

Automap 4.0

User Guide

TABLE OF CONTENTS

Introduction to Automap 4	3	Mixer Mode.....	16
Registration	3	Mixer Automap.....	17
Automap 4 minimum system requirements	3	Saving Mixer Mappings.....	17
Apple Mac	3	Automap HUI – Controlling HUI supported Mixers	17-18
Windows	3		
Installing Automap 4 software and drivers	3		
List of DAWs officially supported.....	5	Automap Virtual MIDI	
Configuring Automap 4 for your DAW and hardware	4-6	(applicable only to certain Novation Automap - compatible products)	
		Setting up MIDI Channels and Ports.....	18
Managing your Plug-ins	6	Other Virtual Automap MIDI functions.....	19
Adding VST Folders (Windows only)	7	Saving your custom Automap MIDI Maps	19
Automap 4 File Handling (Advanced Users Only)	7		
		Multiple Hardware Devices	
Automap Terminology	8	Focus Device.....	19
DAW	8	Saving Mappings when using multiple controllers.....	20
Device	8	Mixer/Plugin Mappings page.....	20
Mappings	8		
The Edit Mapping Window.....	8	Keystroke Assignments	
Plug-in.....	8		
Mixer.....	8	Appendix	
Thing	8	Editing Controls.....	21
Automap HUI	8	Editing Encoders	21
Automap MIDI.....	8	Hardware Settings: Encoder Acceleration	22
Control	8	Editing Buttons	22-23
		Editing Pots and Sliders	24
Using Automap 4	9	Automap File Handling (Advanced Users Only)	25
Edit Mapping window – general.....	9	Setting Automap 4 Preferences.....	25
Using the Edit Mapping window with Impulse.....	11	General	25-26
Using the Edit Mapping window with other	12	Notifications.....	26
Novation Automap-compatible hardware		Controls	26
Automap Browser View	13		
Thing Order	14	Novation contact details	26
Re-ordering Things	14		
Recording Parameter Automation When Using Automap 4 ..	14		
Creating your own Mappings	14		
Manual Parameter Assignments	14		
Parameter Assignment using Learn	14		
Learn latch mode with other Novation Automap compatible hardware	15		
Quick Re-ordering of Parameters	15		
Renaming Parameters	15		

INTRODUCTION TO AUTOMAP 4

This guide is designed to provide comprehensive information about the operational features of Automap 4.

Automap 4 is a software application designed to interface your Novation hardware controller with other software applications on your computer, in ways that are simply not possible without it. As Automap 4 essentially works in the same manner for all Novation Automap-enabled controllers, this guide is not written for any specific hardware. For details about your particular Automap-enabled hardware, please refer to the relevant guide supplied with it.

We are constantly developing Automap, and updates will be available from the Novation website, accessible via the Automap Updates feature built into the application. We also suggest checking the Novation support page regularly to ensure you have the latest update and documentation. Automap 4 is compatible with a variety of 3rd-party software applications, and the list of supported software is being continually updated. Please check the website for the current list, as this is likely to change regularly.

If you require further guidance, video tutorials or technical support after reading this guide please visit the support pages of the Novation website, at www.novationmusic.com/support.

The Novation Answerbase, at www.novationmusic.com/answerbase contains articles on troubleshooting all Novation products, and a technical support contact form that you can use to get in touch with us if you cannot find the information you are after.

REGISTRATION

Registering with Novation helps us to help you. To register with Novation, please visit <http://www.novationmusic.com>, click on 'Register Products' link under 'Support' (on the home page) and complete the form displayed. During the registration process you will be asked questions about your digital audio workstation set up which will help Novation support you with its 'no compromise' support solution. In addition to this, you can elect to receive Novation e-zines - e-mail newsletters (sent once every two or three months) containing product update news, software and hardware tutorials, competitions, freebies and tips from signed artists. Registering your copy of Automap 4 is the best way to ensure your software is up to date, as well as helping us to assist you with any technical enquires you may have.

AUTOMAP 4 MINIMUM SYSTEM REQUIREMENTS

Apple Mac

OS: Mac OS X 10.7 Lion or 10.6 Snow Leopard (32 and 64 bit)
Computer: Apple Macintosh series with USB port
Screen Resolution: 1024x768 minimum

Windows

OS: Microsoft Windows 7, 32- or 64-bit, Windows Vista (32-bit only), or Windows XP +SP3 (32-bit only);
Computer: Windows compatible computer with USB port
Screen Resolution: 1024x768 minimum

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INSTALLING AUTOMAP 4 SOFTWARE AND DRIVERS

Most Novation hardware controllers (Devices) require a software driver to be installed in the computer to allow Automap 4 to work. Drivers for Automap-enabled hardware controllers will be installed on your computer by the software installer.

1. Insert your installer disk, or locate your downloaded installer, and double-click on the installation icon to begin the installation process.
2. Follow the onscreen instructions.



NOTE: Windows users may see a warning stating that 'the drivers have not passed Windows logo testing' (or similar). Press 'Continue Anyway' to complete the installation.

3. Connect (and turn on, if necessary) your Novation hardware controller.
- 4.

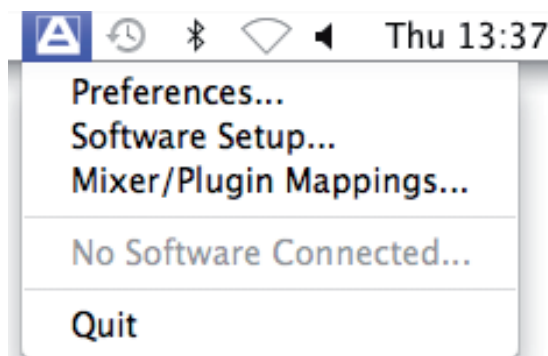
Mac: open the Applications folder, double-click on AutomapServer to launch.

Windows XP and Windows 7: go to Start > All Programs > Novation > Automap > Automap Server.

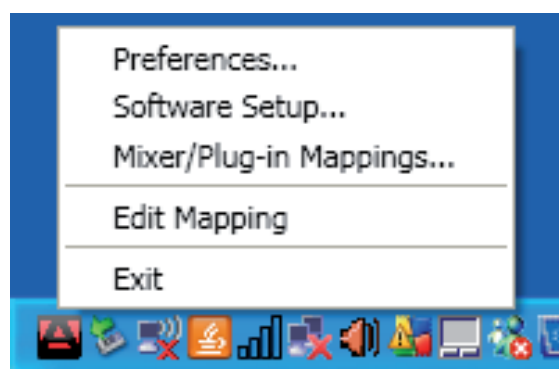
5. If Automap 4 detects that your hardware requires a firmware update, you will be presented with on-screen instructions on how to proceed. Please follow these instructions carefully to ensure a successful update.

CONFIGURING AUTOMAP 4 FOR YOUR MUSIC SOFTWARE AND HARDWARE

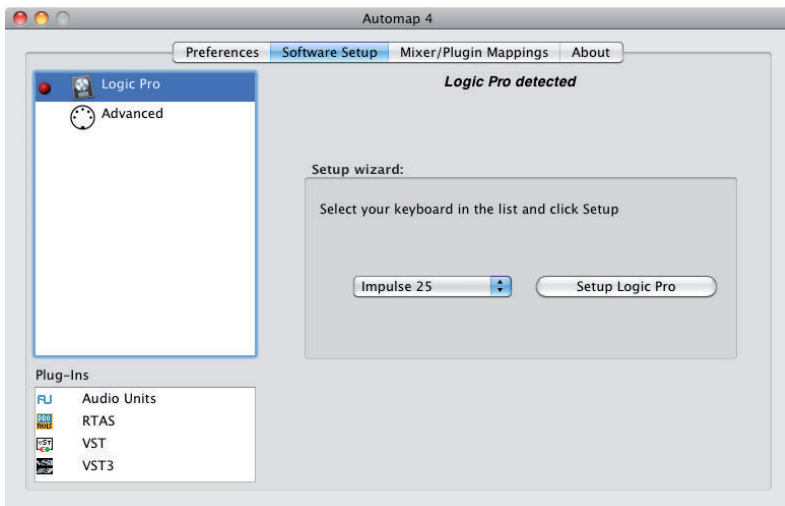
Locate the Automap icon in the Menu bar (Mac) or Status bar (Windows); click on it and select Software Setup... ; this will open the Automap 4 Software Setup window, displaying a list of your installed DAWs (most users will probably only have one installed).



