FOOTSWITCH CONTROLLER FSW

User manual

Footswitch Management Software v2.0

TABLE OF CONTENTS

Introduction

Thank you very much for purchasing our USB Footswitch Controller FSW series and for giving credence to it.

The FSW-02mini device is a multifunctional ultra-compact dual channel USB footswitch controller. In spite of miniature dimensions this model has many functions which you'll certainly like. The FSW-02mini is much more than simply MIDI-controller, in developing it we wanted to make such product that would be simple, easy handling and lightly adapting to your needs as well as meeting all the technical standards. We created a miniature model that takes small place and has simple and stylish design. Using only two buttons of that controller and associated software you get comprehensive facilities of managing. The FSW-02 device is a multifunctional dual channel USB footswitch controller. The FSW-04 device is a multifunctional four channel USB footswitch controller.

Footswitch Management Software (current version 2.0) is a special program to manage the work of Footswitch Controllers FSW series.

By means of Footswitch Management Software you can adjust your Footswitch Controller to manage any number of programs and applications. Necessary settings will automatically applied depending on program running at the moment or you can choice wanted customizing profile manually in the control program.

Footswitch Management Software 2.0 facilities for program management

Use HotKeys application key commands.

Emulation of mouse clicking on application controls.

Use macros (instruction sequence with possibility to add time delay between commands).

Use MIDI interface (message types support MIDI KEY ON, MIDI KEY OFF, CONTROL CHANGE, and PROGRAM CHANGE).

Footswitch Management Software 2.0 contains preliminary settings for program management.

Sequencers: Cakewalk Sonar, Cubase, Ableton, Samplitude, GuitarPro.

Audio editor: Sound Forge, AdobeAudition.

Guitar amplifiers and processors: GuitarRig, AmpliTube, Overloud.

Using this guidebook you can adjust Footswitch Management Software by yourself to manage any other programs.

You can download new settings for various programs from our web-site at:

http://www.footswitch.ru/info/Profiles.html

Program installation

From CD run the program Setup.exe that initiates Footswitch Management Software installation.

On display you will see the window asking installation approval, press **Next** button and follow Installation Wizard instructions.

For program operation it's necessary Microsoft.NET Framework library in the established operating system.

Installer will check your computer for required components and if needed will offer to install missing clauses.

After Wizard completes the work the program will be installed and you'll see the icon on the desktop.

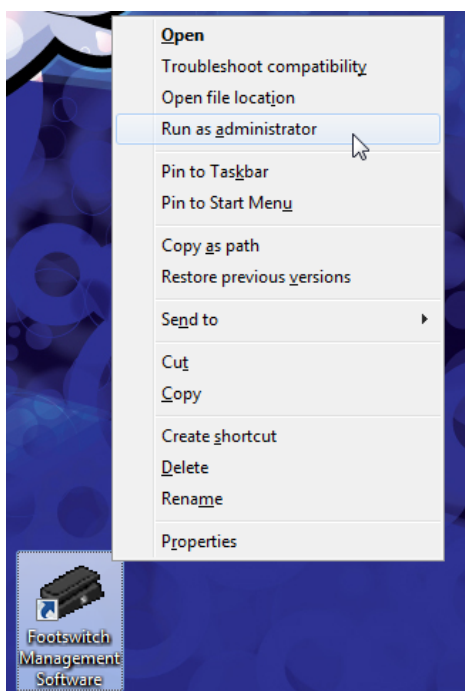Footswitch Management Software

Program start

When program first starts select **File – Import** menu option and load presetted profiles into the program with the indication of **Profils.fms** file.

For Windows Vista and Windows 7 operation systems users

If you use Windows Vista and Windows 7 operation systems it's necessary to run Footswitch Management Software with administrative rights to save the changes.
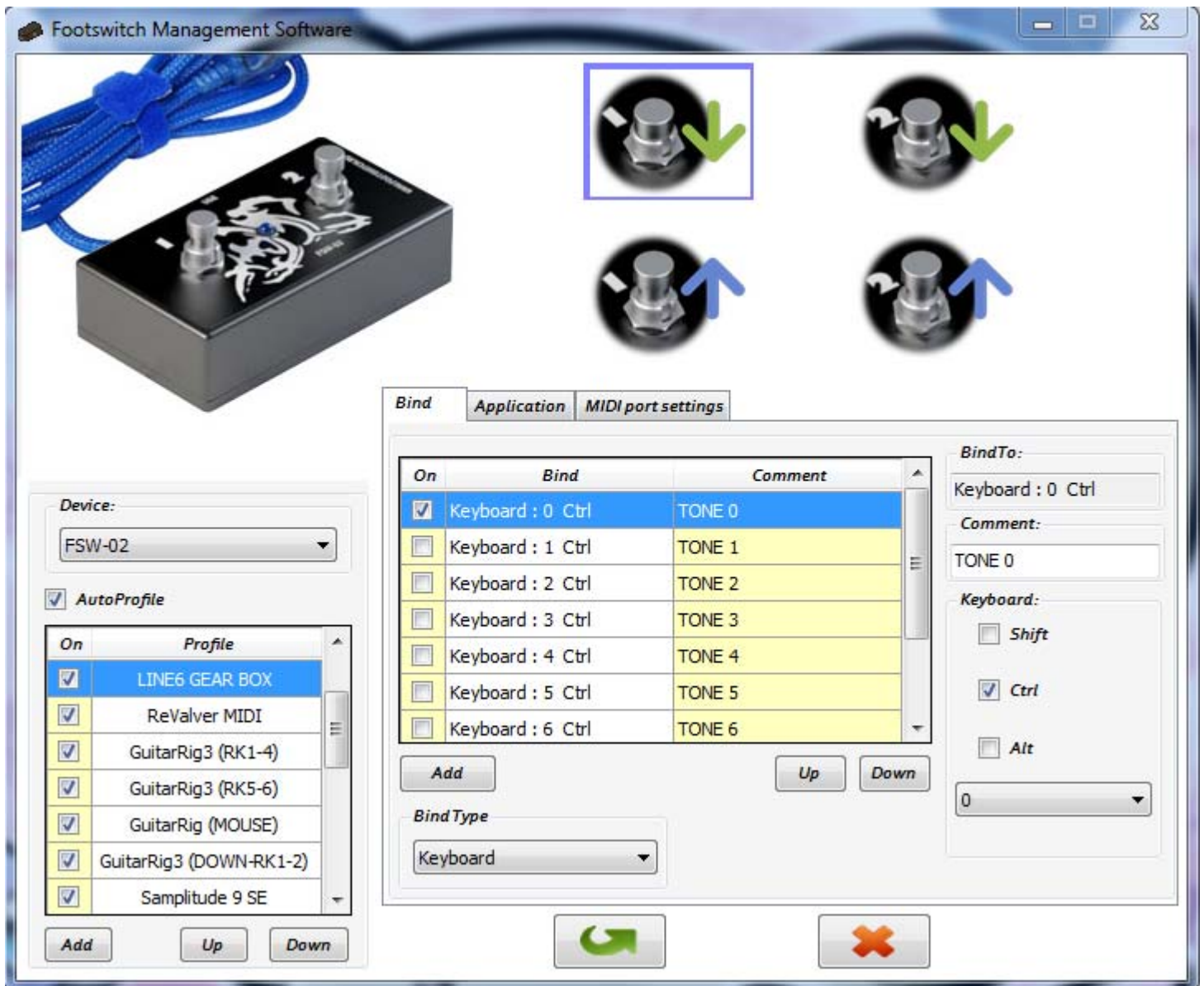
If you work under user account click right mouse button at program icon and select **Run as administrator** in menu options.
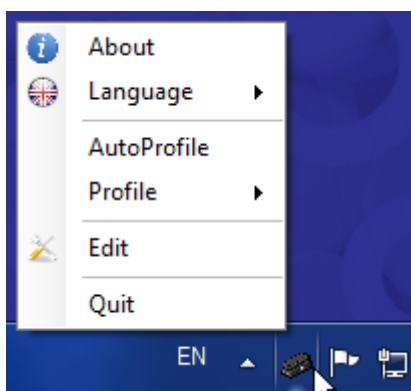

If there's no such menu option click at icon holding Shift button.
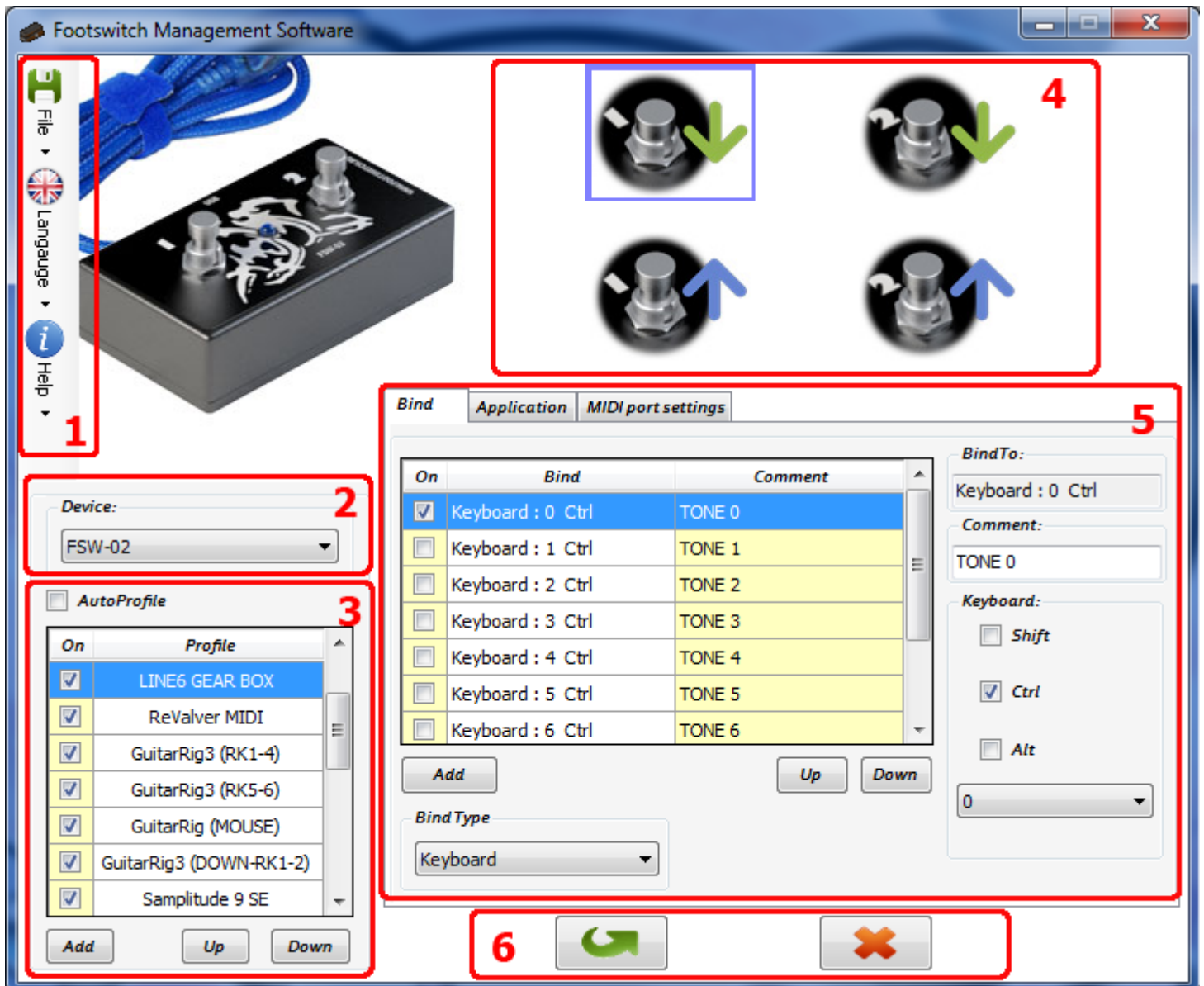
Working with program

