

CUBASE

VST

The Interactive
Phrase Synthesizer

Steinberg

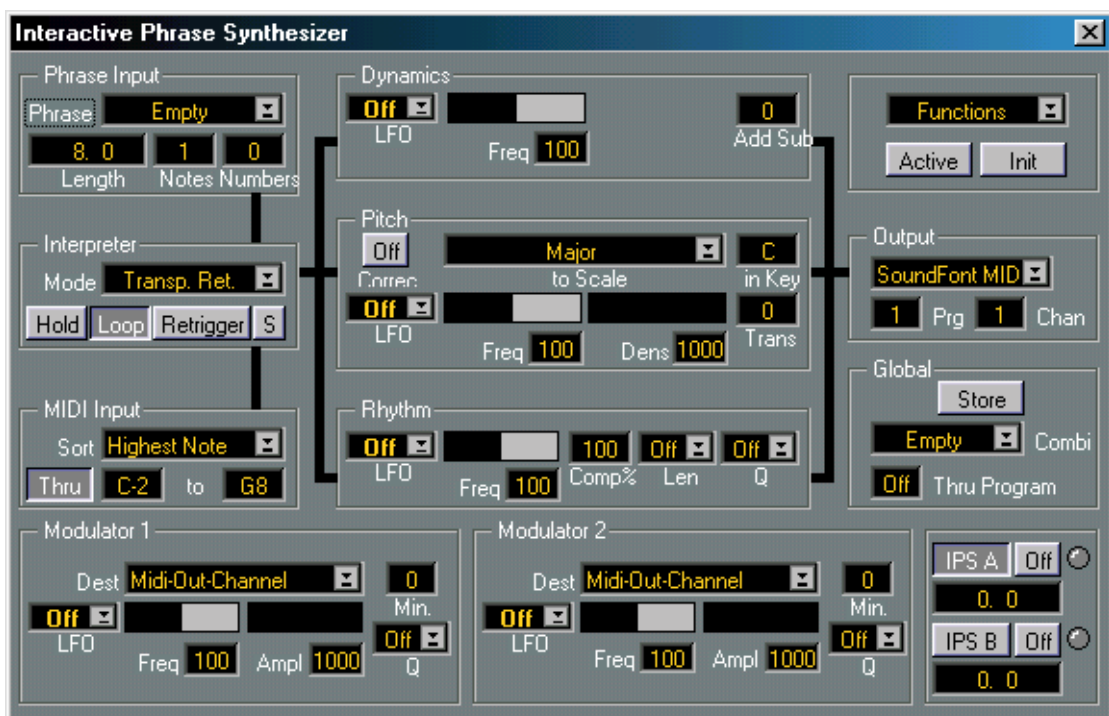
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Introduction



The Interactive Phrase Synthesizer (hereafter abbreviated “IPS”) is not a sound synth, instead each of the two available IPS “synths” (A and B) allows you to model new *music* from existing, create one finger accompaniments, generate complicated arpeggios and more.

The IPS is a lot of things, as you will find out when using it. Let us just mention what it *isn't!* It is primarily *not* a random music generator, instead, it relies heavily on your real time input. In fact, you play it like an instrument. The IPS creates its magic out of *coincidence* rather than randomness, and there's a big difference.

The IPS works in real-time (as everything else in Cubase VST), so you can use it for live playing. But you can also of course route its output to one or more Tracks so that it gets recorded as any other playing. Any parameter changes you make are immediately effective on output, so you can “twist the knobs” during playback as when playing on an old-fashioned synthesizer.

About the Window

The Phrase Synth window, which is opened from the Panels menu, contains all the controls for the Interactive Phrase Synthesizer (IPS), or actually for one of them at a time, because there are two IPS “synths”, A and B.

Examples

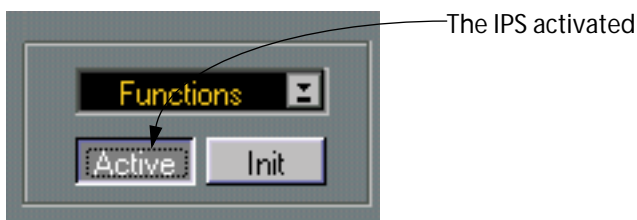
Let us show you some of the features of the IPS by going through a couple of examples that are contained in an "IPS" folder on one of your Cubase VST disks (copy the examples to your hard disk before using them).

Let us show you some of the features of the IPS by going through a couple of examples that are contained in the IPS directory in your Cubase directory.