Mac



Windows

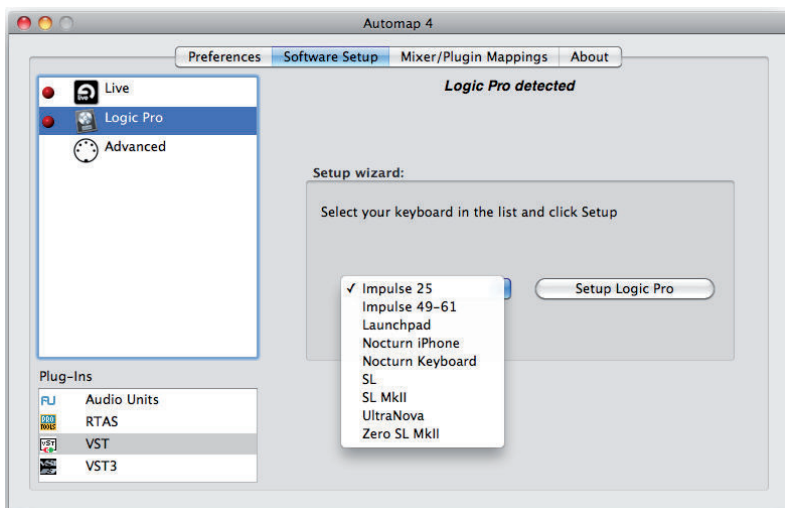


Software Setup page

The configuration process has two stages:

- 1 – enable your plug-ins for control via Automap 4
- 2 – configure your DAW to operate with Automap 4

The easiest way to perform both steps of the configuration is to follow the instructions on the Software Setup tab. First, select the DAW you want to use from the list (this will not apply if you only have one DAW). From the drop-down list, select the model of Novation controller connected to your computer. Click on the Setup xyz button to launch the Setup wizard (where xyz is the name of the DAW you've selected), and follow the instructions given at each step.



Note that the precise instructions will vary according to which DAW is being configured, and that at some point in the procedure, you will need to launch the DAW application.

DAWs officially supported by Automap 4 are:

Mac:

- Live
- Pro Tools
- Cubase
- Logic
- Reason

Windows:

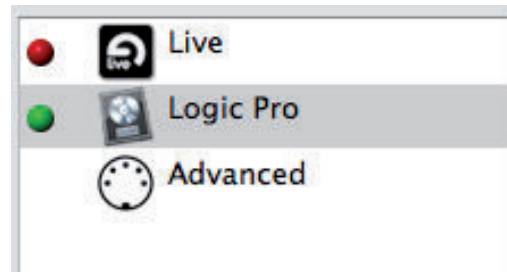
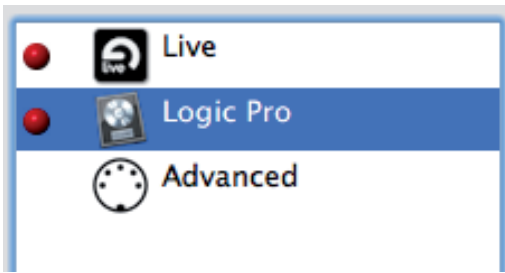
- Live
- Pro Tools
- Cubase
- Sonar
- Reason



NOTE: if your DAW is not listed above, but supports HUI, you can still use Automap 4 to control its mixer functionality. See 17 for more details.



NOTE: that the (virtual) 'LED' alongside each DAW (in the Software Setup tab of the Automap 4 window) is initially red – this indicates that the DAW is not yet configured to work with Automap 4. Upon successful completion of the configuration, the LED will turn green.



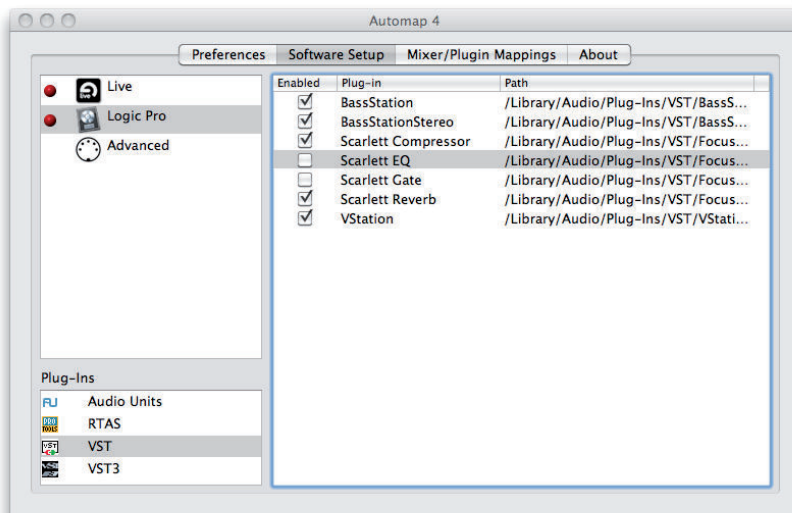
NOTE: If your DAW uses third-party plug-ins, we recommend that the DAW is closed and re-opened at this stage.

MANAGING YOUR PLUG-INS

It is possible to control any VST, AU or Pro Tools (RTAS) format plug-in in your host software directly using Automap 4. By default, the Setup Wizard will enable all the plug-ins it finds in your computer for use with Automap 4. However, there may be circumstances when you will need to manually enable or disable some plug-ins.

Disabling plug-ins:

You may wish to only enable certain plug-ins – the ones you immediately wish to use with Automap 4; for example, your favourite synth plug-in. To remove Automap control from the plug-ins you don't need to use with Automap, open the Software Setup tab of the Automap 4 window and select the plug-in format from the list at the bottom left. This will display of all the enabled plug-ins of that format.



Un-tick the Enabled check box to disable a plug-in. (Multiple plug-ins may be disabled by using the Shift key).

The 'enabled' version of the plug-in is the original plug-in with the added required functionality to allow Automap 4 to control its parameters.



IMPORTANT: Please ensure that your DAW software is not running when you enable or disable plug-ins. You will need to restart your DAW after making any changes to the plug-ins' status.

Enabling a plug-in for use with Automap 4

When you install a new plug-in for your DAW, you will need to enable it for use with Automap 4 before Automap 4 will allow you to control it from your hardware device. Ensure that Automap 4 is not running when you install the new plug-in. After its installation is complete, launch Automap 4 and open the Software Setup window; you will see that the new plug-in has been recognised and added to the list, but the Enabled box will not be ticked. Tick it to allow Automap 4 to control it.

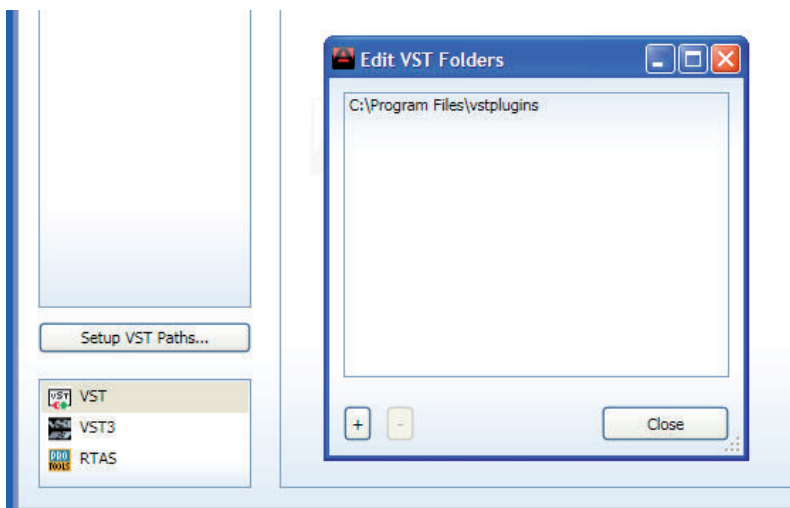
Updating an existing plug-in for use with Automap 4

When installing a later version of an existing plug-in, we recommend that you first open the Automap 4 Software Setup window, and untick the plug-in's Enabled box. Then close Automap 4, and perform the plug-in update process. When complete, re-launch Automap 4, re-open the Software Setup window, and re-enable the plug-in.

If you forget to disable a plug-in while performing an update, the updated plug-in will no longer function with Automap. Automap will prompt you that you need to re-enable the plug-in the next time it is launched.

Adding VST Folders (Windows only)

On Windows, VST plug-ins can be installed to more than one folder location. Click on the Setup VST Paths... sign to open a directory tree, where folders which need to be scanned can be selected.



AUTOMAP TERMINOLOGY

Before you start to use Automap 4 we recommend that you read this section carefully to get a good understanding of some of the terminology used in this manual. The following terms are used throughout the User Guide:

DAW

The DAW (Digital Audio Workstation) is your recording/sequencing/music-making software application, such as Pro Tools, or Cubase or Logic.

Device

A Novation hardware MIDI controller, such as Nocturn, Impulse keyboard, SL MkII keyboard, etc.

Mapping

A Mapping defines the current assignment of controls on your hardware to parameters of the DAW and/or its plug-in(s).