Footswitch Management Software v2.0 main window

Footswitch Management Software menu in Windows system tray

Footswitch Management Software v2.0 interface

1 Program main menu.

2 Device FSW select Panel.

3 Program Profile Panel.

4 Button Position Select Board of Footswitch Controller for bind setting.

5 Setting panel of program binds for the selected button position of Footswitch Controller.
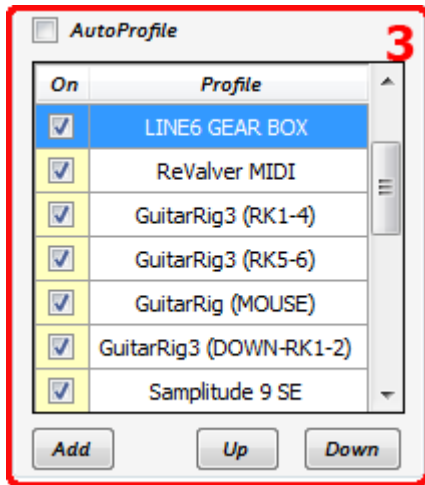
6 Setting save button and change cancel button.

Program profiles

Footswitch Controller settings for program management are saved into profiles, it's convenient if you use a lot of different programs. A list with loaded profiles is available in the Profile Panel (**3**).
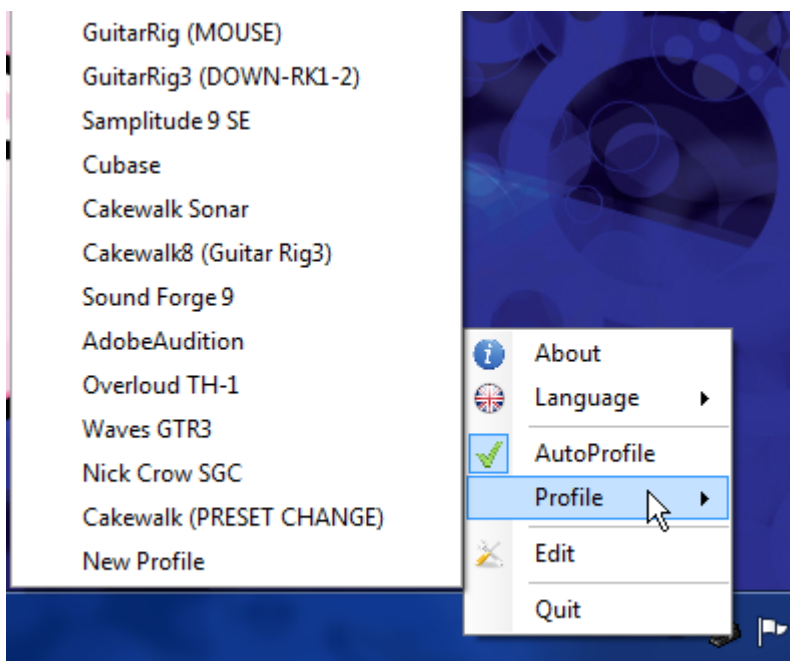

To apply wanted settings you have to only enable required profile or use automatic profile switching function (**AutoProfile**).

You can add some new profiles into the profile list as well as edit already loaded profiles.

To delete or copy wanted profile click right mouse button at profile name and select menu option.

The **On** flag near the each profile name allows temporarily disable unnecessary profile. This setting is effective using AutoProfile function.

While profile disabling (the **On** check mark is taken off) the profile name is also deleted from the profile list which is available from the program menu in Windows system tray.

Program profile settings

You can assign bind to any button positions of Footswitch Controller.
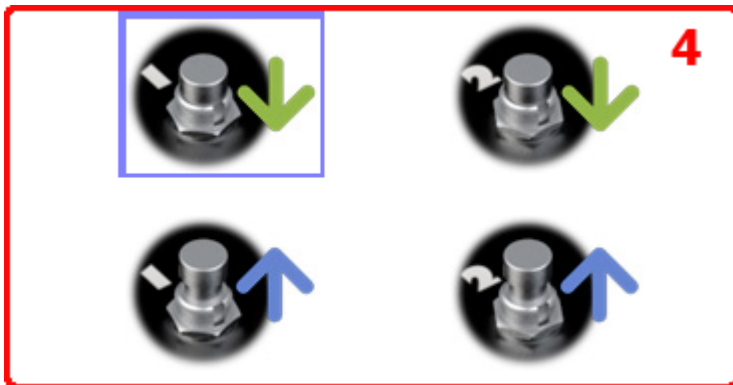
For dual channel FSW-02 Controller model there are four such positions, they are shown by figures on the position select board (**4**):
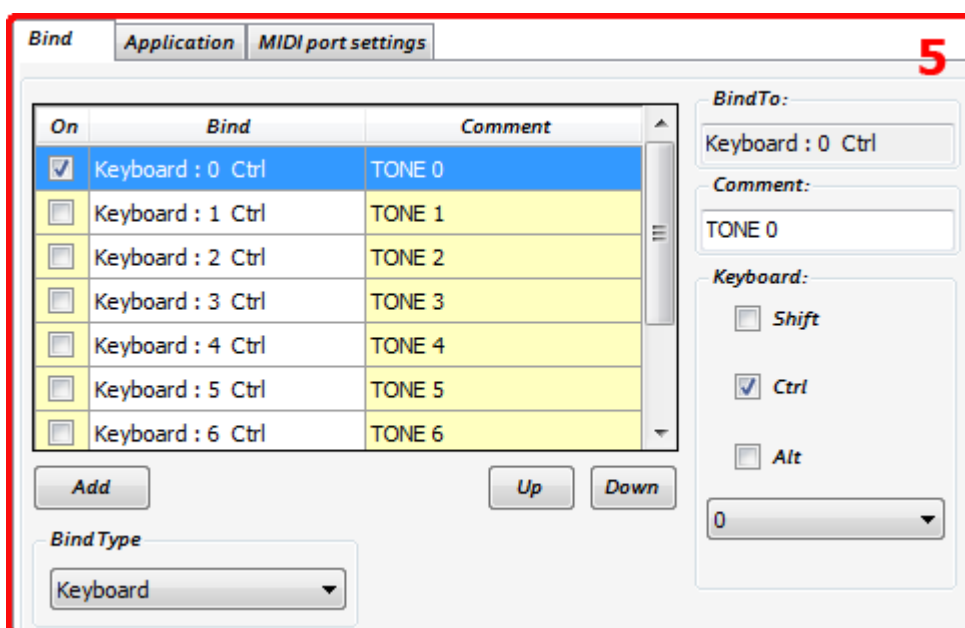
1 button is pressed;

1 button is released;

2 button is pressed;

2 button is released.

For four channel FSW-04 Controller model there are eight such positions. When using the controller expansion FSW+ together with the main controller, you can get up to an additional eight channels of control. For the first four channels 1-4 you can assign actions on to pressing a key on the controller, and on its release too. For the remaining four channels 5-8, you can assign actions on pressing a key on the controller only. For expansion FSW + programming operations you can use the selection panel (**2**)

Clicking left mouse button on button position figures in the loaded profile you can browse and edit their assigned binds in the Bind Setting Panel (**5**) in the **Bind** tab.
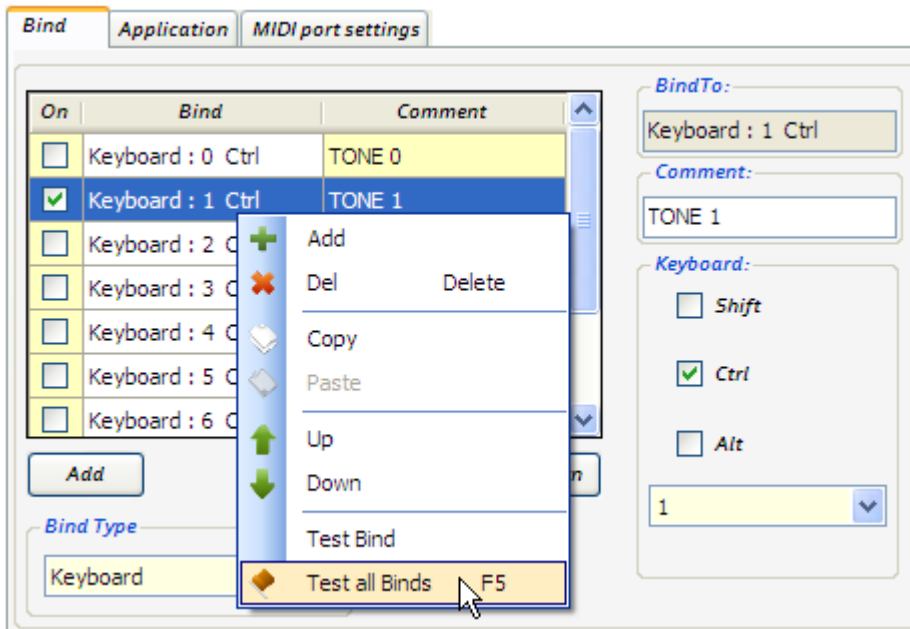

In the **Bind** tab there's a command list which will be carried out when button position of Footswitch Controller is changed (pressed or released). The binds will be executed sequentially starting with topmost one.