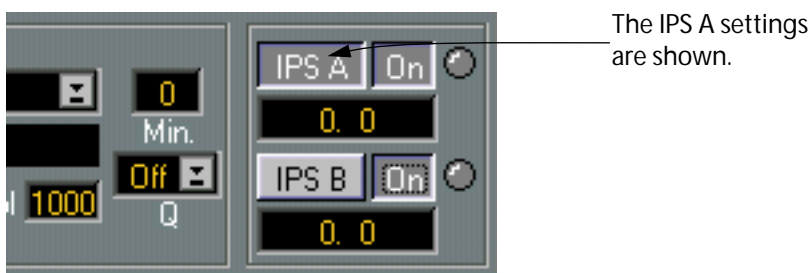
1. **Set your synths so that you have a piano sound on MIDI Channel 1, a bass sound (preferably synth type) on MIDI Channel 2 and some string or pad sound on the same MIDI Channel as the Active Track is sending out on.**

This last sound is just used to directly play the notes you are pressing on your keyboard (or whatever playing device you use).

2. **If you haven't already done so, select Phrase Synth from the Panels menu.**
3. **Press the mouse over the word Functions at the top right corner of the window, and a pop-up menu appears. From this, select Load All Combis.**
4. **A file selector appears. Open the folder IPS and select "example.cmb" and click on OK.**
5. **Turn on the whole IPS by clicking on the Active button so that it turns dark.**



6. **Make sure you see the settings of IPS A, by clicking on the IPS A button so that it too turns dark. Also make sure that the two On buttons beside the IPS A and IPS B buttons are active.**



Example 1

1. **Position the Pointer over the Pop-up menu to the left of the word Combi in the Global module. Press the mouse and select "Example1" from the pop-up menu.**
2. **Activate Play on the Transport Bar.**
3. **Press one key on your keyboard. The string sound plays the note you press.**
The piano sound plays a short riff, over and over again.

The interesting thing here is the bass part. It is actually also the riff, but the IPS modulates it so that it is turned into a new part, a part that is slightly different on each new lap! If you release the key and press a new one, the music will be transposed to the new key when the Phrase reaches the end of the lap.

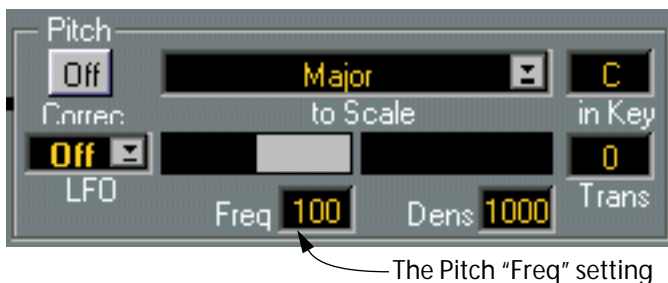
4. Turn off the music by stopping Cubase VST (using [0] or [space bar]).

Example 2

1. Select "Example2" from the Combi pop-up menu.
2. Click on the "IPS A" button so that it turns dark.
3. Activate Playback.
4. Play a key, you will hear the same piano part, but without the bass.
5. If you select the *Note Ramp Down* icon in the LFO box in the Pitch module, the order of the Pitches in the Phrase will change.



6. By clicking on the Freq field in the Pitch module you can set new frequency values for the "pitch order" LFO, and thereby change the output. Values above 100 will make certain notes/chords repeat.



7. You have now re-arranged the order of the pitches in the original Phrase. To also rearrange the rhythm, select an LFO-type in the Rhythm module. Experiment with different LFO types and Frequency values.
8. If you want the original settings back, just select "Example2" from the Combi menu.
9. Select different values in the Density (Dens) field in the Pitch module. Any value below 1000 (actually 100.0%) will make the IPS skip some notes altogether.
10. Switch off the Hold button in the Interpreter module.

You can now play the Phrase momentarily by playing and releasing a key, but if you hold the key, the music will keep repeating (Loop is still On). If you hold one key, and press another, this *last* key will be used to instantly transpose the Phrase (since the sortmode is Last Note, see an explanation of this later in the text).

