

Instascale

MIDI Processor Plug-in

Manual

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Introduction

What is it?

Instascale is a MIDI processor plug-in which processes the MIDI messages it receives and sends out the result that can be used to play other instruments.

Concept

In regular keyboard instruments, each key is assigned to a specific note. So in order to play a certain note, we need to press the key that's been assigned to.

In Instascale things are a little bit different, the plug-in uses relative notes. Which means each key can play different notes depending on the previous note and selected scale. The plug-in calculates the intervals and the user can move up and down the scale playing melodies, arpeggios or even chords using a few keys.

The result is an unusual way of playing instruments, which can be fun, inspirational and much easier to play since you don't have to worry about hitting the wrong note, memorizing all the scales in all keys and practicing complex riffs and phrases that can be a challenge to play the usual way.

Since Instascale is a new kind of instrument, like any other instrument it may take some time to learn and master, but it can be a rewarding experience.

The plug-in is ideal for live playing and with some practice you can play complicated licks and phrases that would possibly impress anyone.

How does it work?

Instascale works as a VST instrument and AU MIDI effect plug-in. It receives midi data from the controller and swaps it with the processed data. In VST mode the output can be routed to any other instrument in the host application using DAW's internal routing functions. The AU version works as a midi effect in hosts like Logic Pro x that supports the type.

There are 16 playing keys that are actually being used to play the target instrument. What these keys do and where they're placed on the controller can be customized. They can have static offset values like 'Home' or a relative one like

'+2' or '-3'. Using this offset value and the previous note, the plug-in calculate the actual note the key plays. you can read more about the playing keys in the next section.

In addition to playing keys there are some control keys that can be used to change and control some of the parameters of the plug-in like scale and octave directly from the MIDI controller.

Features

- **Scales:** A list of commonly known and used scales such as Major, Minor, Melodic Minor, Harmonic Minor, Spanish, Arabic, Major Pentatonic, Minor Pentatonic, Blues, In Sen, Hirajoshi and more.
- **Edit or Add Scales:** Users can edit existing scales or add their own scales (Full version only).
- **Home Note:** The home note can be changed from root to some other note on the scale making it possible to play different modes.
- **Playing Keys:** For each 16 playing keys, there are two menus. The mapping menu, and the action menu. First one determines where the key is placed on the controller, and includes a list of MIDI notes. The second menu determines what the key does and includes some static and some relative options. You can read more about the playing keys in the reference section.
- **Control Keys:** There are several control keys that can be set and used to improve live performance. These keys provide an easy access to control and change the scale, octave, root and home parameters using midi notes on the controller.
 - **Root -/+, Scale -/+, Home -/+, Octave -/+:** When assigned to a midi note, these keys can be used to change the Key(root), Scale, Home Note and Octave by switching up or down the values.
 - **Scale, Root, Home, Octave Switch keys:** These assign a series of midi notes to be used to switch between specific values just by hitting a single note. For example by setting Root Switch to 'C2-B2', C2 on the controller will set the key to C, C# will set the key to C# and so on.
- **Poly:** Multiple notes can be played at the same time.

- **Note:** Same notes can be stacked on top of each other. For example in C major, Home key plus two stacked +2 key will produce C major chord (C+E+G).
- **Note:** Playing keys will change the last playing note value and because of that the order of notes are important. So even if you're using piano roll in your DAW and placing them at the same point in time or even on top of each other, the first note created will be the first one processed and so the second note's value is based on the first one.
- **Octave Shifter:** Shifts the output octave up and down. Input octave also can be shifted to match a more preferable playing position using 'C2' menu.
- **Map Playing and Control Keys:** Instascale allows users to change the default settings and map all the keys to desired midi notes.

Installation

WIN: Run the installer and follow the instruction to install the plugin on your computer. You can also copy the dll files to your plug-ins folder that your host scans. It's usually something like this:

32bit: C:\Program Files (x86)\VstPlugins

64bit: C:\Program Files\VstPlugins

OSX: Install the package or copy the plug-in files to your plug-ins folder that your host scans. It's usually something like this:

VST2: Library/Audio/Plug-Ins/VST

AU: Library/Audio/Plug-Ins/Components/

Note: OSX have more than one Library folder. Make sure you're copying the files in the right path.

Tip: Navigating to the root library folder:

On the menu bar, select Go then hold down the Option key (marked ALT) and you will see the ~/Library folder appear.