In the **Comment** field you can put text comments for every bind explaining why this bind is needed. Removal **ON** check mark opposite every bind allows canceling bind execution in the command list.
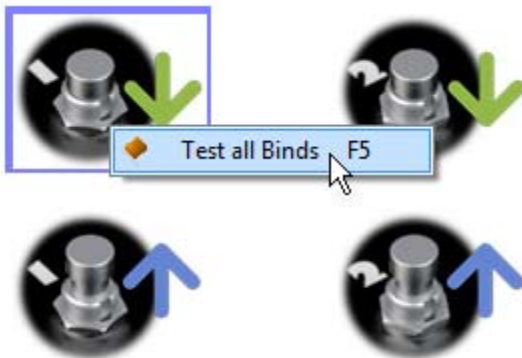
This command list is useful for quick reprogramming controller buttons if we don't want to change the settings in the managed application as well as for macro command execution.

In this example CTRL+1 keyboard shortcut is assigned with shown controller button position.
The rest shortcuts of the command list won't carry out because of disabling **ON** flag.
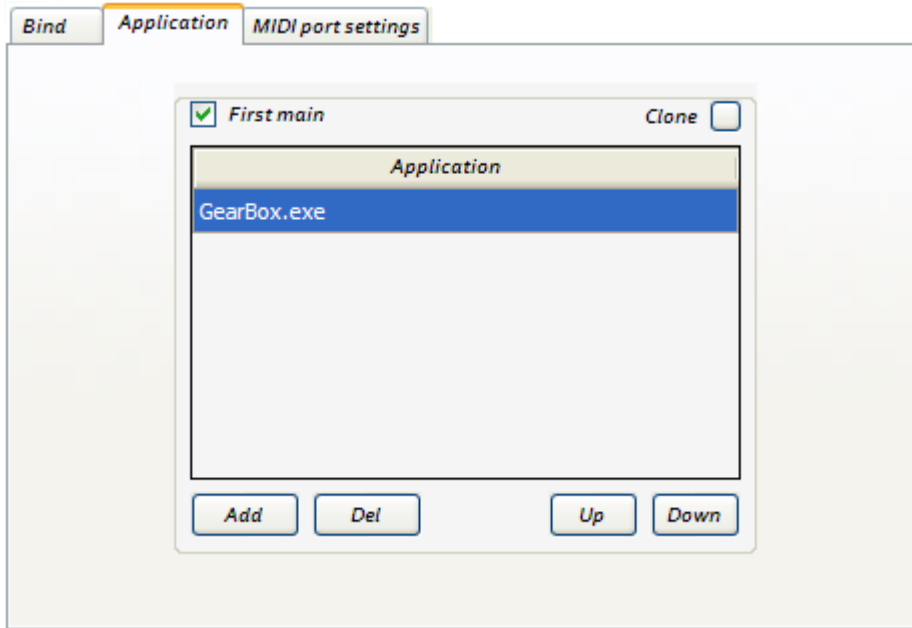

You can test binds clicking right mouse button at the bind name and select **Test all Binds** or **Test Bind** menu options.

Similar command is available at clicking right mouse button on the Button Position Select Board of the Controller.

Also you can take this test without connecting Footswitch Controller FSW to the computer.

Application tab

In the **Application** tab there is a name of the executable file or there are names of application files related to current profile.

Checking **First main** mark allows send commands even if managed program window is minimized to Windows taskbar, but at that time the managed program window will be brought to the forefront. When the check mark is disabled the commands are sent only if the program window is active.
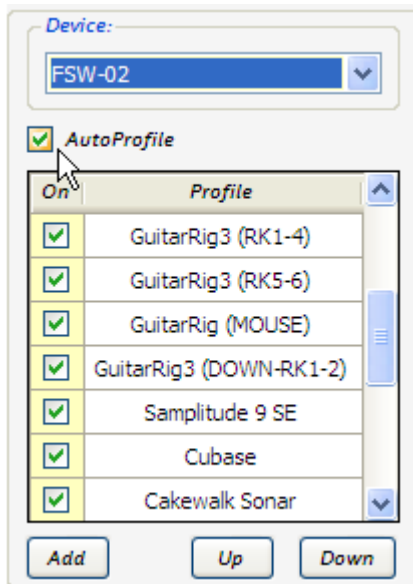
First main function is available only for one executable file, topmost in the application list, to select wanted application use **Up, Down** buttons.

Copy button allows copy typed names of application executable files onto all other Footswitch Controller button positions.
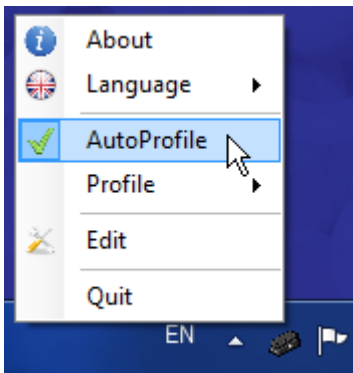
Automatic profile switching function (AutoProfile)

Automatic profile switching function allows automatically switching profile settings depending on which program you use at the present moment.

To enable function check **AutoProfile** in the Profile Control Panel.

Also you can enable function using Footswitch Management Software program menu in Windows system tray.

The **AutoProfile** function uses application names saved in the **Application** tab for every profile.
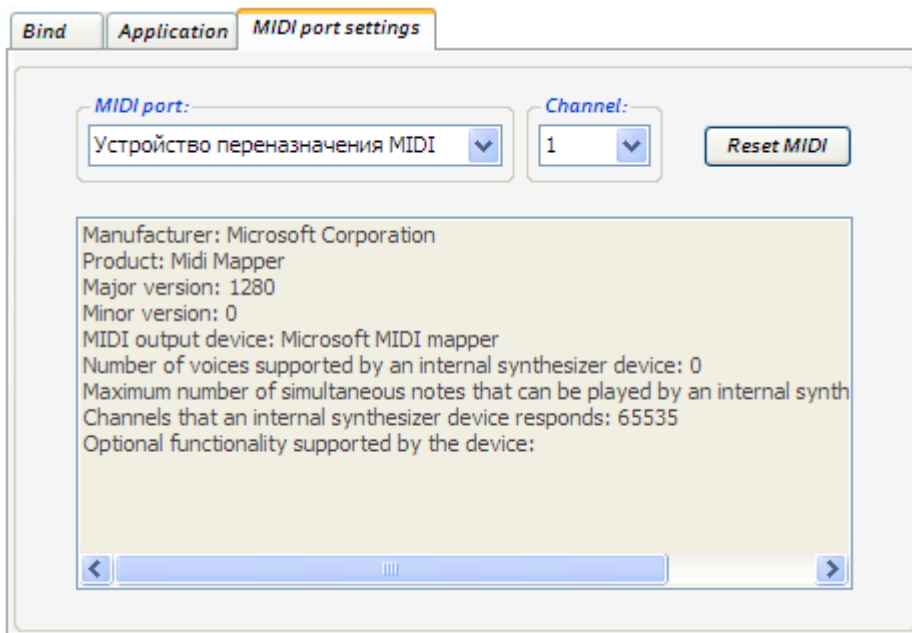
At pressing Footswitch Controller button the program defines active application at the moment and enables first profile in the list if it has the name of the active application executable file.

If you use several different profiles for one application, topmost profile in the profile list has a priority, in that case to enable wanted profile use **Up**, **Down** buttons to make your profile high on the list.

Or else use the **On** flag near the every profile name to disable unnecessary profiles.

MIDI port settings tab

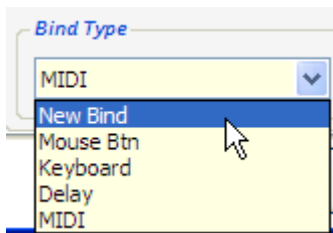You can select MIDI port in the **MIDI port settings** tab.

MIDI port settings are common for all button positions of Footswitch Controller within a profile.

For each independent profile you can make individual MIDI port settings.

Reset MIDI button sends All Notes Off message to MIDI port.

Binds programming

Programming Footswitch Controller buttons you can assign any quantity of binds (**Bind**) to each button position. In the program there are four different bind types: **Mouse Btn**, **Keyboard**, **Delay**, **and MIDI.**
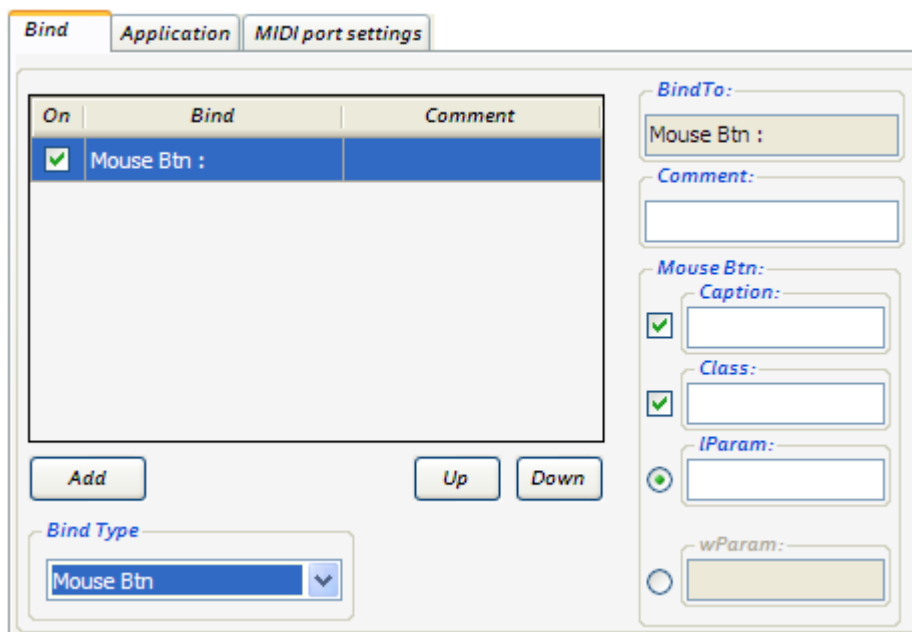
Let's review each of them in detail.

Mouse Btn

Emulation of mouse clicking on application controls.

This bind type is perfect fitted if the application has no possibilities to use hotkeys or controls at MIDI interface.

You can use two methods to execute this bind: mouse clicking is set at fixed coordinates of the application window (**lParam**) or clicking is set on definite controls (menu option, toolbar button) (**wParam**).