11. Set the *right* key value in the MIDI Input module to C4.

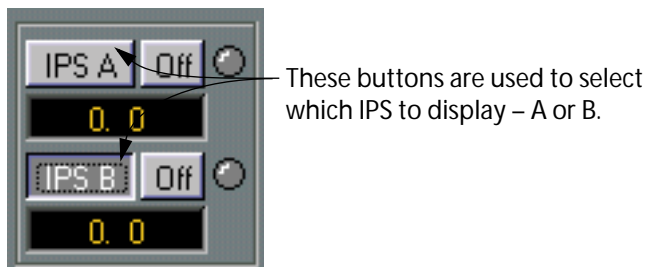
Now, keys below C4 are used to control the IPS and keys above C4 are just sent through (Thru is On), so that you can add a solo to the IPS music.

Example 3

1. Select "Example3" from the Combi pop-up menu.
2. Activate Play on the Transport bar.
3. Play a key, you will hear a Schumann piece.
4. Adjust the tempo on the Transport bar if you like.
5. Stop the music by stopping Cubase VST, whenever you wish.
6. Select the *Note Ramp Down* LFO icon in the Pitch Module (see Example 1).
The Freq setting of the Pitch LFO is 150% and this creates an interesting 3/4 feeling to the music by repeating some notes without actually changing the rhythm of the piece. The same goes if you set the Freq value to 75 (%) but then the effect is achieved by skipping some pitches.
7. **Activate Scale correction by clicking on the Pitch button in the Pitch Module until ON is activated.**
Now all notes are corrected to a blues scale in C, by transposing notes downwards to the closest note in that scale. Experiment by selecting different scale types from the pop-up menu and try different keys by setting the value in the box beside this.

The Window and the Modules

When you select Phrase Synth from the Panels menu the Phrase Synth window appears. This has a number of “synth” modules in it. The window can only be moved and closed. It displays one of the synths at a time, and you select which by clicking on the IPS A or IPS B button in the lower right part of the window. You will see how all the settings change when you do this.



To the left you have three modules above each other, Phrase Input, MIDI Input and Interpreter.

Phrases

The *Phrase* is the raw material, the clay that the notes are modelled from. Phrases are created by copying a recording, or a Part of a recording, in an Arrange window or an editor, into a Phrase location by selecting Convert to IPS Phrase from the Functions menu.

MIDI Input

You model the Phrase by playing something, and this playing comes in via the *MIDI Input* module.

Interpreter

How the Phrase and the MIDI Input interact is decided by the settings in the *Interpreter* module.

Rhythm, Pitch and Dynamics

So, you have a Phrase and a MIDI Input which interact via the Interpreter, and new notes are created. The notes at the output of the Interpreter are split up into the three components that all music is made up of, *Rhythm*, *Pitch* and *Dynamics*. The thing about the IPS is that it is able to pick the music apart and handle these three entities separately, and this is reflected in the fact that they are represented by one module each on the screen. Each component may be exposed to more or less dramatic changes by settings made in each module.

Output

The output from the Dynamics, Pitch and Rhythm modules are summed together and sent out via the *Output* module.

Modulators

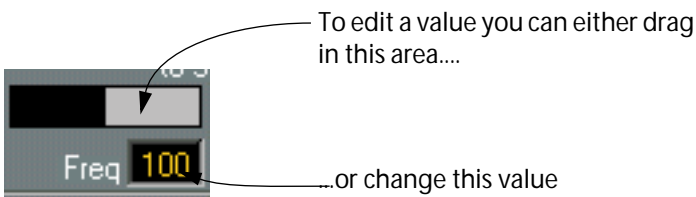
Many of the parameter settings can be changed automatically, on the fly, by the two *Modulators* (1 and 2) in the lower part of the window.

Global Settings and Functions menu

And finally, you have a number of *Global* settings (like the Active button which turns both IPS's on and off) and above the Active and Init buttons a pop up *Functions* menu.