The Edit Mapping Window

This is where you can modify the current Mapping, reassigning hardware controls to other software parameters.

Plug-in

A software application which adds additional functionality to your DAW. A plug-in generally needs to be enabled for Automap 4 before it can be controlled by your external controller hardware. Plug-ins may be either native (supplied as part of the DAW), or third-party (installed independently by the user).

Automap 4 supports the following plug-in formats: VST, VST3, RTAS and AU.



NOTE: Your DAW software's native plug-ins may or may not be one of these formats. Nevertheless, some native plug-ins (e.g., all those in Logic) are still controllable by Automap 4.

Mixer

An audio mixing application which is part of a DAW.

Thing

In the context of Automap 4, a Thing is anything you can control using Automap. Plug-ins, DAW mixers and external MIDI devices under Automap control are all examples of Things.

The connection between Automap and Things is made internally in the computer; the Things tell Automap 4 which parameters are available for control. Automap 4 then assigns these parameters to controls on your hardware controller. A maximum number of 256 Things can be connected to Automap 4 at any one time.

Automap HUI Mixer Control

HUI is a special MIDI protocol designed for controlling software mixers. Automap HUI is a special port that Automap 4 makes available to your music software to allow control of these software mixers from your hardware. Of the DAWs officially supported by Automap 4, HUI is only used with Pro Tools. However, Automap HUI can be used with other DAWs not on the officially supported list, provided they support the HUI protocol.

Automap MIDI

Automap MIDI is a virtual software MIDI port that allows control of any software or hardware device that responds to certain MIDI data (CC, Note On/Off and Pitchbend). This allows you to use your hardware as a standard MIDI controller.

Control

A Control is a knob, button, slider, or cross fader on your Novation hardware. The layout of the hardware controls is replicated by the Edit Mapping window.

USING AUTOMAP 4

In most cases* when you launch your DAW, Automap 4 will automatically open as well. Automap 4 can be opened manually, if necessary, from the following locations:

Mac: Macintosh HD > Applications > AutomapServer

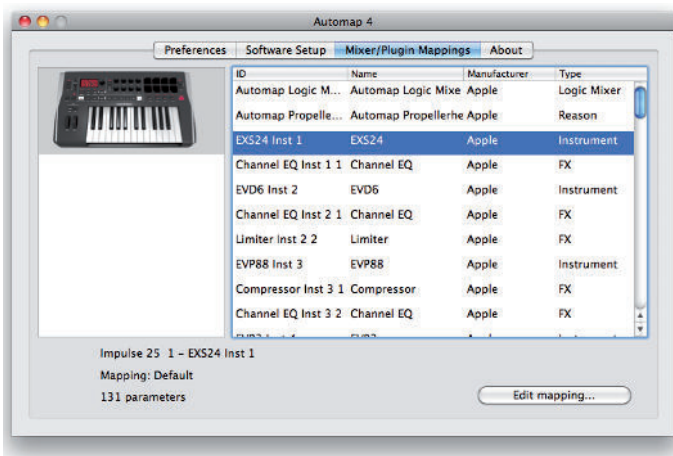
Windows XP and Windows 7: Start > All Programs > Novation > Automap > Automap Server



*Automap 4 will not be launched automatically for Propellerhead's Reason/Record software and will need to be loaded manually.

Automap 4 runs 'in the background'; this means that by default, you will not see any window specific to Automap 4 during normal DAW use. However, the Edit Mapping window can be opened at any time by clicking the Automap icon in the Menu/Status bar, selecting Edit Mapping and then selecting a Thing from the list.

Also, Automap 4 does have a 'management' window, the Automap 4 window, which is used for setting preferences, managing plug-ins and software setup. This can be opened at any time from the same icon, and selecting Preferences..., Software Setup... or Mixer/Plugin Mappings..., which will open the Automap 4 window at the appropriate tab. (The Edit Mapping window can also be opened from here).



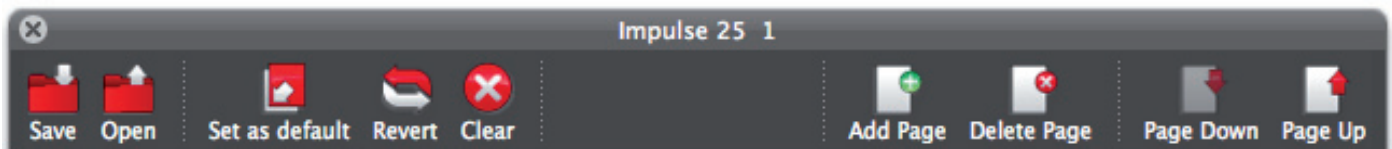
Edit Mapping window Overview

The Edit Mapping window is the main software interface for your hardware. Note that Automap 4 supports earlier Novation products (such as Nocturn), and that the graphics detail of the window will change according to the hardware connected.

The Edit Mapping window provides two main areas of control – for plug-ins, and for the DAW's mixer. The method of switching between the two control areas is dependent on the type of hardware connected.

Certain basic controls are provided for all types of controller:

Title Bar and Menu Bar



The Title Bar confirms the type of hardware controller connected.

On the Menu Bar, the following buttons are provided:

Save

Clicking this opens a Save window, allowing you to save either the plug-in's current Mapping, or the current DAW mixer's assignments and settings.

Open

This lets you load a Mapping file previously-saved for a particular Thing.

Set as default

Clicking this will replace the 'factory' set of default control assignments with those currently set up. Thus once you have changed assignments to suit your method of working, every time you load the plug-in in future, those assignments will be active.



NOTE: Default Mappings are saved in the following locations:

Mac: Macintosh HD > Users > {User} > Library > Application Support > Novation > Automap Universal > Mappings > {Hardware controller type}

Windows XP: C:\Documents and Settings\{User}\Local Settings\Application Data\Novation\Automap Universal\Mappings\{Hardware controller type}

Windows 7: C:\Users\{User}\AppData\Local\Novation\Automap Universal\Mappings\{Hardware controller type}

Revert

Clicking this resets the Mapping to the default set of assignments.

Clear

Clicking Clear removes all current assignments from the Edit Mapping window, and leaves the controls free to be re-assigned. (Note – Clear will remove assignments from all Mapping pages.)

Add Page

You can add a further Mapping page to the existing set by clicking this icon. (This may be used to add your own 'personal' page(s) without overwriting the default pages, for example.)

Delete Page

This deletes the currently-displayed Mapping page

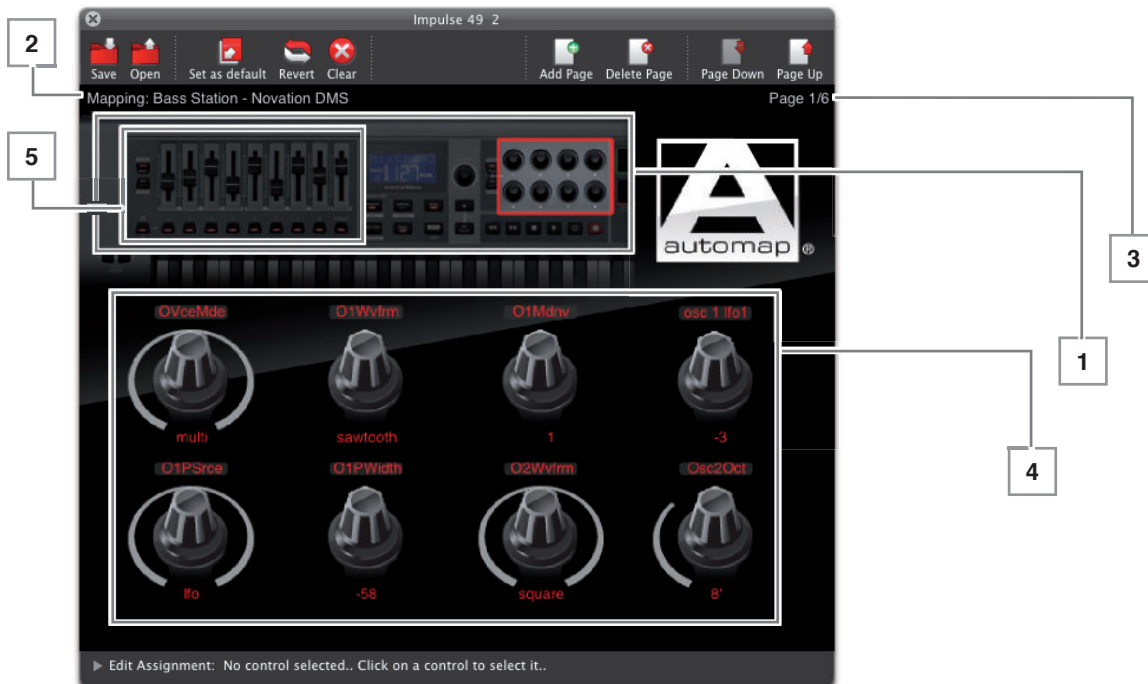
Page Down & Page Up

These two buttons simply scroll through the Mapping pages in either direction (you can do this from the hardware controller as well).