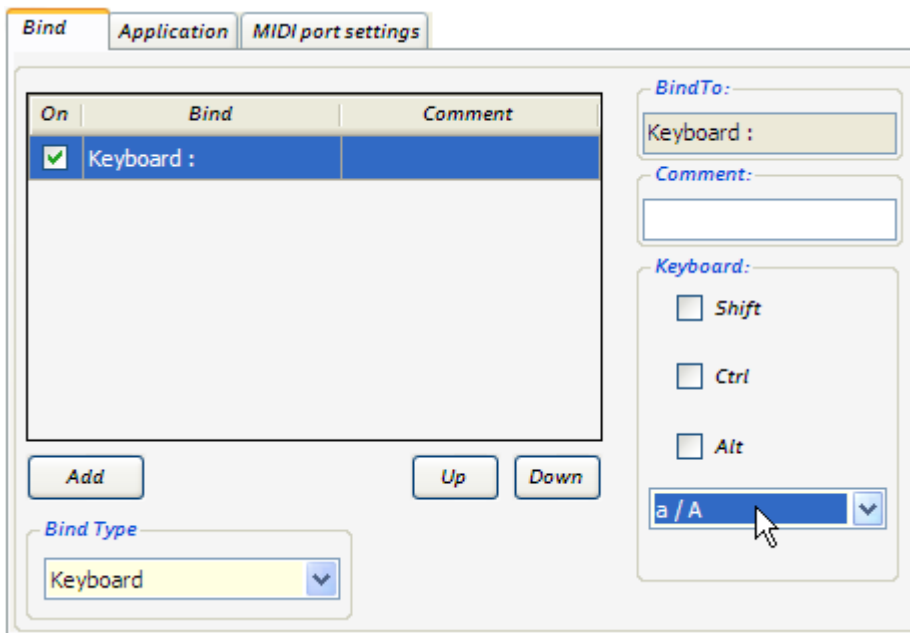Managed application window title is typed into the **Caption** field.

Managed application window class is typed into the **Class** field.

This management method works with many applications; nevertheless there are a lot of complicated management applications which can't apply mentioned way.

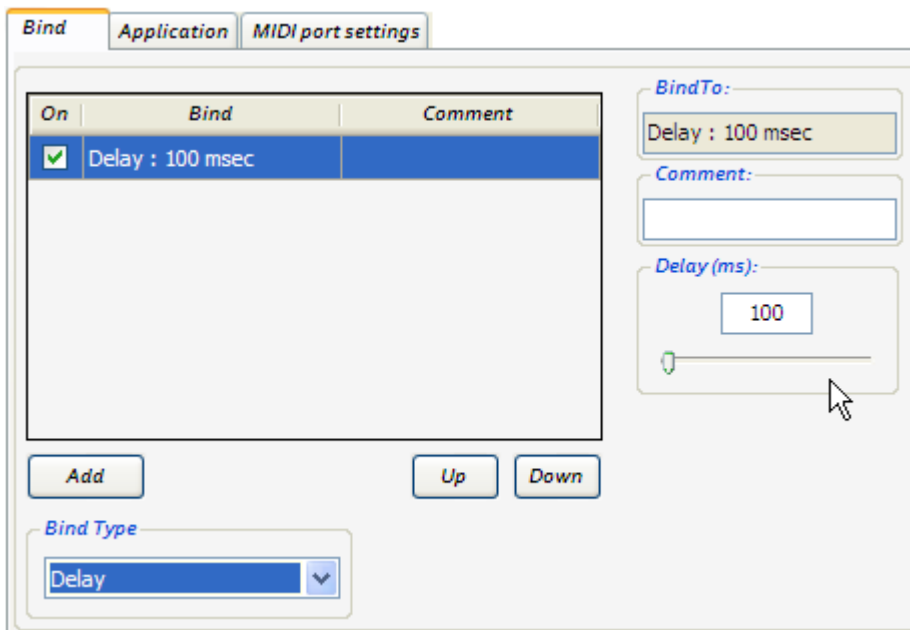For examples of that method settings see page **22** of current manual.

Keyboard

This bind type allows using application keyboard commands, hotkeys (HotKeys) for management.

You can adjust any keyboard commands including keypresses with **Shift**, **Ctrl** and **Alt** buttons.

It's the quickest setting method, see the help file which hotkeys the application uses and add them into Footswitch Management Software profile.
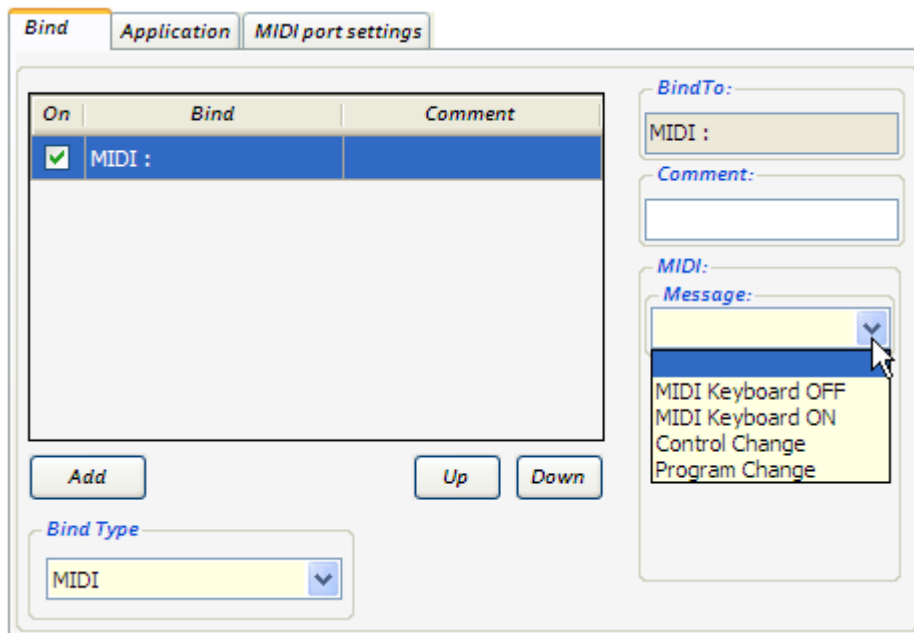
Delay

This bind type is used in macro commands during command sequence execution if an interval is needed between their implementations. You can set delay time from 1 up to 20000 ms.

For applying only add this bind type between the commands.

MIDI

If the application is managed by MIDI interface you can make your Footswitch Controller transfer MIDI messages.

You can make transfer of following message types:

MIDI KEY ON, MIDI KEY OFF, CONTROL CHANGE, PROGRAM CHANGE

For MIDI KEY ON, MIDI KEY OFF messages there are available transfer settings of **Note** and **Velocity** values.

For CONTROL CHANGE messages there are available transfer settings of controller number (**Param**) and its value (**Value**). If you set the **Value 2** than during every command execution transmitted Value will alternate **Value** with **Value 2** typed in the form. For **Value2** parameter optional transfer setting of increment-decrement (**Inc +1**, **Dec -1**) is available; transmitted value will automatically increase or decrease per unit. To disable optional transfer setting of **Value2** set **Off** value for this parameter.

For PROGRAM CHANGE it's available transfer setting of program number (**Program**) with capability to change 0-127 or 1-128 list view and to transfer setting of increment-decrement (**Inc +1**, **Dec -1**); transmitted value will automatically increase or decrease per unit. To disable transfer the setting of increment-decrement set **Off** value for this parameter.

These are all bind types that you can use for application management. For every button position of Footswitch Controller you can assign any quantity of binds as well mix different bind types using macro commands.

Program setting example

Command sequence use

Practically every program has hotkeys for the most often used functions or has an opportunity to do so, that is why you'll fairly often programme your Footswitch Controller using hotkeys controls.

Let's see an example of Footswitch Controller setting to manage GuitarPro program.

We'll try to adjust Footswitch Controller so that at first pressing Controller 1st button the file opened in GuitarPro program will play from first measure, at second pressing the playing will stop, and at next pressing all these actions will be repeated.

GuitarPro program has following hotkey settings.

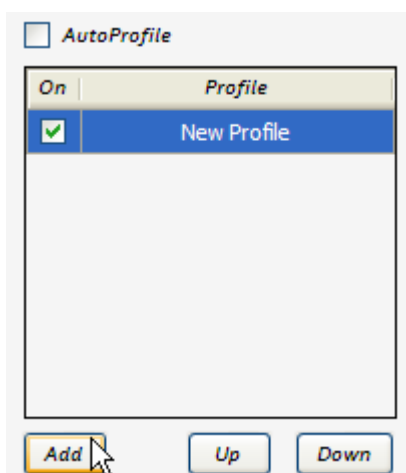Track plays and stops – **SPACE** key.

Playing pointer puts on first measure – **CTRL + HOME** key combination.

There's no ready hotkey combination for our purpose therefore to achieve the goal we'll use available command combination.

In other words every time at pressing Footswitch Controller buttons it's necessary to send two commands to GuitarPro program: **CTRL + HOME** command to put playing pointer on first measure and the command starting track play (pressing **SPACE** key).
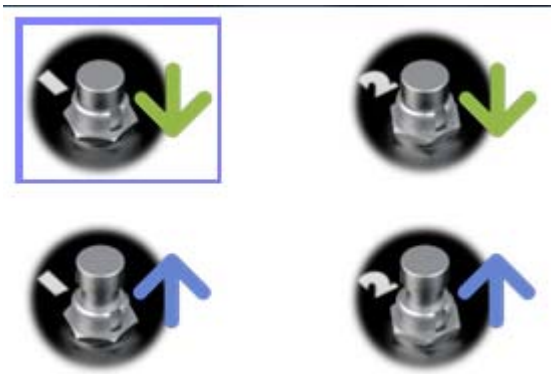
So we'll do that.

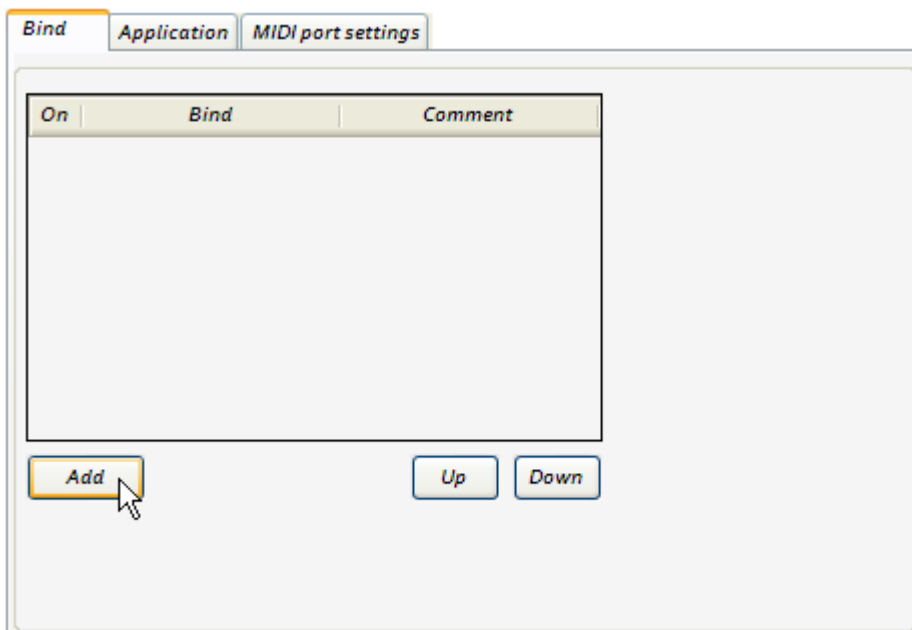Add a new setting profile pressing **Add** button in the Profile Panel.