Note: Instascale creates a folder named 'WAProduction/Instascale' inside application folder when loaded at the first time.

Note: Instascale does not edit the system registry or connect to internet without user's permission. However the installer might store some information on your computer.

Note: AU Version is not an instrument like VST version. It's a MIDI effect and can be used only by hosts like Logic Pro x that supports the type. In hosts like Ableton Live and Reaper that support both AU and VST, use the VST version.

Note: Make sure your VST host supports MIDI routing. Some DAWs like Reason does not have the feature.

Demo version limitations

In demo mode only C Major is available and editing scales are disabled.

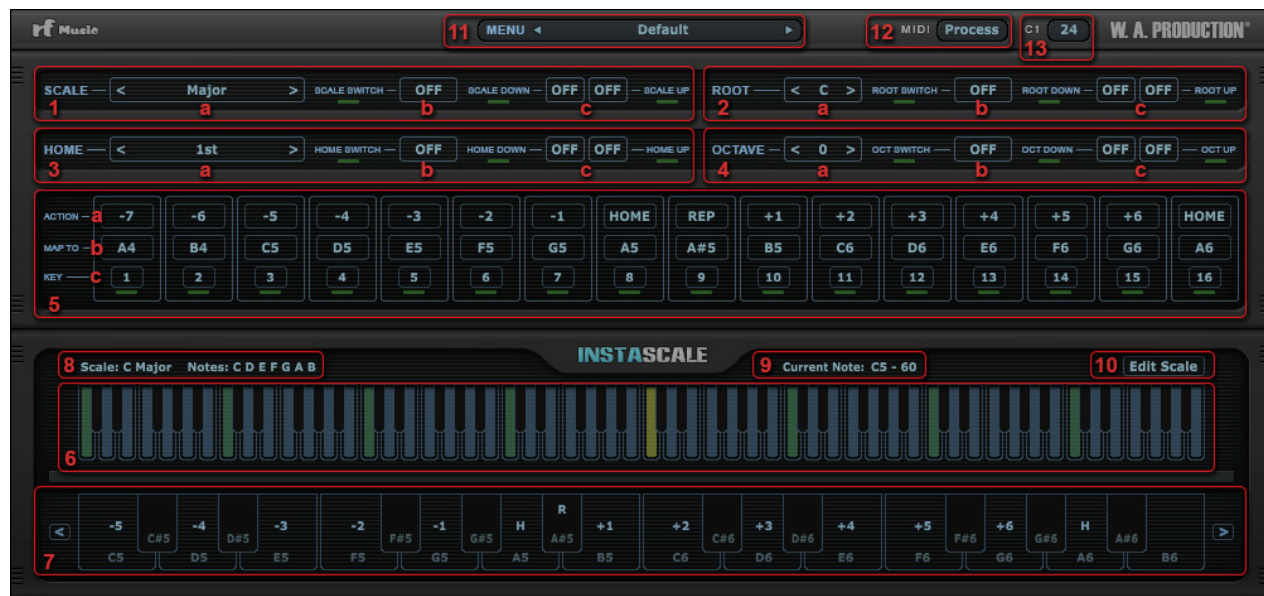
Authorization

If you have purchased **Instascale** and finished the payment, you'll receive an email with your authorization information.

Please contact **info@waproduction.com** if you have any questions.

Reference

Interface Overview



1. Scale

Here you can:

- a:** Choose a scale from the list.
- b:** Assign an octave of keys to switch between scales. For example when we have set the switch to C7-B7, hitting C7 on the controller sets the scale to the first one, hitting C#7 sets it to the second one and so on.
- c:** Assign 'scale down' and 'scale up' control keys to MIDI notes and change the scale by moving up or down the list.

2. Root (key of the scale)

Here you can:

- a:** Set the root of the scale (C, C#, etc).
- b:** Assign an octave to switch between root notes.
- c:** Assign 'octave down' and 'octave up' control keys to move up or down the list.

3. Home

Here you can:

a: choose one of the notes of the scale to be set as Home note.

The default is 1st which is the root note. In C major for example 1st note is C, 2nd is D and so on.

b: Assign an octave to switch between home menu options.

c: Assign 'home down' and 'home up' control keys to move up or down the list.

