

EP-Station user manual – v1.0



1. Overview

The EP-station is an electric piano modelling synthesizer. While its main strength is in emulating the classic rhodes sound, it can also be used to generate rich synthetic pads, or more modern electric piano sounds. This potential should become obvious after playing a while with the built-in patches.

Like all our synthesizers, EP-station can be used either as a standalone synthesizer, or as a vst plugin.¹

2. Installation

The downloaded package should consist in the following files:

ep-station.dll	The actual plugin file. You should copy this file into your vst plugins directory before being able to use it in your favourite vst host.
ep-station.exe	The standalone version of ep-station. You will require a soundcard with DirectSound drivers to use this version.
ep-station.fxb	The default presets bank for the synth.
ep-station.pdf	The document you are reading right now !

¹ VST PlugIn Technology by Steinberg

3. Interface description

EP-station generates sounds by mixing 3 different raw electric piano models. The mix output is then processed, in this order, by the following effects:

- **Tremolo:** this effect modulates the amplitude of the sound by a sinusoidal low-frequency oscillator.
- **Phaser:** this is an emulation of the classic 6 stages analog phaser effect.
- **Autopan:** this effect modulates the stereo position of the sound by another sinusoidal low-frequency oscillator.
- **Chorus:** this is a stereo chorus effect, that splits the signal into a low and an high frequencies components, and modulates the pitch of the low frequency component by independant low-frequency oscillators.

To use the LCD interface, right-click on a parameter to increase its value, and left-click to decrease it. Holding the mouse button will keep the value moving into the selected direction. You can also finetune values by holding the SHIFT key while using the mouse. Finally, using the CONTROL key together with the mouse resets a parameter to its default value.

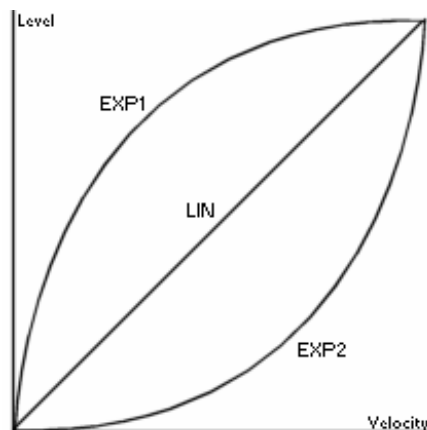
The only exception is the Shape parameter, whose usage is detailed below.

3.1 Electric Piano models parameters

Shape: 054.RealTime 3	Level: 100	Transpose: +0	Detune: +0
Curve: LIN VS1: 071	VS2: 100	Time: +0	Brightness: 082

The EP-station "screen" displays the parameters for the 3 selected electric piano models that will be mixed together. There parameters are:

- **Shape:** The selected model. Right click brings up a menu to change the current model shape, and left click mutes/unmutes the current model.
- **Level:** the mix level of the selected model
- **Transpose:** the pitch of the selected models (in semitones)
- **Detune:** the detuning (in cents) of the model. Adding 2 detuned models produces a warmer sound.
- **Curve:** the velocity curve to use for this model. Velocity curves, displayed below, control the scaling of the various velocity controls.

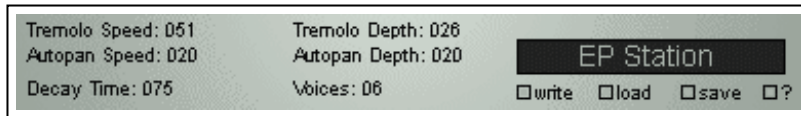


- **VS1:** the velocity control of the model level. When 0, the model level is the mix level, whatever the playing velocity. When 100, the model level is 0 at velocity 0, and the mix level at the max velocity (127). This parameter allows the sound to be louder when you hit the keys faster.
- **VS2:** the velocity control of the model harmonics content. When 0, the model timbre is

independent from the playing velocity. When 100, the model timbre varies with the playing velocity, and is brighter when you play louder.

- **Time:** the length of the model. The higher this value, the longer the notes will sustain.
- **Brightness:** the contents of high harmonics in the model. The higher this value, the brighter the sound.

3.2 Other parameters



Additional controls are available at the bottom of the LCD screen:

- **Tremolo Speed:** the speed of the low-frequency oscillator controlling the tremolo effect
- **Tremolo Depth:** the depth of the tremolo effect.
- **Autopan Speed:** the speed of the low-frequency oscillator controlling the autopan effect
- **Autopan Depth:** the depth of the autopan effect. When 100, the sound will move from full left to full right at a speed controlled by the LFO.
- **Decay Time:** controls the length of all models at once. This parameter can be used to finetune the sustain length of the final sound.
- **Voices:** controls the maximum number of sustaining notes the synth can play. EP-station internal voice stealing algorithm will try to reuse any non-sustaining notes. If the same note than the one being played is already in use, it will be reused immediatly. Otherwise, the program will try to find a note to steal using the following rules:
 - never steal the lowest playing note
 - if there are notes currently being released, but not terminated, steal the one that has been playing since the longest time
 - if all notes are sustaining, steal the one that was played with the lowest velocity.