Using the Edit Mapping window with Impulse

Load an Automap-enabled plug-in into your DAW software. Open the Edit Mapping window.

The Edit Mapping window will display the parameters which have been mapped by Automap 4, as well as other information about the plug-in.



The example above shows a Novation Bass Station plug-in mapped onto an Impulse controller.

1 Hardware Overview

The window displays an overview of the Impulse controller at the top. Click on the rotary controls or the fader area to enable the main Mapping for plug-in control or DAW mixer control respectively.

2 Name/Manufacturer

Names of plug-in and its manufacturer.

3 Page Number

Because most plug-ins have more than eight parameters, multiple pages may exist for control. The number of pages varies with plug-in. You can scroll through pages with the Page Up and Page Down buttons on the toolbar, or from the Impulse.

4 Rotary controls

Eight rotary controls corresponding to the Impulse's rotary encoders are displayed below the overview. The rotary controls' main function is to control parameters in the plug-in of your choice.

5 Faders

The main display may be changed by clicking on the appropriate area in the overview. Clicking the fader area displays nine faders which correspond to the Impulse's faders. These will be automatically assigned to the DAW's internal mixer, once the Setup Wizard has been run.

Using the Edit Mapping window with other Novation Automap-compatible hardware



Load an Automap-enabled plug-in into your DAW software. Open the Edit Mapping window.

The Edit Mapping window will display the parameters that have been mapped by Automap 4, as well as other information about the plug-in.

- 1 Name/Manufacturer**

Plug-in name and plug-in manufacturer name, together with the name of the plug-in's current preset (where supported), or MIDI program number.
- 2 Name**

Initially shows the default name of the plug-in. Click on the text to edit or re-name it. This can be useful if you are using multiple instances of the same plug-in in your project, making the one you want easier to find in the browser view (see p13). Reloading the project will keep the edited names, but loading another instance in the same project, or in a new project will revert to the default name.
- 3 Group**

Shows the browser group (see p13) for each Thing (i.e., plug-in, mixer or MIDI device). Four browser groups are available: user, fx, inst and mixer. These may be accessed from the corresponding buttons on the hardware.
- 4 Page Number**

Because most plug-ins have more than eight parameters, multiple pages exist for control. The number of pages varies with plug-in. You can scroll through pages with the Page Up and Page Down buttons on the toolbar, or from the controller.
- 5 Rotary controls, Faders and other mappable controls**

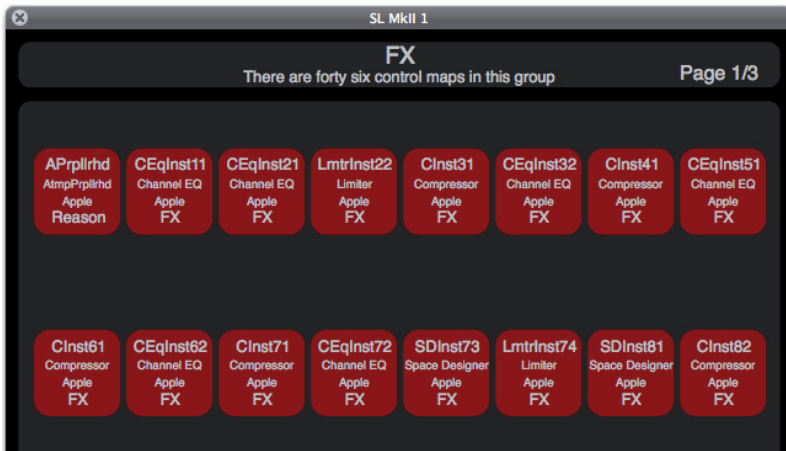
The layout of the controls in the Edit Mapping window will match the physical controls on the hardware you have connected.

Automap Browser View*



*Note that the Automap Browser View feature is not available on the Impulse range

The browser views display all plug-ins (and other MIDI Mappings) in 3 groups – these are accessed by the **user**, **fx** and **inst** buttons on the hardware.



The 3 browser groups are:

FX – Automap-enabled Effects plug-ins (example illustrated above)

Inst – Automap-enabled Instrument plug-ins

User – regular MIDI channels, things that don't naturally fit into the other groups

Note there is a fourth group – Mixer. This accesses the DAW mixer Mapping instead of a Browser page. Most users will generally only ever have one DAW, and hence one mixer.

When you select a group by pressing a group button on the hardware controller, all available plug-ins/MIDI devices for the group are displayed. The currently active Thing will be highlighted. You can select an alternative plug-in/MIDI device by touching or moving the corresponding control (hardware-type dependent) on your controller to load the control map for that plug-in/MIDI device. Alternatively, the selection can be made on-screen using the mouse.



NOTE: If there is only one plug-in/MIDI device in the group, then pressing the relevant group button will auto-select it.

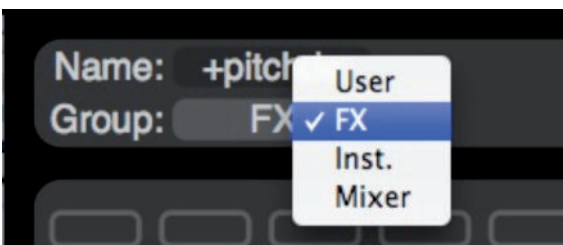
Order of Things

The order in which Things to be controlled are displayed in the browser is the order in which they were loaded in your project. If there are more Things loaded than can be displayed on a single browser page, use the page +/- buttons on your hardware to access the additional Things.

Using browser view allows quick selection of control maps. For example, if you want to control a certain FX plug-in then you know it will be in the FX group.

You can, however, assign a Thing to any of the 4 groups. For example, you may wish to control the plug-ins on 4 of the tracks in your session, in which case you could assign the control maps such they are separated between the 4 groups on a track-by-track basis rather than according to the type of Thing.

Click in the 'Group' field to select a new group for the currently selected Thing



Re-ordering Things you can control

Automap Browser mode allows you to re-order the Things within a group using drag-and-drop with your mouse. If you drag a Thing from one location to one that is already in use, then the two will swap positions.

Recording Parameter Automation When Using Automap 4

When you move a control on your Automap Hardware, the control data is sent directly to Automap 4. Automap 4 then sends this data directly to the plug-in. Automap 4 'talks' directly to the plug-in using host automation data, not MIDI. This means that control movements will not be recorded as MIDI data; they are recorded as host automation data.

To record control movements from the Automap Hardware, you must set the Automation mode on the relevant instrument or audio track to 'write' (some sequencers have a number of different write modes) and then put the sequencer into playback (not record). Automation data will then be written when you operate a control on the Automap Hardware. Remember to set the Automation mode for the track back to 'read' when you have finished recording control movements. Note that some sequencers use different methods for writing Automation data compared with this so check the documentation for your sequencer.

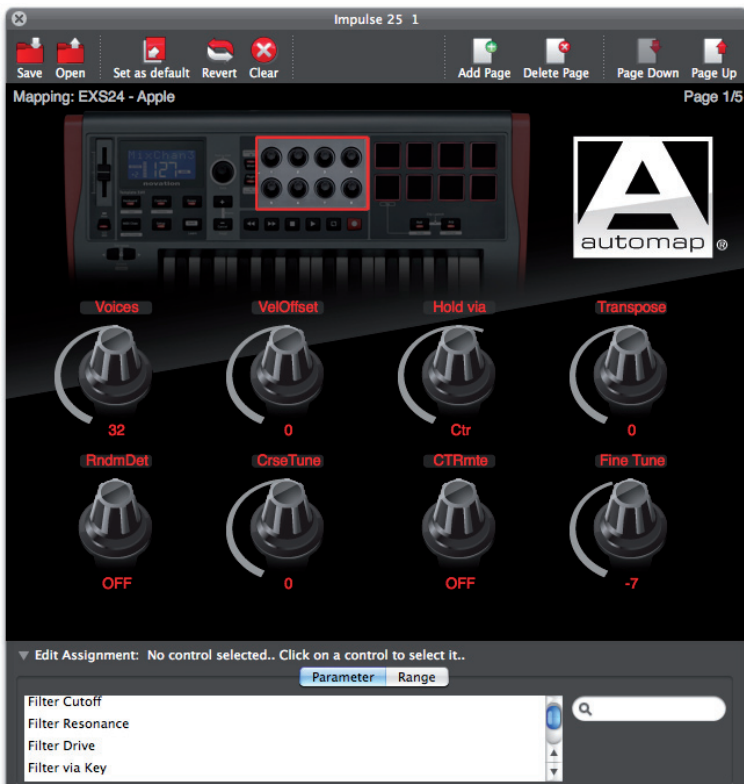
The exception to this is when you are using the advanced Automap MIDI. Automap MIDI is recorded as MIDI data. Therefore you need to have the relevant MIDI track in Record.