4. Octave

Here you can:

a: Choose the output octave.

b: Assign a set of 5 MIDI notes to switch between octaves.

c: Assign 'octave down' and 'octave up' control keys to move up or down the list using MIDI controller.

5. Playing Keys

16 Playing Keys can be used to play the target instrument. For each playing key you can assign an offset value (a) and a MIDI note (b). The note determines where the key is placed on the controller and when its pressed, using the offset value, the plug-in calculates the actual note it should to play.

5.a - Offsets (Action Menu):

- **Home:** Plays the home note (reset).

Home is one of the static options. Which means any key with home action, always plays the home note, regardless of what the previous note was. By default, home is the root of the scale, but it can also be changed and set to be any of the other notes on the scale. Changing home note is useful when you want to follow a chord progression or play another mode based on the current scale. For example we can play D Dorian on C major by setting home to be the second note (D).

We call this note home, because while playing, it acts like a guide or an anchor and helps to find and maneuver around that specific note.

- **Home-Nearest:** Plays the home note closest to the previously played note. This helps playing more smoothly without jumping too far to the middle home note.
- **Home + Octave:** Plays the home note one octave higher.
- **Home - Octave:** Plays the home note one octave lower.
- **Home Don't Play:** Resets the current note to home position but doesn't play it.
- **Repeat:** Plays the previous note.
- **Relative Notes (+1,...,+14 and -1,...,-14):** These represent notes with relative values. Which means the actual note will be calculated based on the previous note and the current scale. For these options the number determines the step size and the sign determines the direction.

Example: If the scale was set to C Major and the last note was C5, a +1 key will move one step forward or up the scale and play the next note which is D5. Now pressing +1 again will play the next note which is E5.

The same goes for actions with negative numbers. For example in C major with the last note being C5, -2 will move 2 notes down the scale and play the A4.

Note: Replaying the same + or - key will not repeat the same note but moves relative to it.

5.b - Mapping Menu (MIDI note assign):

Assign a MIDI note to the playing key using this menu.

Note: To prevent users from setting the same note for multiple keys, the plugin grays out in used midi notes.

5.C - Playing Key buttons:

These buttons can be used to play the keys and check what they do quickly. The numbers represent each key's ID.

6. Virtual MIDI Keyboard - Output

This keyboard helps visualizing the output and shows what notes are being played, it also highlights the notes for current scale and displays last notes position on the keyboard.

- **Cyan:** The root note of the selected scale.
- **Blue:** Other notes of the scale.
- **Bright green:** On notes (Currently playing notes).
- **Yellow:** Last note's position (Next note is based on this one).

7. Virtual MIDI Keyboard - Input

Input keyboard helps visualizing the input keys. It displays their mapping and statues while playing. It also gives the option to play them by mouse.

Bottom labels on each key shows the actual MIDI note number, and colored labels on top displays the assigned action and control keys. The keyboard can be shifted up or down using the arrow buttons on two sides.

- **Playing keys:** If the note is a 'Playing key', the label will display the offset value in a light blue color.
- **'-' and '+' Control keys:** These will be displayed in yellow.
 - **<S and S>:** Scale Down (-) and Scale Up (+).
 - **<O and O>:** Octave Down (-) and Octave Up (+).
 - **<R and R>:** Key Down (-) and Key Up (+). R as in Root.
 - **<H and H>:** Home Down (-) and Home Up (+).
- **Scale Select keys:** These are labeled as S1,...,S12 and colored in light pink.
- **Octave Select keys:** These are labeled as O1,...,O5 and colored in light violet.
- **Key Select keys:** These are labeled as RC, RC#..,RB and colored in green.
- **Home Select keys:** These are labeled as H1,...,H12 and colored in cyan.

8. Readout 1

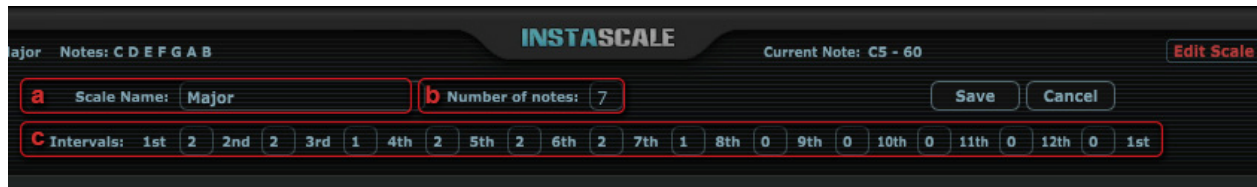
Displays the scale name and its notes.

