vst~

vst~ is an external for PD that acts as a VST2.0 host. It provides access to the "string" interface for the plugin and access to the graphical editor. Midi events can also be sent to the plugin allowing VST instruments to be played.

Installing

In order to use the vst~ external PD must be started with a –lib setting pointing to the vst.dll. For example –lib \pd\vst\vst would point to the file c:\pd\vst\vst.dll.
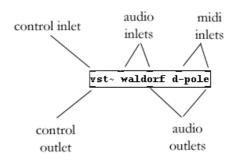
The external looks for plugins using the environment variable VST_PATH. It doesn't search sub-directories so every directory that contains VST plug should be listed.

Instantiating the external

The vst~ external takes a variable number of arguments. It assumes each of these arguments make up the name of the external and that they are separated by a space. In this way plugins with spaces in their names can be loaded.

Anatomy of the external

The vst~ external will alter its inlets and outlets depending on the number of ins and outs required or provided by the plugin. The control inlet and outlet and the midi inlets are always present. The audio inlets and outlets will be set by the external at load time and may or may not be present.

Note in this example the use of a name with a space in it.

Messages

This section describes the messages that the vst~ external responds to.

print [-params] [-noheader] [-programs] [num]

>print displays the parameters that the plugin responds to. Each parameter has a number (used to alter its value), a name and a value between 0 and 1.

>If the –params option is used this value is also displayed in terms of what it means to the plugin – for example a filter cutoff frequency might be displayed as Hz. Note that this option can cause PD to crash if the implementer of the plugin has not implemented this function properly.

>The –noheader function omits the display of the plugin name, the dll and other settings.

>The –programs parameter shows the currently available programs. No parameters are displayed if this option is used.

>If a number is given then only the parameter of that number is displayed

showparams
noshowparams

>These two options cause the display of parameters when they are altered to be turned on and off.

param <num> <value>

>This sets the value of parameter number <num> to be <value>. Value must be between 0 and 1. If the parameter number does not refer to a valid parameter then nothing happens

edit

>This causes the plugins built in editor to be displayed. If the plugin has no editor then this message is ignored. The editor window is a always on top window and the position you last placed it is remembered

pitchbend <value>

> This sends a pitch bend message to the plugin. Any value can be send to pitch bend but a lot of the controls I have played with seem to respond to values between 0 and 127.

programchange <value>

> This sends a midi program control message allowing the plugin to change programs.

program <value>

> This sends a vst set program message allowing the plugin to change programs.

ctrlchange <control> <value>

> This sends a midi control change message. Both control and value are constrained to be between 0 and 127.

Midi

The two midi inputs work in exactly the same way as note out. To do a midi note on a note number is sent to the left input and a velocity is sent to the right input. A note off is sent by doing the same thing with a velocity of zero. Other midi data is transmitted using the messages described above.

To Do

- Better program support
- Output of control messages to allow full automation
- A little bit more midi support (raw midi and aftertouch)
- Bug fixes

Small Print

Vst~ written by mark williamson

Vst ~ contains a small amount of code from the pyscle tracker, the plugin~ external and PD itself.

All additional coding (which is now most of it)
© February 2002 mark Williamson

You are free to use the code within this external for your own ends provided you mention me somewhere and provide a link to my website (http://www.junklight.com)

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Thanks to marius schebella for valuable input during testing.

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