CREATING YOUR OWN MAPPINGS

Many plug-ins will already have default maps defined, with their parameters logically assigned to the available hardware controls. If this is not so, Automap 4 will assign parameters to the available controls in an order dictated by the plug-in manufacturer. In some cases this works quite well, but if you want to create your own control map, this can be achieved easily and quickly.

Manual Parameter Assignment

Hardware controls may be mapped to plug-in parameters directly in Automap 4, if wished.



1. Clicking on a control will expand the Edit Mapping window downwards by opening the Edit Assignment pane. (You can expand it any time by clicking on the Edit Assignment arrow at the bottom of the window.) Click the Parameter button. All available parameters for the current plug-in will be in the displayed list.
2. Click on the control to be assigned, and it will turn red
3. Select the parameter to be assigned to the control from the drop-down list in the Edit Assignment pane.



NOTE: that Automap 4 can only control those parameters that are available for automation as defined by the plug-in manufacturer.

Parameter Assignment using Learn

Novation hardware controllers have a Learn function which simplifies the process of parameter assignment. However, there are slight differences in the method of using Learn between controller types, and you should, in addition, consult the User Guide for your particular hardware.

Learn mode can be used to map new parameters to controls, or to overwrite existing parameters with new ones.

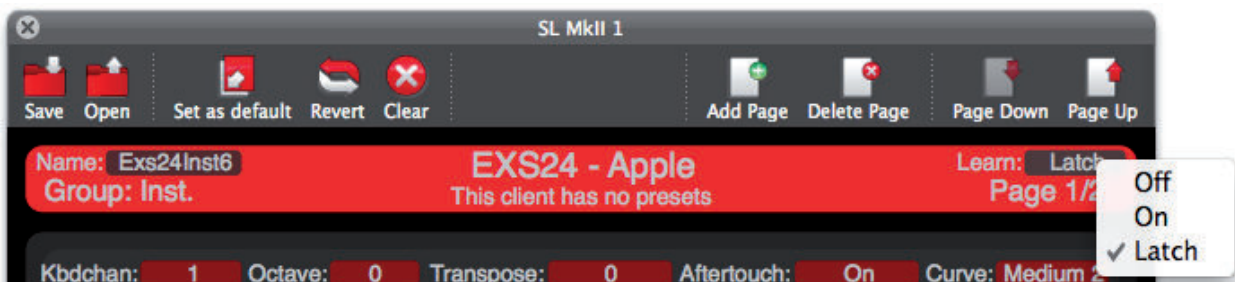
1. On the plug-in itself, click on the control for the parameter you wish to assign, and alter its value slightly.
2. On the hardware controller, press Learn*, and touch or move the control* you wish to assign the parameter to.
3. The parameter's name and value are now mapped to the control.



* Not all controllers have a dedicated Learn button, or touch-sensitive controls, thus the precise method of assignment will vary somewhat. Please consult the user guide for your hardware.

Learn latch mode with other Novation Automap-compatible hardware

Normally, Learn mode maps one control at a time; pressing Learn once assigns the chosen parameter, then automatically switches off. However, it is possible to “latch” the Learn function on, to permit multiple control assignments to be made in one operation.



Click on the Learn field in the Header Bar, and select Latch. The procedure for assigning plug-in parameters to controls may now be repeated as many times as wished. When you have finished your assignments, set Learn back to Off.

Quick Re-ordering of Parameters

Automap 4 allows you to reposition the controls in the Edit Mapping window by drag-and-drop. This is a quicker way of re-arranging your map compared with control reassignment. If you drag a control from to a position that is already in use (for a different control), they will swap positions.

Renaming Parameters

A parameter may be renamed, if wished. This will also change the parameter's name as it appears on the hardware controller (if it has a display). Double-click on the name field below the control and enter the new name. Note that the name shown in the Edit Assignment pane remains unchanged.



MIXER MODE

The DAWs listed on page 5 support direct control of their mixers using Automap 4. Other DAWs will need to make use of Automap HUI to control their mixers.

This section gives details of how to correctly configure Automap 4 to work with your DAW's mixer.

Automap Mixer

Once correctly set up, a control map for your DAW's mixer will be available in the Edit Mapping window, either by clicking on the fader area of the hardware Overview (Impulse), or pressing the mixer button on the hardware (earlier Devices).

The following mixer parameters can typically be assigned:

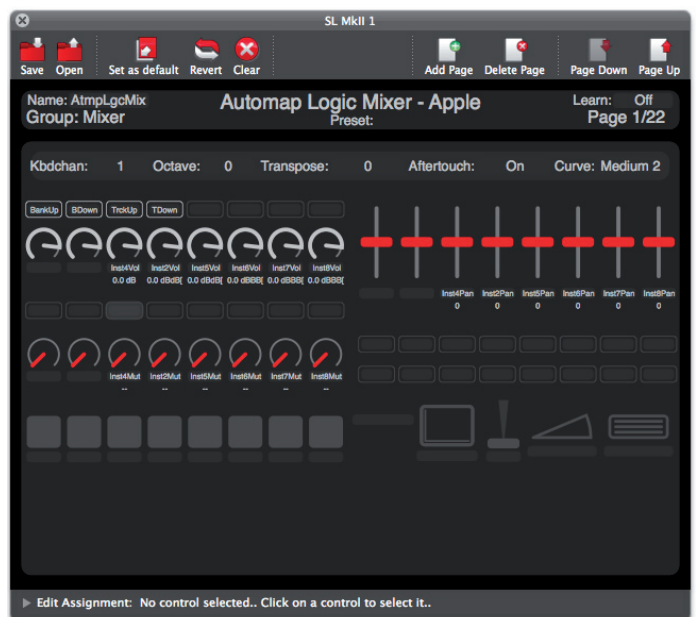
- Channel Level
- Channel Pan
- Channel Mute
- Channel Solo
- Channel Record Arm
- Channel Send level
- Master level



NOTE: not all the above may be available. The functions available to Automap 4, and the functions' names, differ between DAWs.

Example:

A DAW mapped onto two different Novation controllers:



Logic, Cubase and Sonar support the Automap Learn function, so if you are using one of these with a Novation controller which has a Learn button, getting Automap 4 to learn the mixer parameters is simple. See p15.

Controls can also be mapped by selecting a parameter from the Edit Assignment pane.

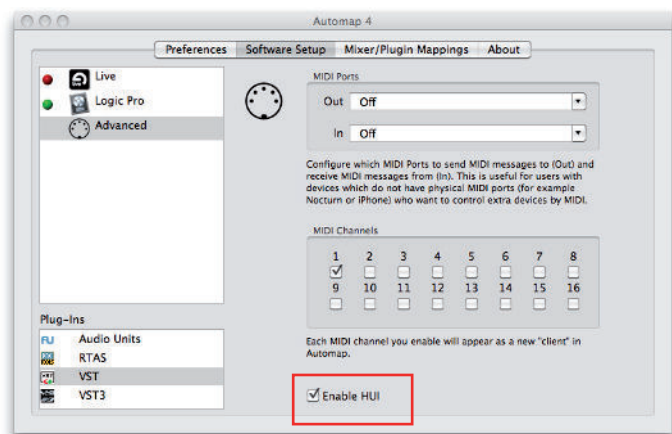
If you change the names of the tracks in your DAW, Automap 4 will also change the name displayed in the Edit Mapping window. In most cases you will want the track name to be the same here as it is in the DAW; however, you can overwrite the track name using the same method as for plug-in parameters – click on where the name is displayed under the control, and enter the new name.

Saving Mixer Mappings

You can use the Set as default button to save the current control map as the default Mixer Mapping which loads when you open or start a new a sequencer project. Any changes to the default mixer control map are not automatically saved with the project. If you change the default mixer control map to suit the needs of a particular project then you must save the control map using the Save button before closing the project. After reopening the project, select Mixer mode and then use the Open button to load the previously-saved mixer control map.

Automap HUI - Controlling HUI supported Mixers

To control the mixer in Pro Tools or the mixer in a DAW that does not support direct mixer control from Automap 4 (i.e., one not in the list of supported DAWs on p5), use Automap HUI. HUI is a standard protocol that some DAWs use to control their mixers from a remote hardware device. To enable Automap 4 for HUI operation, open the Software Setup window, select Advanced and tick the Enable HUI checkbox. Note that with DAWs which do support Automap mixer control, the HUI option will not be available.