9. Readout 2

Displays the name of the current note.

10. Edit Page

To open up the edit page hit the edit button on the main page.



a) Scale Name: Edit the scale name here. When editing is done hit the save button.

b) Number of notes: Enter the number of notes in the scale here. For example 7 for a Major scale. Maximum number is 12.

c) Intervals: Edit interval values for the scale here. 1 is half step, 2 is whole step and so on. The order is from left to right. For example: Major: C (2) D (2) E (1) F (2) G (2) A (2) B (1) C.

- **Important Note 1:** Scales are being stored in a file on the hard drive and they are independent from the plug-in preset system. So if you change them it will affect other projects that are using the same scale. The advantage is you have to do it once and every time you load the plug-in you can use the new scale.
- **Important Note 2:** Nothing will change before clicking the save button.
- **Important Note 4:** You can reset the all scales to default values using the 'Reset Scales' option from the menu.

11. Main Menu

- Save and load presets. *Scales won't be effected by presets changes.
- Reset Scales to default.
- Open about page.

12. MIDI Mode

Use this button to bypass the plug-in when needed. If pass through is enabled you can play the target instrument normally.

13. C2 Menu

In some DAWs the note's octave number (in the MIDI editor) doesn't match the plug-in. This is because some hosts start from something like C-2 and some start from C-0. If by default the numbers used in the plugin didn't match your host, you can use C2 menu to shift the input up or down and fix the issue.

Note: If you have set C2 to 12 instead of 24, you're going to play an octave lower on your keyboard.

How to use Instascale

Setting up and using

VST: The details depend on the host application you're using but basically you need to insert the plugin as an instrument in your project, then route its MIDI output to the instrument you want to play.

In order to do that we have to set Instascale's MIDI output to the MIDI input port of the target instrument track or device.

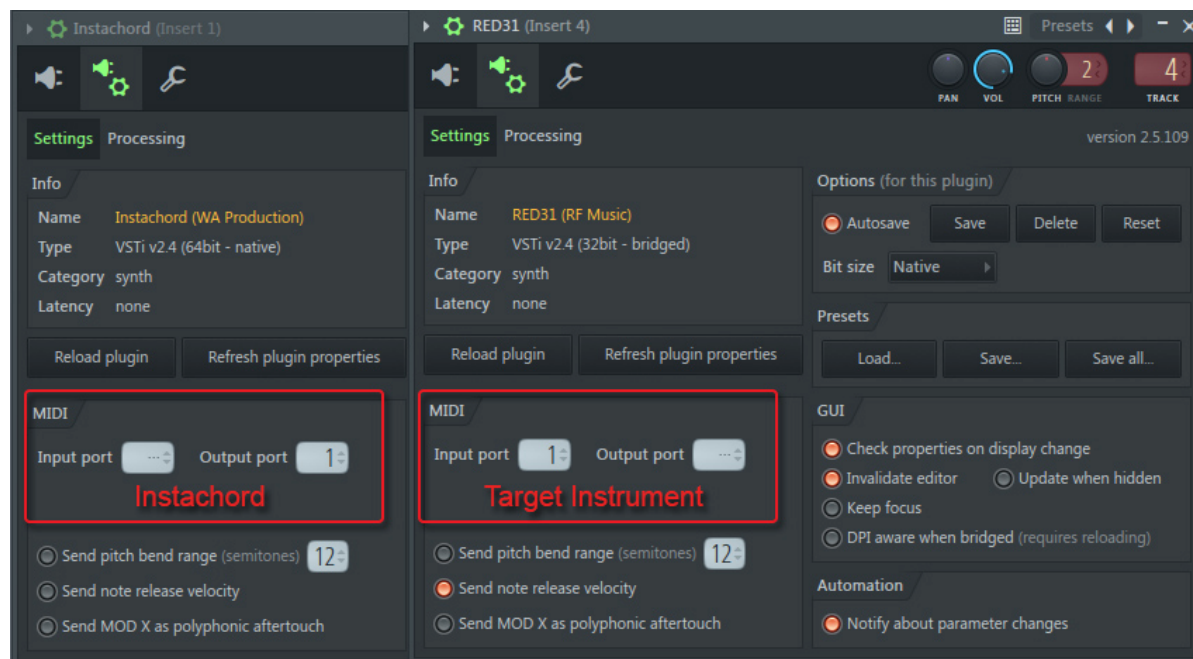
AU: AU version is a bit different and it can only be used in hosts like Logic Pro X that supports the Midi effect (Processor) type. You only need to insert the plugin as a MIDI effect on your instrument track.