A new profile (New Profile) will appear in the program, rename the profile in GuitarPro by left mouse button double clicking on the name.

Go to the Button Position Select Board of Footswitch Controller and select wanted position.
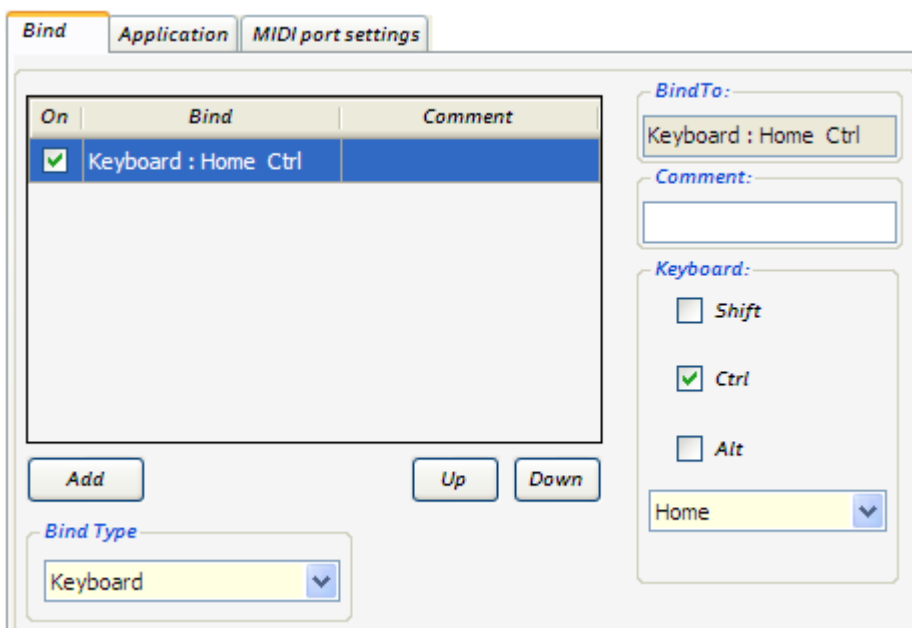
In this case it's a pressing of Footswitch Controller first button.

Go to the Bind Setting Panel and press **Add** button to create a new bind.

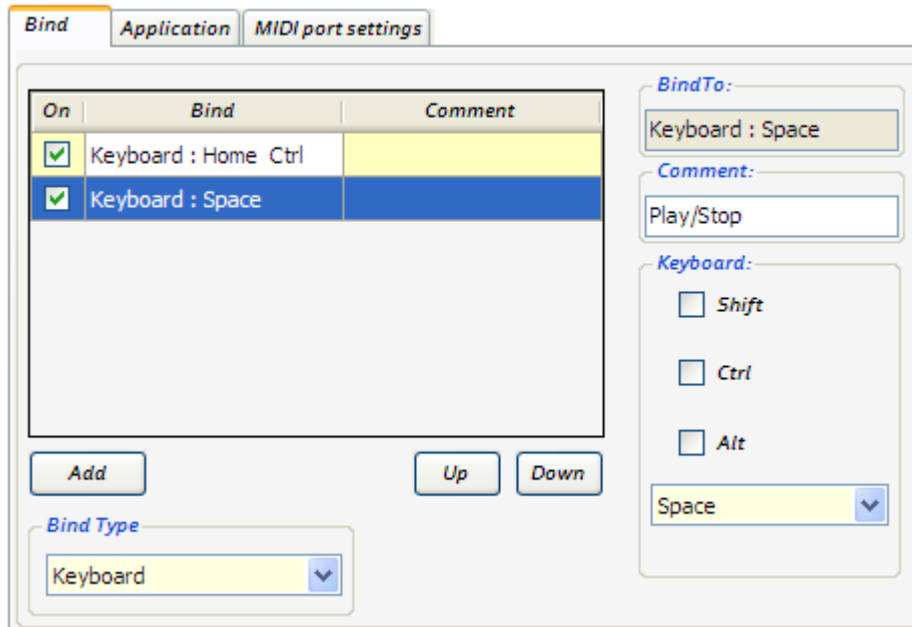To add first key command set new bind parameters according to the figure.

From the **Bind type** list choose **Keyboard** key command.
In key command settings define necessary key combination checking **Ctrl** mark and choosing **Home** key from the dropdown list.

To add second key command repeat similarly all the steps.

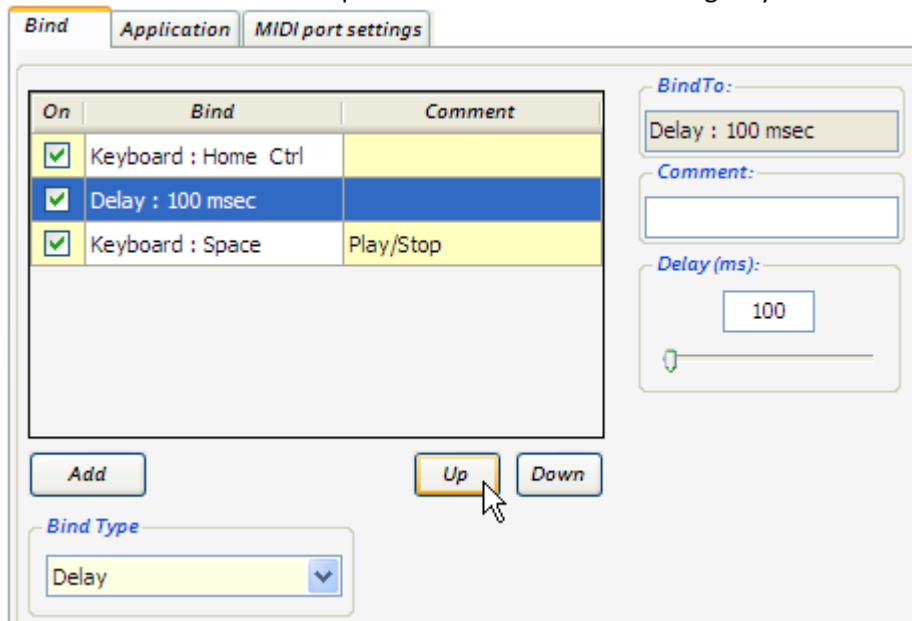The second command adding result is shown in the figure.

You can put text comments into the Comment field for every bind explaining what this command is doing.

In order that GuitarPro program interprets correctly this command sequence it's necessary to send commands with short pauses, their duration could be found experimentally, in this example it's enough 100 ms pause between commands.
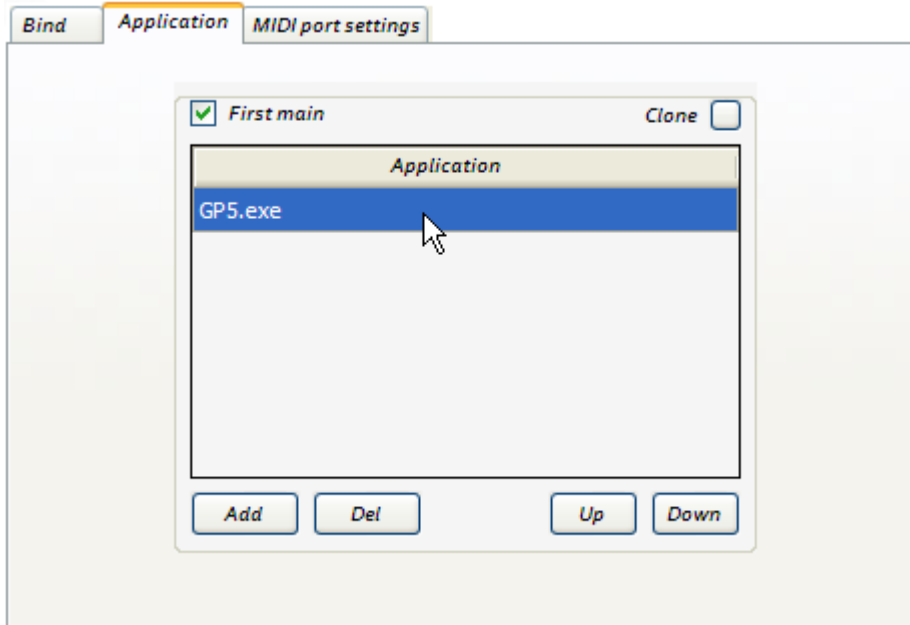
To put delay between command executions add a new bind (**Delay**) and set 100 ms delay time. Using **Up**, **Down** buttons place the new bind between two previous commands.

As a result our command sequence will look in the following way.

At the final setting stage it's necessary to exactly define the program where Footswitch Management Software will send this command sequence.
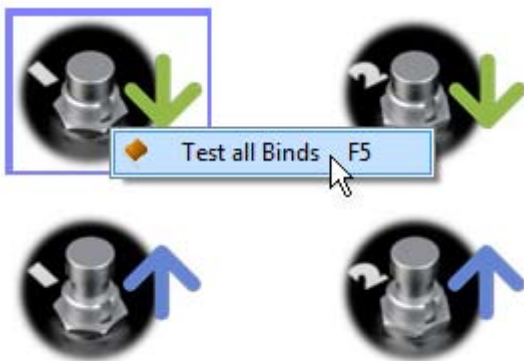
Make settings in the **Application** tab.

Define executable file name for GuitarPro program by typing **GP5.exe** file name into the **Application** row.

For permanent command implementation regardless of GuitarPro program window state, for example when the program window isn't active or minimized, check **First main** mark.

With all the settings completed check the command sequence functioning by pressing Footswitch Controller first button or **Test all Binds** command executing (F5 hotkey).

Also you can take this test without connecting Footswitch Controller FSW to the computer.

Save all the changes pressing Change Save Button.

Common recommendations for key command setting.

Management program emulates keypresses therefore using operating way by key command sequence for more reliable performance as far as possible make efforts to choose key combinations with less used keys.

Mouse Btn action use

Application management system of Microsoft Windows operating system is based on Windows Messages.

For example during mouse clicking at program controls a certain message is transmitted to the application window. Footswitch Management Software allows simulating these messages.

The program can simulate two message types.

1. Left mouse button clicking at the application window fixed place. With that action we transmit **WM_LBUTTONDOWN** window message containing place coordinates in the value **lParam**.

2. Clicking on definite controls (toolbar button or menu option). With that action we transmit **WM_COMMAND** window message containing command value **wParam**.

Caption (Window caption) and **Class** (Window class) parameters are common and determine the window which these messages are addressed to.

Now we'll overview every action type.