The following mixer parameters can be assigned using HUI:

- Channel Level
- Channel Pan
- Channel Mute
- Channel Solo
- Channel Record Arm

Bank Left and **Bank Right** can be assigned to buttons to bank between groups of 8 tracks. (Note that the Novation Impulse controller has dedicated buttons for this function. Please see the Impulse User Guide for full details.)

The **Bank +/-** control can be assigned to any pot, encoder, slider or cross fader to scroll between groups of 8 tracks. If assigned to a non-button control, the control needs to be moved to both its extreme positions for the bank to move up or down.

The above picture shows tracks 1-8 simply named 1 Vol, 2 Vol etc; 1 Mute, 2 Mute etc. However, once a project is loaded in your DAW the names of the tracks as they appear in the DAW will be displayed. Renaming a track in your DAW should update the track name displayed in Automap 4.



NOTE: As with all Maps, controls can be re-ordered to create alternative layouts. When altering the layout, ensure that the DAW is not running, i.e., if changes are made while the HUI Thing is in use with a DAW, then any changes will not take effect until the DAW is re-started. If you make any changes to the HUI map, then remember to click Set As Default.

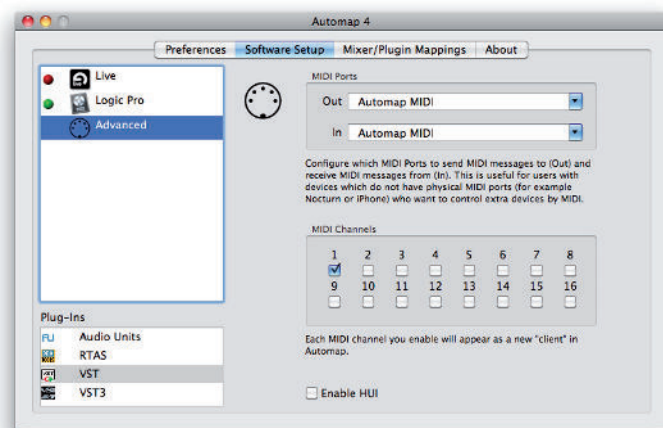
AUTOMAP VIRTUAL MIDI

(applicable only to certain Novation Automap-compatible products)

Automap Virtual MIDI is a way to use your hardware controller as you would any usual 'standard' MIDI controller. Automap Virtual MIDI will send or receive regular MIDI CC, Note On/Off and Pitchbend messages. In this case, instead of the messages coming from the hardware itself, the messages come from the Automap 4 software and thus can be edited easily.

Setting up MIDI Channels and Ports

Before using Automap Virtual MIDI you must ensure that MIDI Output and Input Ports are set to Automap MIDI. Open the Software Setup window and select Advanced from the DAW list. Select the two MIDI Ports to Automap MIDI. Then enable the MIDI channels which you wish to use.



The available Output and Input MIDI Ports include all MIDI interfaces connected to your computer, plus a virtual port called 'Automap MIDI'. When 'Automap MIDI' is selected you can control any software using this virtual MIDI port. Consequently you will also see 'Automap MIDI' appear as an available MIDI input and output port in your DAW software.

Automap Virtual MIDI can be used to control software applications that do not directly support Automap. A few examples would be using MIDI Learn in Ableton Live, controlling Native Instruments Traktor DJ, or assigning Quick Controls in Cubase.

The Automap Virtual MIDI port will only be available when Automap 4 is running. You must launch Automap 4 before launching your DAW so that your DAW can establish a connection to it as it launches. If you quit Automap 4 while your music software is running, you must also close the music software, re-launch Automap 4 and then re-launch your music software to re-establish the connection.

In addition to selecting a MIDI port, you must also select a MIDI channel or Multiple MIDI channels from the same tab of the Automap 4 window. Each MIDI channel enabled will create a new Automap Virtual MIDI Thing. These are listed in the 'user' group in the Automap browser.

When a MIDI Input Port is selected, Automap 4 will 'listen' to incoming MIDI messages. This means that you can use Automap MIDI to learn parameters. For example, if you have a hardware synthesiser connected to the selected MIDI interface, moving a control on the synthesiser will output a MIDI CC message. Therefore, after selecting Learn on your hardware controller and assigning one of its controls, it will be able to remotely control the synthesiser's parameter.

Other Automap Virtual MIDI functions

Assigning, renaming, re-ordering and editing controls work in the same way as using any other Automap-controlled Thing.

Saving your custom Automap MIDI Maps

Default level

The Set as default button will save the current Map including the MIDI channel(s) assignments. If you deselect the MIDI channel(s), then when it is re-selected, the MIDI map will automatically load the Map from this state.

User Level

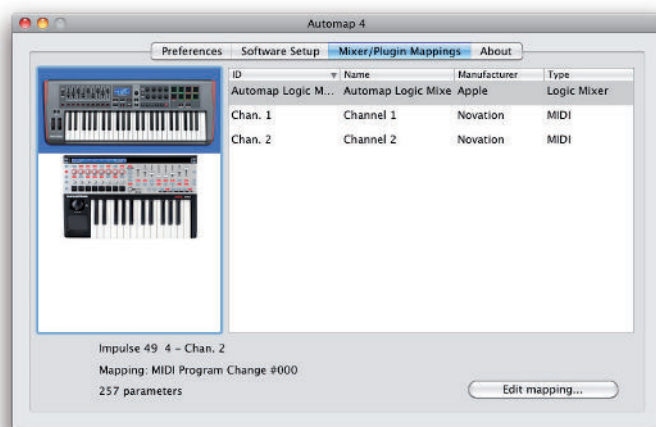
Save allows you to save the current Map to any user location.

Project level

As the MIDI Thing is not directly linked to a DAW project, the MIDI Maps are automatically saved when you quit Automap 4 (rather than being saved in your DAW project), and these are re-called when you re-launch Automap 4.

MULTIPLE HARDWARE DEVICES

With Automap 4 it is possible to use multiple hardware controllers (for example, an Impulse and an SLMkII). Automap 4 will display a graphic of all the controllers connected to your computer in the Mixer/Plugin Mappings tab of the Automap 4 window.

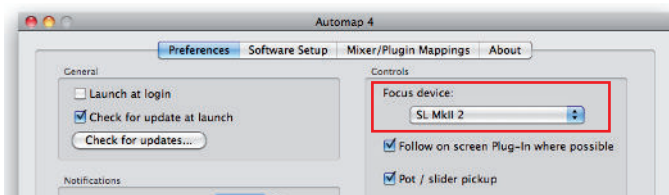


Different hardware devices can control different Things simultaneously, however Automap 4 can only display one device at a time. Pressing the view button on any controller (except Impulse) will display the Edit Mapping window for that device.

For Impulse only: select Impulse from the left hand pane in the Mixer/Plugin Mappings tab, and double-click the Thing you want to display in the list in the right-hand pane.

Focus Device

When using more than one hardware controller, one controller is always defined as the Focus device. This will be the one to which any new Things are initially assigned when they are loaded. The Focus device is selected from the Preferences tab of the Automap 4 window.



NOTE: The encoder section on Impulse always tries to follow the Focus device. Consequently this setting will not be available if you are using Impulse.

Saving Mappings when using multiple controllers

When using more than one controller of the same type, note that Automap 4 will only save one Map per Thing for that type, not one Map per controller.

This means, for example, that if you save a Map for a particular plug-in, mapped onto a Nocturn, all other Nocturns in use will load the same Map as their default for that plug-in.

Mixer/Plugin Mappings Page

This is one of the tabs of the Automap 4 window. It displays a) the hardware controller(s) currently connected to Automap 4, and b) a list of currently active Things together with additional information on each Thing.

In addition, the **Edit mapping...** button can be used to open the Edit Mapping window (if it is not already open), which will display the selected Thing as mapped to the selected controller.

Some controllers will also reveal a **Device calibration...** button. Clicking on this will open a Device Calibration window for the controller. Calibration procedure varies between hardware controllers, but as Automap 4 adjusts to suit the controller in use, users should follow the on-screen instructions.

KEYSTROKE ASSIGNMENTS

Automap 4 has a very powerful feature – QWERTY button support – which lets you program buttons on your Novation controller to send QWERTY keyboard messages. You can then send your favourite DAW keyboard shortcuts directly from the controller without using the QWERTY keyboard. For example, your DAW may have two keyboard shortcuts which command the DAW view to zoom in and out. By assigning these shortcuts to buttons on your controller, you can put the QWERTY keyboard aside and control the zoom purely from the controller.