Note: In hosts like Ableton Live use the VST instead of the AU.

Note: When using as AU, the plug-in doesn't start processing before it receive the first note. So when you click on the virtual keyboard the plugin will seem unresponsive.

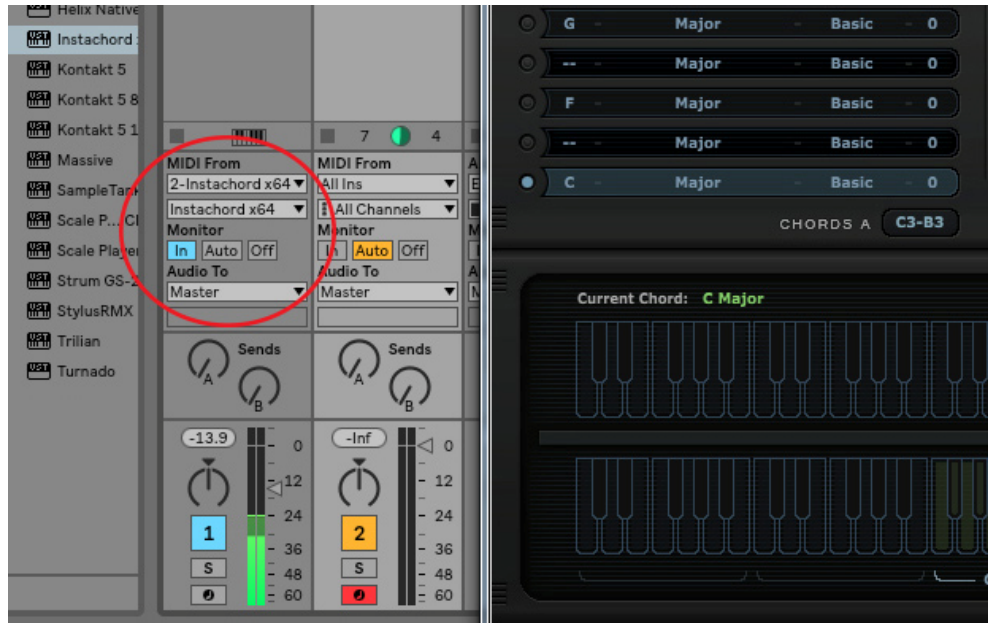
The following examples show how the plugin can be used in different DAWs. Note that setting up Instascale is similar to Instachord which is shown in the pictures.

Example 1 - FL Studio



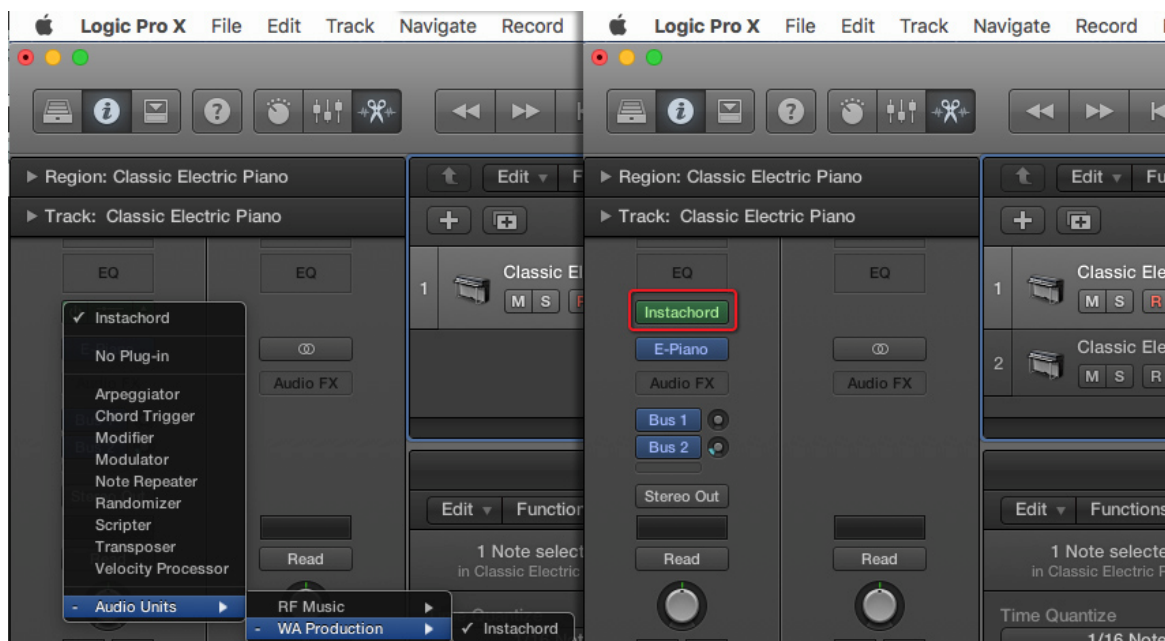
Insert instachord as a new instrument and change the MIDI routing for both the plugin and the target instrument and pair them up as shown in the picture.