- **Clicking at the application window fixed coordinates.**

Amplitube2 program Standalone version has no possibility managing by hotkeys and MIDI interface. Let's see the action functioning by the example of this program.

First of all it's necessary choose the right controls in the application to execute this action.

As we click at the application window fixed place with mouse the controls shouldn't change its position during application window size modification, otherwise the action might stop work. Shown in the figure preset shift knobs are given the best fit for our purposes.

Window message parameters determination

We need to determine which message parameters are transmitted to the program while mouse clicking at these buttons.

Herein **SPYxx** special program will help us, it's a free applet included in Microsoft Visual Studio programming environment package, you can find it on the installation disk in the **/Utils** directory.

There are only three parameters.

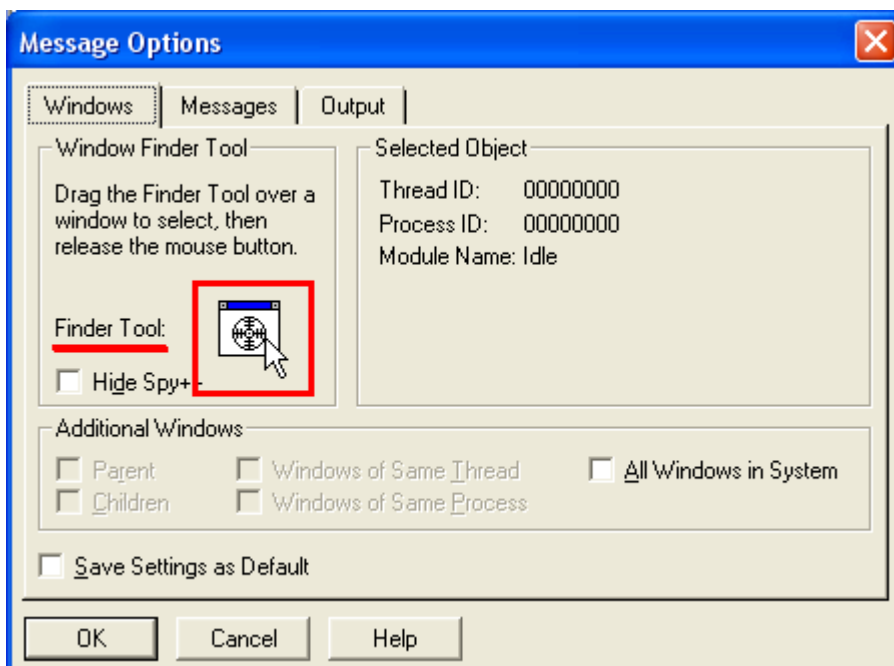**Caption**: a managed application window title.

Class: a managed application window class.

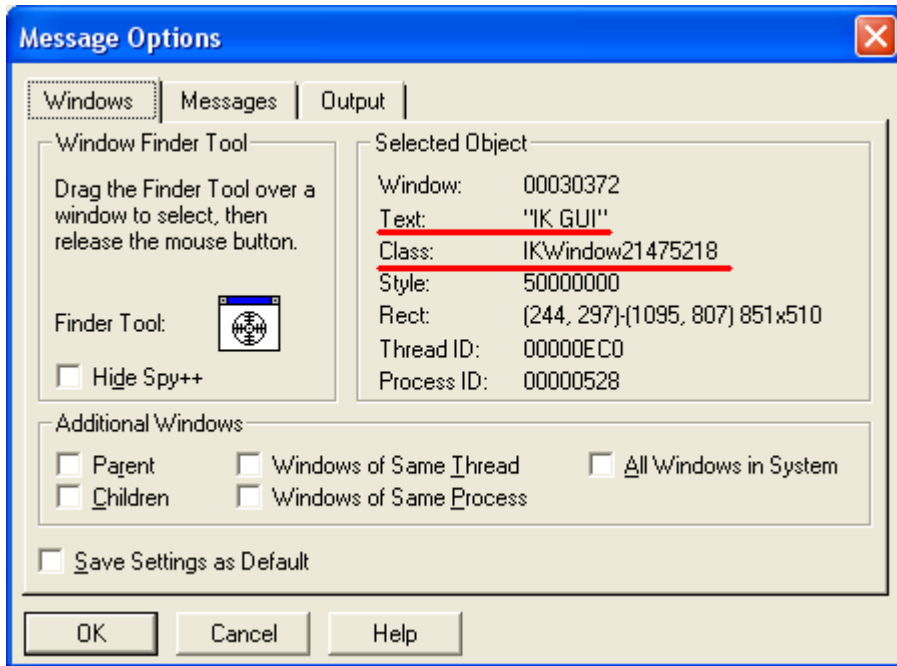**lParam**: place coordinates where it's necessary mouse clicking.

Start **SPYxx** program and press **Message Log** button.
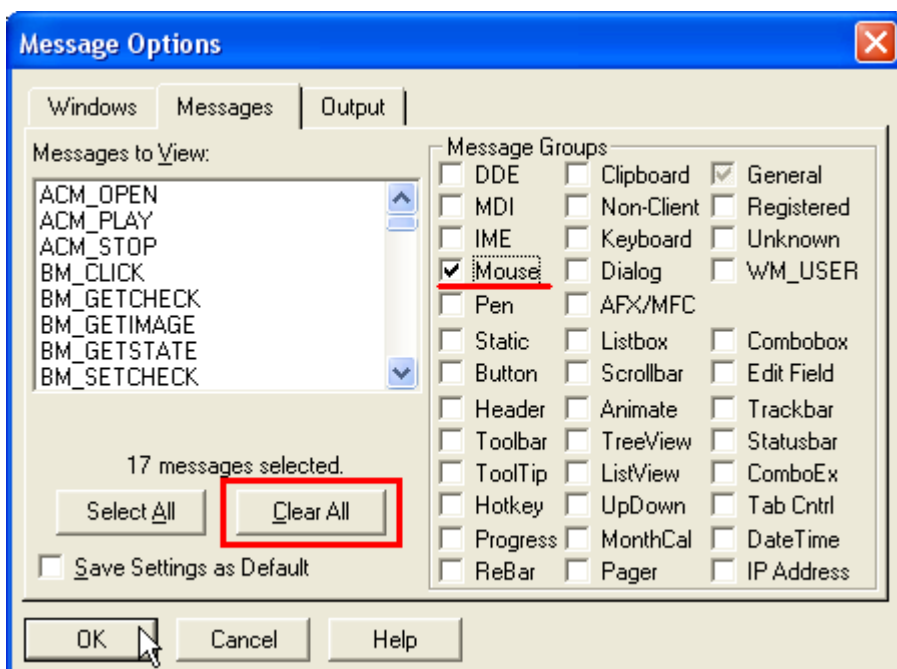

Message Options window will appear.

Take a sight (**Finder Tool**) and point it at the preset shift knobs in **AmpliTube** program window.

In **Selected Object** group we can already see a part of necessary parameters, window title is in the **Text** field, window class is in the **Class** field.
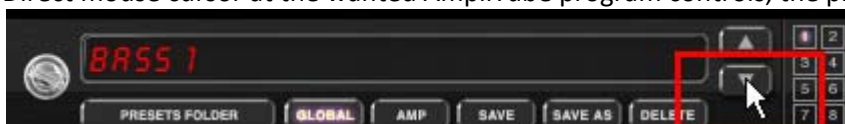
Go to the **Messages** tab.

To clear message filter press **Clear All** button and check **Mouse** mark, next press **OK** button.
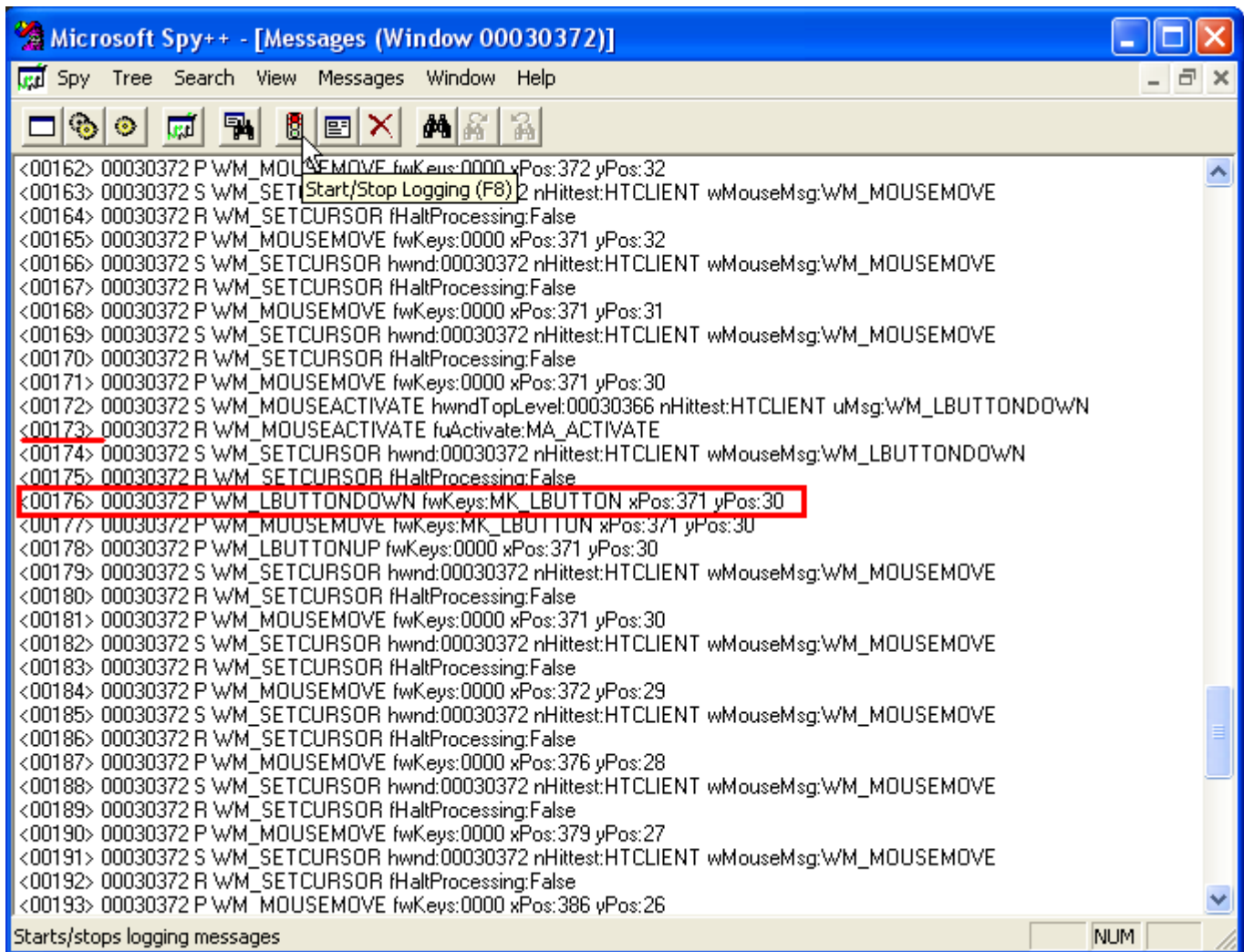
After that if we move the mouse over **Amplitude** program window SPYxx program will intercept messages and in **Messages** window we'll see messages log.