To reassign a sequence of keystrokes to a controller button, proceed as follows:

1. Open the Automap 4 Edit Mapping Window.
2. Click on the control that you wish to assign a keystroke to (in this case, the first button of a Nocturn).
3. The Edit Mapping Window will expand to show the 'Edit Assignment pane'.
4. Click 'Range'. You will see a keyboard symbol.
 - 5a. If using a PC, select the mode as QWERTY keyboard and enter the desired keyboard shortcut (in this case the Right arrow key), or....
 - 5b. If using a Mac, left-click and hold on the keyboard symbol and then enter the desired computer keyboard shortcut (in this case the Right arrow key)

Keystroke assignments are made on a per-Map basis. If you move to another Thing, the keystroke assignments will no longer be available. This means that you can make keystrokes specific to the Thing you are using. For example, keystrokes added to a mixer Map can be specific to navigating around the mixer, whereas a different set of keystrokes can be used with a MIDI Map.



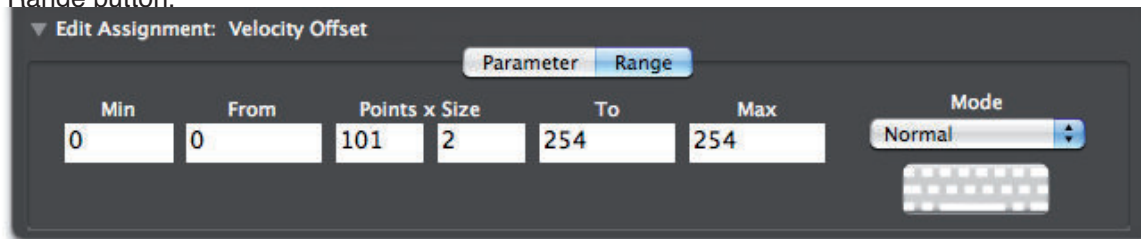
Note that keystroke assignments must be saved with the Map they are used in - either by using **Set as default** or **Save**.

APPENDIX

Editing Controls

You can change the way in which a Thing's parameters respond to movements of the hardware controls. The default relationship between hardware controls and the various parameters on your software will often be satisfactory, but occasionally you may wish to alter the relationship manually. This situation often arises because not every plug-in manufacturer makes their parameter data in the same way, and you may wish, for example, alter the range of parameter values which is mapped to a hardware control.

Expand the Edit Mapping window by clicking on the Edit Assignment arrow at the bottom of the window. Click the Range button.



When a control is selected on-screen by clicking it, it is highlighted (graphics vary between controllers), and the name of the parameter assigned to it is displayed in the Edit Assignment pane together with a number of numeric fields. The values in these fields determine how movements of the hardware control will be interpreted by the plug-in. The numeric fields displayed vary, depending on the type of control selected.

There are three types of control:

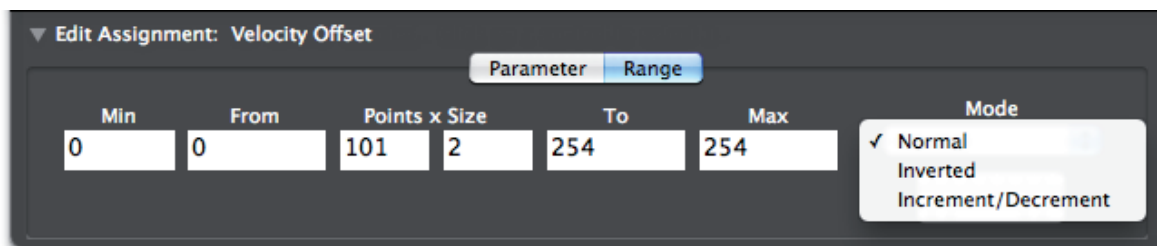
- Encoders
- Buttons
- Pots and sliders (faders, crossfaders)

The way in which the relationship between the hardware control and the parameter may be altered (edited) is discussed separately for each control type:

Editing Encoders

An encoder is a control whose absolute physical position is irrelevant; these are generally rotary controls with no end stops.

Each encoder can be set to one of three modes with the drop-down Mode button: Normal, Inverted or



Increment/Decrement.

Normal Mode

Rotating the control clockwise increases the parameter value.

Inverted Mode

Rotating the control clockwise decreases the parameter value.

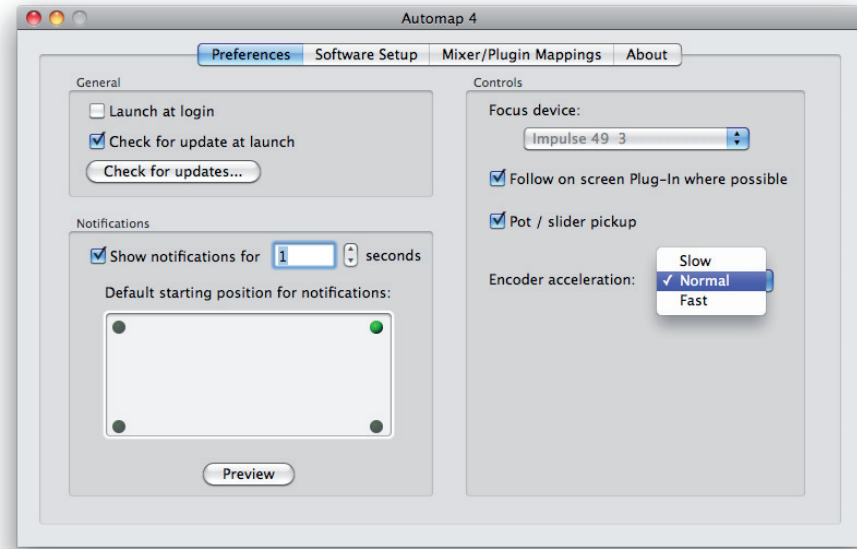
Increment/Decrement Mode

In this mode, the encoders send information to tell a Thing in which direction the encoder has been turned and how fast it has been turned. Not all Things are able to interpret this data but it is very useful in advanced music software such as Max /MSP.

When set to this mode an encoder will send a value of 1 for a slow clockwise turn. The sent value will increase up to 64 as the encoder is turned faster. Turning an encoder anticlockwise will send a value of 65 for a slow turn. This value will increase up to 127 for a fast turn.

Hardware Settings: Encoder Acceleration

Encoder acceleration can be adjusted from the **Preferences** tab of the Automap 4 window. This setting affects the relationship between how fast you rotate an encoder and the magnitude of its effect over the parameter you are controlling. The default setting is Normal but this can also be set to Fast (for coarser control) or

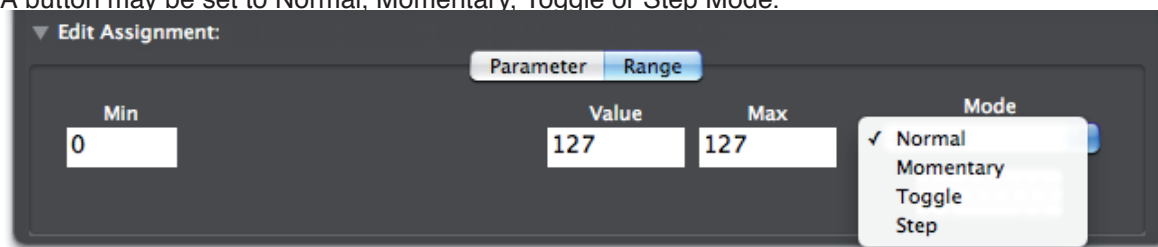


Slow (for finer control).

Editing Buttons

As buttons are a different type of controller, the set of range values displayed is different from that for encoders. When a button is assigned to an analogue parameter (as opposed to a switch), the difference between the Max and Min values determines the number of button presses required to change the parameter from its minimum value to its maximum value.

A button may be set to Normal, Momentary, Toggle or Step Mode.



Normal Mode:

Setting the Max and Min values to be equal will give the button 'normal' action. If both are set to zero, pressing the button will set the parameter to its minimum value and stay at minimum when the button is released. Setting both to any non-zero value will make the parameter assume its maximum value when the button is pressed and retain that value when the button is released.

The screenshot shows the 'Edit Assignment: Master' window. At the top, there are two tabs: 'Parameter' and 'Range'. Below the tabs, there are four input fields: 'Min' (0), 'From' (0), 'To' (127), and 'Max' (127). To the right, there is a 'Mode' dropdown menu with 'Normal' selected and 'Inverted' below it. A keyboard icon is visible at the bottom right.

Momentary Mode:

In momentary mode, the parameter is set to the value defined in the Press field when the button is pressed and to the value defined in the Release field when let go.

The screenshot shows the 'Edit Assignment' window. At the top, there are two tabs: 'Parameter' and 'Range'. Below the tabs, there are four input fields: 'Min' (0), 'Release' (0), 'Press' (127), and 'Max' (127). To the right, there is a 'Mode' dropdown menu with 'Momentary' selected. A keyboard icon is visible at the bottom right.