Editing Parameters

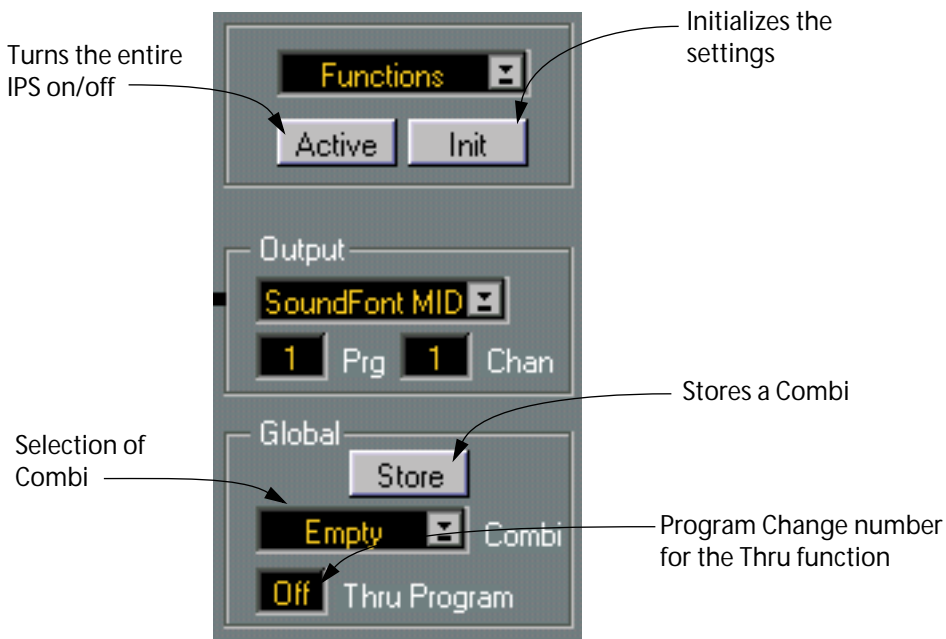
As in the rest of Cubase VST, you can use the mouse to change any value in a value field or double click to enter it from the keyboard. But the IPS has some special fields whose values are indicated graphically like this:



Here you can click and drag directly in the graphics to set a value. You can also set the value as usual (using the mouse or keyboard) in the small value field shown below the graphics.

If you hold down [Alt] you are changing the selected parameter in both IPS A and IPS B.

Active, Init and Global Controls



Active

This is the major On/Off button for the both “synths” (IPS A and B). The button is dark with white text when the IPS is On. If you have created an endless loop of music (using the Hold and Loop buttons) you turn it off by clicking on Active twice (turn the IPS Off and On) or by stopping Cubase VST (using [0] or [space bar]).

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- ❑ **Remember that the IPS remains Active even if you close its window.**
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Init

By clicking the Init button you set both synths to some default settings, with almost all functions turned off. This is good if you want to start making up a Combi from scratch.

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- ❑ **The Output and MIDI Channel settings are not changed by the Initialization.**
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Combi

You can select from one of 32 “programs” from the pop-up Combi menu in the Global module. When you do this both IPS A and B are loaded with completely new settings. These “programs” are called *Combis*, and sets of 32 Combis can be saved to and loaded from disk. You can also copy Combis between the 32 memory locations, by using the pop-up Functions menu. If you want to change the name of a Combi, double click on its current name in the global module.

Store

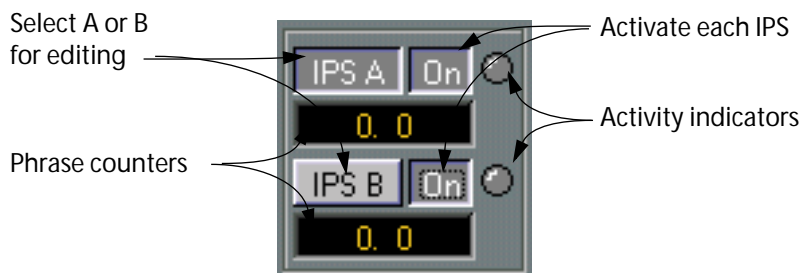
Whenever you have made any changes to a Combi, you can store those changes in the Combi by clicking on the Store button. This saves the changes to RAM, so that they are still there when you select another Combi.

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- ❑ You have to Store your settings before selecting another Combi, or the settings will be reset to the last stored version. The Store button does not save settings to disk, you need to use the Functions menu for that.
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Thru Program

This feature is described with the Thru function on [page 13](#).

On, Off and Selecting A or B for Editing



Select A/B

Below the Global section you have two buttons called IPS A and B. The IPS is actually two completely independent “synths” and you use these buttons to select which one you want displayed in the window.

On

Beside *each* select button you have an On button, that is similar to Active in the Global Module above, but turns each IPS (A and B) On/Off separately. You don't have to select “synth” A or B to turn it On/Off.

Activity Display

To the right of the ON buttons you have two round indicators which show output activity for each of the two “synths”. If they blink, MIDI data is definitely being sent out from the IPS. If you still don't hear anything, you may be sending on the wrong MIDI Channel or to the wrong Output.

Phrase Counters

Below the A/B select buttons are the two Phrase counters. In these you can see “where” in each Phrase you are.

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- ❑ Note that the Position is shown in bars and ticks, the quarter notes are omitted in this display. There is a list of what different tick values represent in the Getting Started book.
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