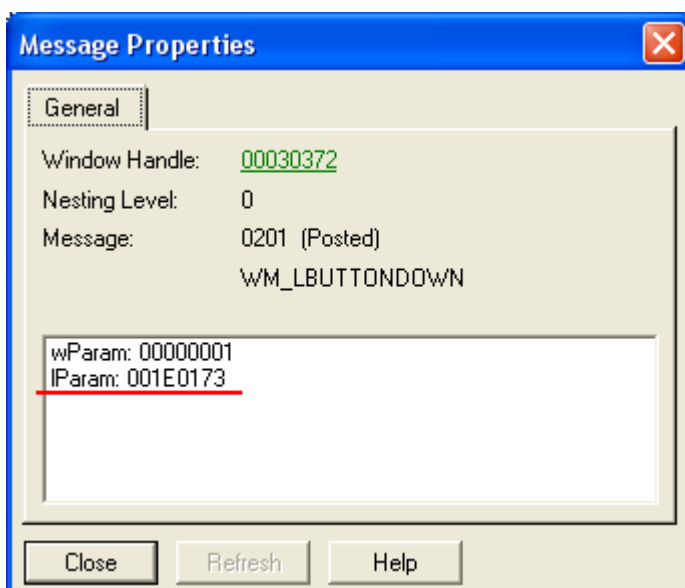Direct mouse cursor at the wanted AmpliTube program controls, the preset shift down knob.

Remember the last message number in **SPYxx** program **Messages** window, after that press mouse button clicking at the preset shift knob in Amplitube program.

Return to **SPYxx** program and go to the remembered message number in the messages list, in our example that number is 00173.
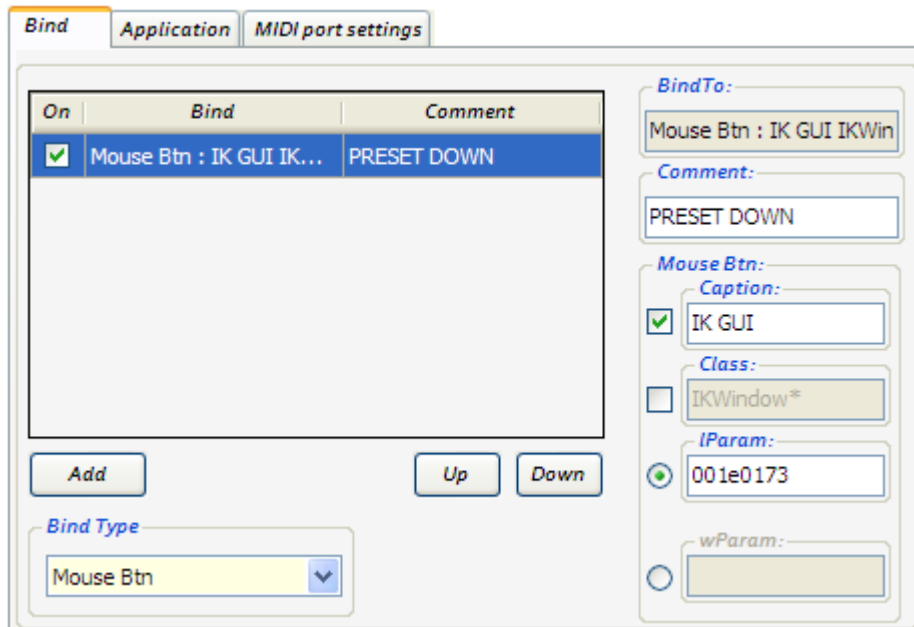

Move down through the list from the remembered message number looking for the string with **WM_LBUTTONDOWN** command, then make double clicking at this string.

In the appearing window we'll see required **lParam** parameter.

It remains only to write these settings into Footswitch Management Software program and check command functioning.

Completed **Mouse Btn** command settings window looks like this.

Explanations how to fill in fields

For command execution it's necessary to fill in minimum two fields: **IParam** field and one of **Caption** or **Class** fields; exactly which fields are required to be filled in depend on the concrete program. To manage Amplitube program you can use both variants.

In some programs **Window class** and **Window caption** could be modified after program restart, for example in Amplitube program **Window class** is modified.
In that case you can use asterisk symbol (*) to replace modifying ends.
For instance we can write IKWindow* instead of IKWindow21475218.

- **Clicking on definite controls.**

In contrast to previous action type this method doesn't depend on application window size modifications and buttons or controls positions.
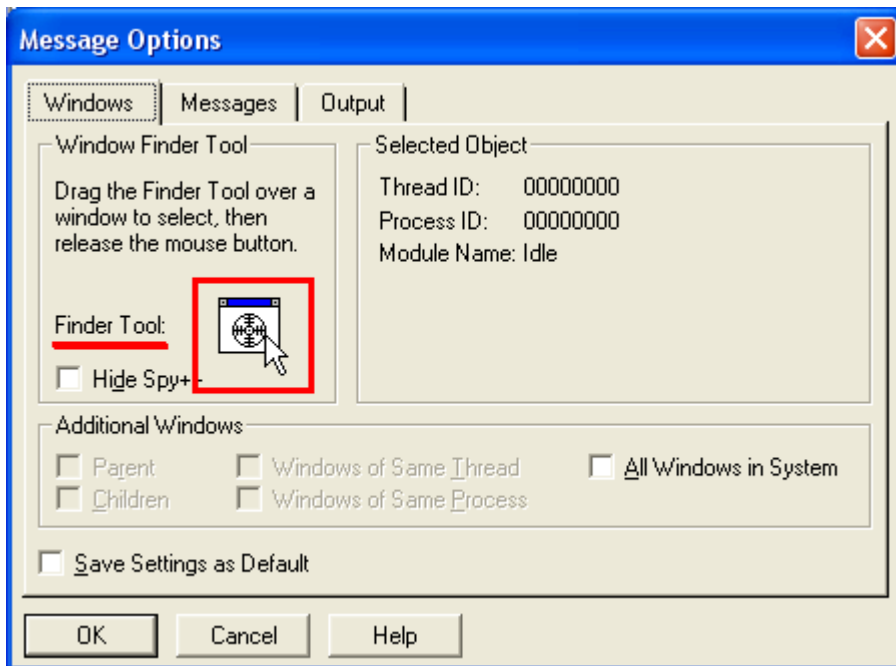
For example if we set Footswitch Controller on toolbar button pressing, it's already unimportant toolbar position for further command execution; you can even disabling the toolbar in the program window, the command will be executed anyway.

This action setting is very similar to previous action adjustment. As a case in point we'll overview Cakewalk Sonar program and adjust Controller to execute this program menu option.

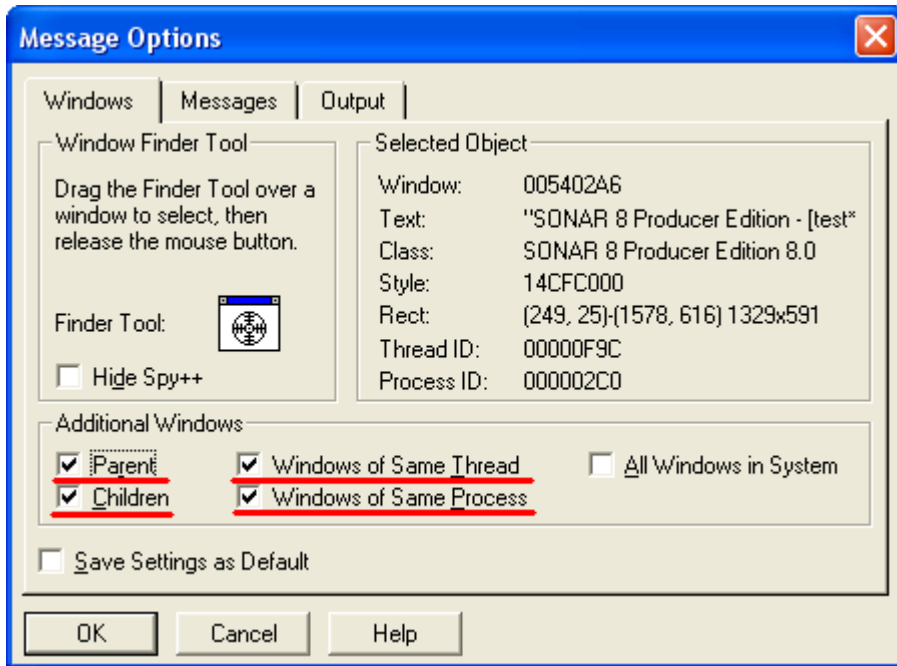Start **SPYxx** program and press **Message Log** button.
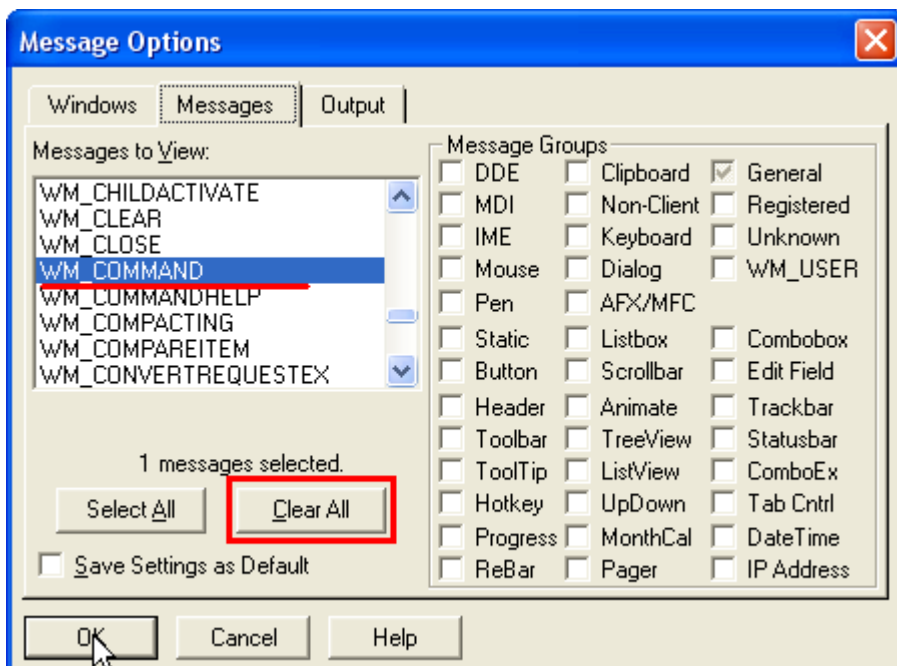
Message Options window will appear.