Toggle Mode:

Toggle mode is used to configure a button as a switch with two states which alternate on consecutive presses - e.g., Press 1 - 'bypassed', Press 2 - 'not bypassed'. The parameter values sent to the Thing in the two states are defined in the Off and On fields.

The screenshot shows the 'Edit Assignment' window. At the top, there are two tabs: 'Parameter' and 'Range'. Below the tabs, there are four input fields: 'Min' (0), 'Off' (0), 'On' (127), and 'Max' (127). To the right, there is a 'Mode' dropdown menu with 'Toggle' selected. A keyboard icon is visible at the bottom right.

Step Mode:

The screenshot shows the 'Edit Assignment' window. At the top, there are two tabs: 'Parameter' and 'Range'. Below the tabs, there are six input fields: 'Min' (0), 'From' (0), 'Points x Size' (11, 12), 'To' (127), and 'Max' (127). To the right, there is a 'Mode' dropdown menu with 'Step' selected. A keyboard icon is visible at the bottom right.

Multi-state parameters:

If the parameter to which the button is assigned is a 'rotary switch type' with more than two states - e.g., Filter Type selectable to low-pass, band-pass or high-pass - enter a higher Max value. In this example, a Max value of 2 will allow the button to scroll between the three filter types on successive presses.

Continuous parameters:

If the parameter to which the button is assigned is an analogue type (i.e., 'continuous') - e.g., filter cut-off - the button can be used to step through the parameter range. With Min set to zero and Step set to 1, you can simply adjust the value of Max to set the number of button presses required to step through the complete parameter range. If you want the button action to be reversed so that successive presses decrease the parameter value, swap the Max and Min values.

Editing Pots and Sliders

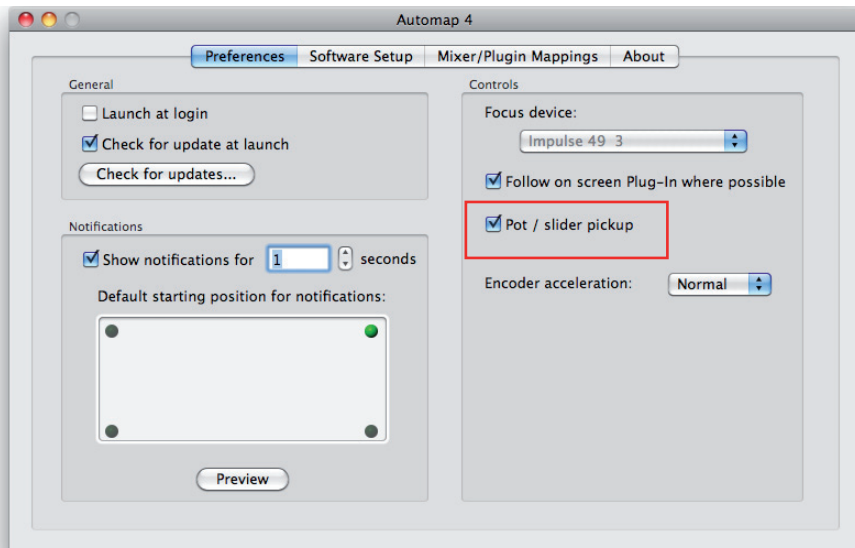


A pot or slider differs from an encoder in that the physical position of the pot's knob pointer always represents the value of the parameter being controlled.

Pots have fixed sensitivity, so the difference between the Max and Min values has no effect. As with encoders, if the Min value is made larger than the Max the action of the pot will be reversed, i.e., it will decrease the parameter value as it is turned anticlockwise. Also as with encoders, if you want a pot to have its 0 position in the centre, enter a negative number for the Min value.

If the control is a slider, the control at its fully 'down' position corresponds to a pot at its fully anticlockwise position, and 'fully up' to a pot at its fully clockwise position.

Pot / Slider pickup



If this checkbox is ticked, the pot or slider will not alter the parameter it is assigned to until its physical position corresponds to the current parameter value. This prevents the parameter suddenly 'jumping' to a new value corresponding to the position of the control after selecting a different control Map.

Automap 4 File Handling (Advanced Users Only)

Enabling plug-ins for Automap 4 use creates files related to the original plug-in files. The following lists the files which are created, and their location for each plug-in type.

Windows VST:

Original plug-in: plug-in X.dll
Enabled plug-in: plug-in X (Automap).dll

The Automap 4 file is created in the same folder as the original. You are free to move the Automap 4 file to another location.

Mac VST:

Original plug-in: plug-in X.vst
Enabled plug-in: plug-in X (Automap).vst

The Automap 4 file is created in the Users library:

Macintosh HD > Users > {Your user name} > Library > Audio > Plug-Ins > VST

Mac AU:

A single file - AUAutomapThing.component - is created, which holds the information for all enabled Aus in the following location:

Macintosh HD > Users > {Your user name} > Library > Audio > Plug-Ins > Components

A maximum of 256 AU plug-ins can be enabled.

Mac and PC - RTAS

Original plug-in: A copy of plug-in X.dpm is placed in:

Mac: Macintosh HD > Library > Application Support > Digidesign > Plug-Ins (Unused) > Automap Plug-Ins

Windows: C:\Program Files\Common Files\Digidesign\DAE\Plug-Ins (Unused)\Automap Plug-Ins

Enabled plug-in: has the same name as the original - plug-in X.dpm – in the original location

(When Automap 4 enables a plug-in, it re-names the original file because Pro Tools will not load both the original and a enabled version of the same plug-in. When you disable your Pro Tools plug-in for Automap 4, then the original file will be replaced in its original location.)

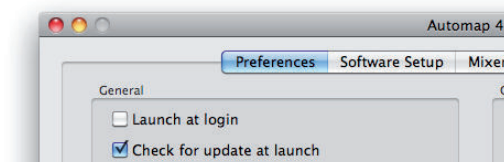
Setting Automap 4 Preferences

Automap 4 includes a Preferences page where you can customise certain aspects of its operation.

General

Launch at login

If the Launch at login checkbox is ticked, Automap 4 will start automatically when you log on to your computer. If not, Automap 4 can be started manually from:



Mac: Applications > Automap Server
Win (XP): Start > All Programs > Novation > Automap > Automap Server
Win 7: Start > All Programs > Novation > Automap > Automap Server



NOTE: most DAWs will also launch Automap 4 automatically when they are themselves launched, whether Launch at login is checked or not.

Check for update at launch

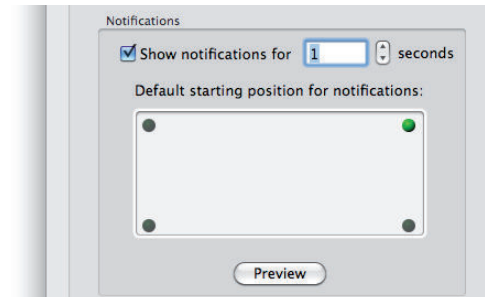
If the Check for update at launch is ticked, Automap 4 will automatically check the Novation website each time it starts, to see if an update is available. You can also manually check for updates at any time by clicking the Check for updates... button.



NOTE: An Internet connection is necessary for these options to operate!

Notifications

Automap 4 displays various notifications during normal use. These may inform you that a new Thing has taken focus, or confirm that a control has been moved on your Automap controller. The length of time for which notifications are displayed can be adjusted, and the message position on screen (Apple Mac only) can be any of the four screen corners (default is top-right). Use the preview button to test the settings and decide on the setting that suits you best. If you do not want notifications to be displayed at all, untick the Show notifications checkbox.



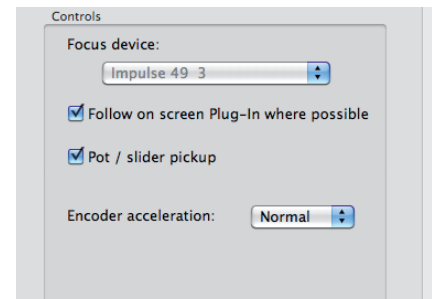
Controls

Focus device

See p19 for full details

Follow on screen Plug-in where possible

This is related to the selected Focus device. When the Follow on screen Plug-in where possible checkbox is ticked, and a new Thing takes focus on screen – e.g., when you click on a plug-in in your DAW - the new Thing will be assigned to the Automap controller immediately.



Pot / slider pick up

If Pot / slider pickup is ticked, moving a control on the hardware controller will not change the parameter mapped to it until the control's 'position' matches that of the virtual (on-screen) control. This is useful in avoiding sudden 'jumps' in parameter values.

Encoder acceleration

See p22 for full details

NOVATION CONTACT DETAILS

For the latest information, updates and assistance with Automap please visit

www.novationmusic.com/answerbase