Example 2 - Ableton Live



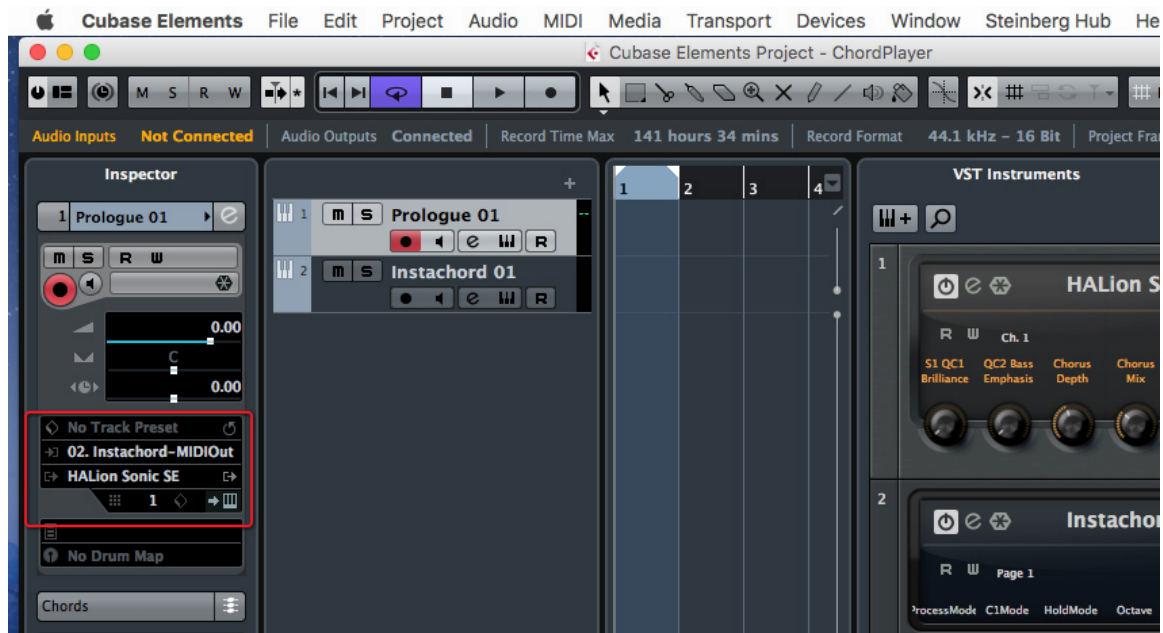
Insert instascale as a new instrument and change the MIDI input option for the target instrument similar to the picture. don't forget to turn on the monitoring as well.