Take a sight (**Finder Tool**) and point it at the frame of Cakewalk SONAR program main window.

In Message Options window check Parent, Children, Windows of Same Thread and Windows of Same Process marks, in such case we'll capture messages not only from the main window but generally from all windows of that program.
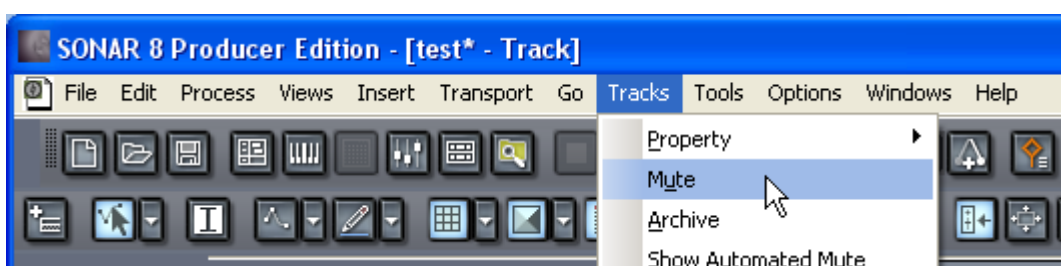
Go to the **Messages** tab.

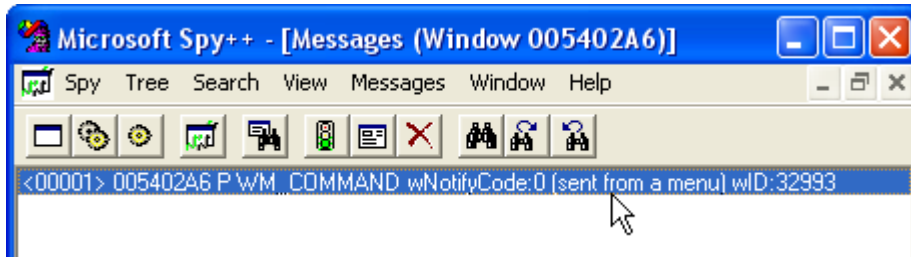To clear message filter press **Clear All** button.
In Messages to View list find and mark **WM_COMMAND** command and press **OK** button.
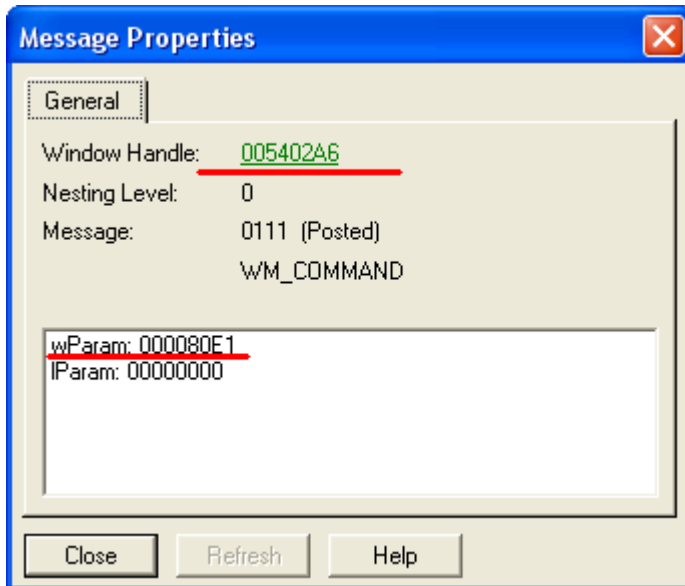
The program is set to capture messages.

Return to Cakewalk Sonar program and execute **Tracks – Mute** menu option.

In Messages window of **SPYxx** program the first message will be our desired command.
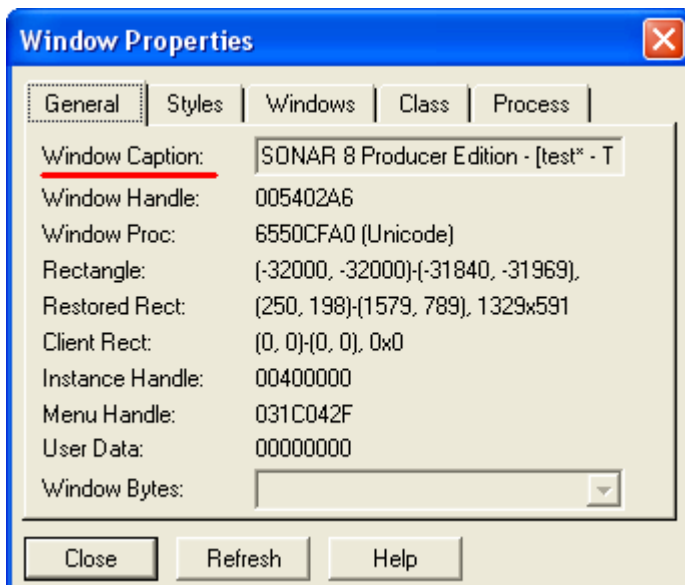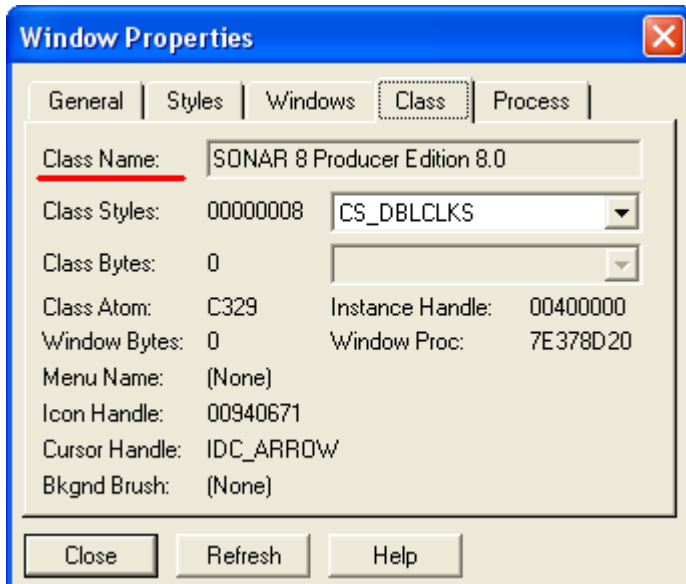

Make double click at this message.

In Message Properties window we'll see required **wParam** parameter.

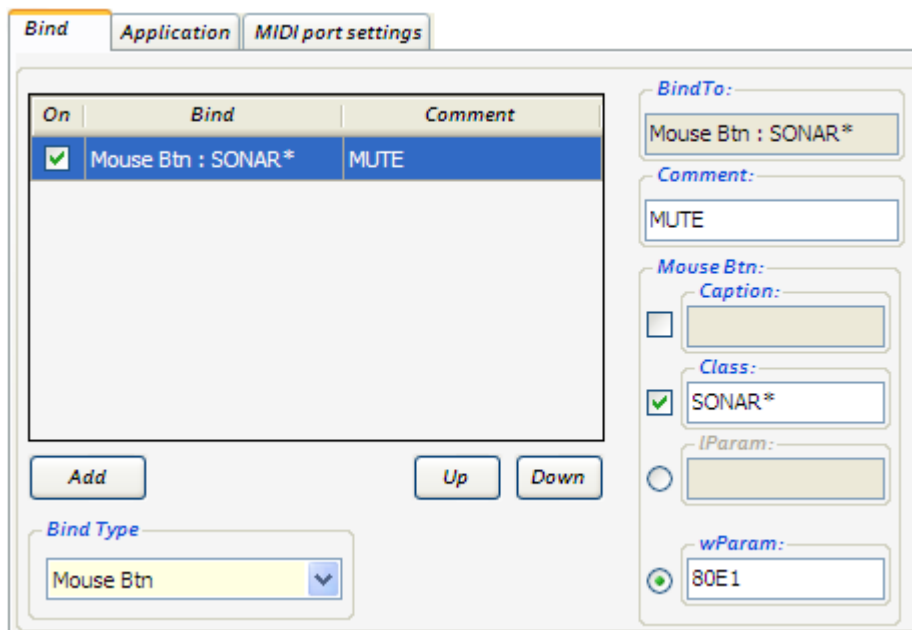To determine window Class and Caption click on the link in **Window Handle** string.

In the General tab we'll find a window title in Window Caption string.

In the Class tab we'll see a window class in Class Name string.

It remains only to write these settings into Footswitch Management Software program and check command functioning.

Completed **Mouse Btn** command settings window looks like this.

Explanations how to fill in fields

For command execution it's necessary to fill in minimum two fields: **wParam** field and one of **Caption** or **Class** fields; exactly which fields are required to be filled in depend on the concrete program.

In this case Window caption is constantly modified depending on which project is open in the program, therefore we won't use it and leave Caption field empty.

Lest writing long Window class name in the **Class** field we can shorten it till one word (SONAR*).

System requirements

1. Operating system: Microsoft Windows XP, Vista, 7 (32/64 Bit).

2. Installed Microsoft .NET Framework 2.0 and higher.

3. Notebook or computer with USB port.

Program uninstallation

Start → Control Panel → Program installation and uninstallation → Footswitch Management Software

Safety measures

In spite of the fact that Controller has a strong and very reliable design, please respect following recommendations for safe device use and FSW model will make you happy long time after its purchasing.

Footswitch Controller is fed with USB interface cable.
Please take all required safety measures.

Prevent shorts in the cable or USB port socket, avoid any contact between Footswitch Controller body and other device metal frame (including grounded one) as the equipment may be put out of operation.

Environment

Avoid using your FSW in the places where it may be exposed by:

- High temperature;
- Intense humidity or moisture;
- Dust or sand in quantity;
- Strong vibration or impacts.

Handling

As FSW is an accurate electronic device avoid applying excessive force to Controller switches. As well prevent device from dropping and impacts or excessive pressure.

Changes

Don't open FSW body and don't try to modify the device anyway as you may damage it. All the repair works must be performed only by qualified staff.

Cleaning

For cleaning FSW use soft dry material. If it's necessary wet it slightly. Don't use abrasive abstergent, wax or solvent (like paint thinner or highly alcoholic cleaning fluid) as it may lead to cover darkening or damage the surface.

Legal information

Companies and organizations mentioned or figured here as well as corresponding logotypes present registered trade marks of their rightful owners.

Their use doesn't claim to corresponding trade marks or connectivity between trade mark rightful owners and FOOTSWITCH.RU in no circumstances.