hides the application to system tray.
d) Contextual menu can be opened from the tray and also by right mouse click in any empty space of main application window.

21. **Functions of contextual menu.**
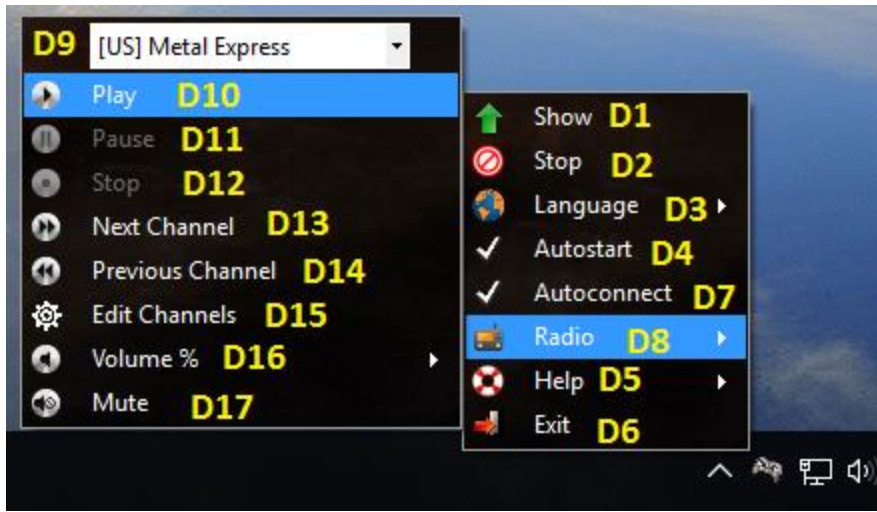
a) Menu item [**D1**] restores application window from tray. You can do the same by DoubleClick the application icon in the tray.

b) Menu item [**D2**] disables the joystick polling, next click on this item enables it. This function can be useful if you want to disable joystick temporary.

c) Menu item [**D3**] allows to choose the GUI language .

d) Menu item [**D4**] enables and disables the automatic application starting on Windows startup.

e) Menu item [**D5**] opens the application website.

f) Menu item [**D6**] closes the application completely.

g) Menu item [**D7**] automatically connects first gaming controller to emulator when you connect it to USB port.

h) Menu item [**D8**] open the submenu of Radio-Player.

i) Menu item [**D9**] opens the dropdown list for selecting a radio-channel. First item in this list completely disables radio-player.

k) Menu item [**D10**] starts or resumes radio playing.

l) Menu item [**D11**] pauses radio playing.

m) Menu item [**D12**] stops radio playing.

n) Menu item [**D13**] switches to next radio-channel from the list.

o) Menu item [**D14**] switches to previous radio-channel from the list.

p) Menu item [**D15**] opens the editor of radio-channels. Disabled while playing.

r) Menu item [**D16**] opens the list of radio volumes to change volume of radio playing.

s) Menu item [**D17**] mutes and unmutes radio playing (toggle).

22. Radio Channels Editor .

a) Adding a new radio-channel:

Press [**E2**] button for creating a new radio-channel. Enter the Title and URL in the [**E6**] and [**E7**] fields. Press [**E3**] button to add your new radio-channel into the list.
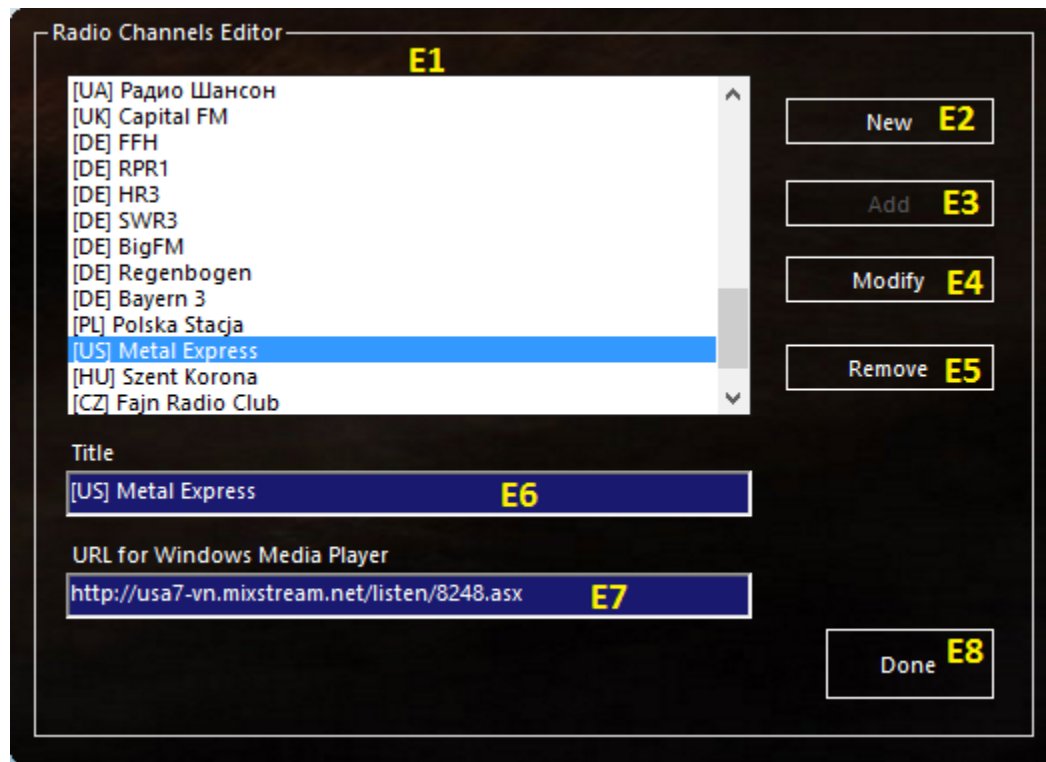
b) <u>Editing an existing radio-channel:</u>
   In the [**E1**] list choose a channel for editing. Change the Title and\or URL in the fields [**E6**] and [**E7**]. Press [**E4**] button to apply your changes.
c) <u>Deleting an existing radio-channel:</u>
   In the [**E1**] list choose a channel for deleting and press the [**E5**] button.
d) Press [**E8**] button to close the Editor. Selected in the [**E1**] list channel will start playing after closing.
e) After next update of WoJ Standard software the list of radio-channels won't be updated to avoid removing your changes.
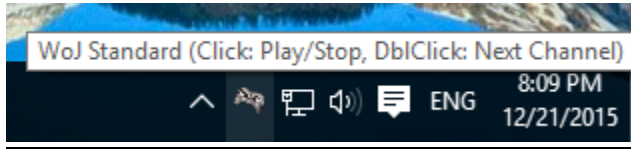   Used by WoJ Emulator file of radio-channels is:
   "c:\Users\[UserName]\AppData\Roaming\WoJ Emulator Standard Edition\ radioChannels.xml"

   And the new one after update is:

   "c:\Users\[UserName]\AppData\Roaming\WoJ Emulator Standard Edition\ radioChannelsOrig.xml"

23. Controlling of Radio-Player from the System Tray .

a) Click the WoJ Standard icon in the System Tray to Play or Stop radio-playing (Toggle).
b) DoubleClick the WoJ Standard icon in the System Tray to play the Next radio-channel from the list.
c) This functionality is not available when Radio-Player is disabled in the list.

24. Automatic saving of application settings .

Application saves the following settings on closing:
a) Path to last opened configuration file.
b) Interface language.
c) Last activated mode. (Work or Assignment)
d) Last application window state (hidden in the tray or not).
e) Autostart
f) Autoconnect
g) All the settings of Radio-Player.

25. Tips and Tricks:

a) Keyboard Keys are too responsive – increase the "Polling Rate" value.
b) Mouse Axes are too responsive – decrease the "Sensitivity 1" values, if it is not enough – increase the "Polling Rate" value.
c) Graphical artefacts while Mouse Movement - decrease the "Polling Rate" value.
d) You can modify the text of application UI in the following file:
"c:\Users\[UserName]\AppData\Roaming\WoJ Emulator Standard Edition\WoJEmulator_Translations.xml".

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Project Web-Site: www.worldofjoysticks.com