Example 3 - Logic Pro X



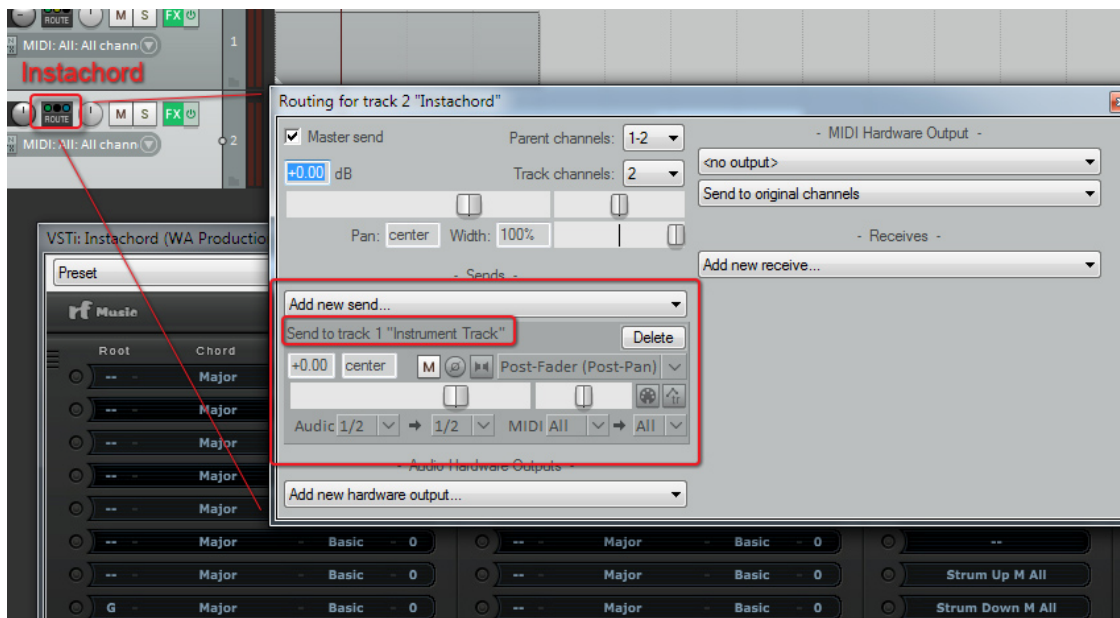
Insert the plugin as a MIDI effect on your target instrument channel.

Example 4 - Cubase



Insert the plugin as a new instrument and change the MIDI input option on the target instrument similar to the picture.

Example 5 - Reaper



Insert the plugin as a new instrument and change the MIDI send option on Instascale or MIDI receive option on target instrument similar to the picture.

Playing Instascale

Like any other instrument learning and playing Instascale needs a bit of time and practice, since we are used to traditional keyboard mode.

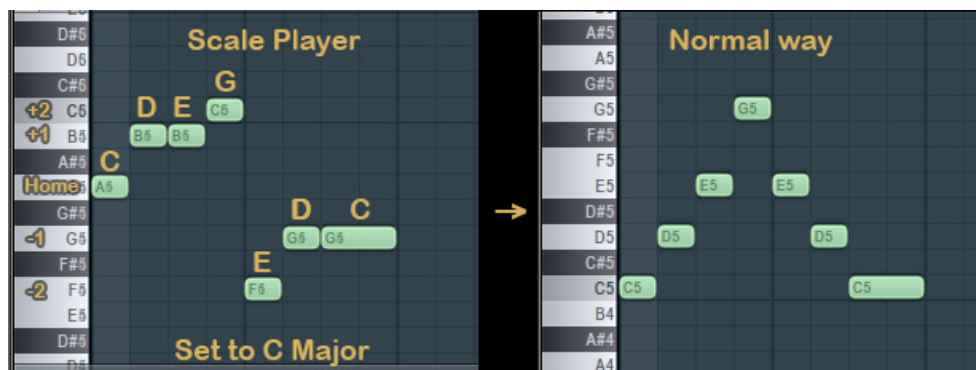
You can customize and set the keys in an order that you're comfortable with and experiment with different settings and combinations to create a unique instrument. Even if you're not using the plug-in in production the process is fun and the outcome can be musically inspiring.

Tip 1: Use the home key to stay in a good range and find your way back when getting too far up or down.

Tip 2: You can set multiple repeat keys, or keys with the same offset to play particular phrases faster and more easily.

Tip 3: Turn off any unnecessary keys and controls to keep it simple and prevent accidental hits.

The example blow show how things work in Instascale. Look how repeating the same key (+1 or -1) produces a new note each time.



Credits

Developing, Coding and GUI design by Rahman Fotouhi | info@rfmusic.net.

Visit waproduction.com for latest updates and news.

Contact info@waproduction.com for support or info@rfmusic.net to get in touch with the developer directly.

"I hope Instascale bring you more creative ideas and help you in your future projects ."

-RF