To the bottom right of the LCD is a black area with the name of the current patch. Left-click in this area to change the current patch name. Right-click in this area to bring up a menu with all the available patches. The **write** button will write any changes you have done on the current patch. The **load** and **save** buttons will load or save a bank of 32 patches, in the fxb format defined by Cubase.

3.1 Effects section



The effects section is located below the LCD screen, and can be controlled by the following knobs:

- **Phaser Depth:** the depth of the phaser effect. Setting it to 0 turns off the phaser effect entirely, thus saving CPU.
- **Phaser Rate:** the speed of the low-frequency oscillator controlling the phaser effect.
- **Phaser Feedback:** turning this parameter up makes the phasing effect even more obvious.
- **Chorus Depth:** the depth of the stereo chorus effect. Setting it to 0 turns off the effect entirely, thus saving CPU.

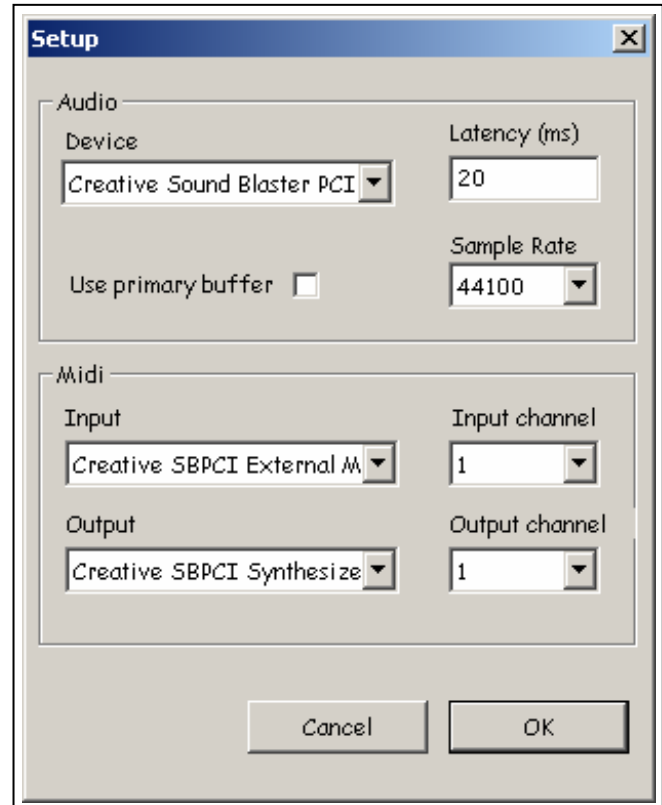
Finally, the **Level** knob controls the overall output level of EP-station. The little button next to the knob level can be used to hide the LCD interface.

4. Standalone operation

Running the ep-station-demo.exe file will launch the standalone version of EP-station. In this mode the program does not require a VST host, but is directly controlled by a MIDI input device. You can configure the standalone mode settings by clicking on the setup button, in the top right bar. This should bring up the window to the right:

The audio section, to the top, configures settings for the audio (DirectSound) interface:

- **Device:** The audio device to use.
- **Latency:** The desired playing latency (for 44100 sample rate). Experiment with this value, too high a value will cause a noticeable delay when playing your MIDI keyboard. Too low a value will cause audible noise and crackle.
- **Use primary buffer:** when set, the system will use exclusive access to the audio device. This will allow for better latency settings, but will prevent other applications from playing sound while EP-station is in use.
- **Sample rate:** the desired sample rate. The higher this value, the lower the actual latency, but the higher the CPU usage.



The midi section below defines settings for the MIDI interface:

- **Input:** the midi input device to use.
- **Input Channel:** the desired MIDI input channel.
- **Output:** the midi output device to use (currently not used by EP-station)
- **Output Channel:** the desired MIDI output channel (currently not used by EP-station)

All these settings are stored within the registry, under the following key:

HKEY_CURRENT_USER/Software/BigTick/EP-station

If you wish to uninstall the program (and have used the standalone version) you should remove this key manually.

7. License agreement

You should carefully read the following terms and conditions before using this software.

Use of this software indicates your acceptance of this license agreement and warranty.

A. TERMS AND CONDITIONS OF USE

This program is shareware; if you use it for more than evaluation purposes you must register it. You can obtain the full license by registering at the software's home page and receiving a personal registration code from the software author. Upon the reception of the registration code from the author you become a legal owner of the full version license. The registration code is for your personal use only and cannot be given to any other person. Should you violate the terms of the license, the author has the right to terminate your registration code, without any obligation to you.

B. DISTRIBUTION

Provided that you verify that you are distributing the original, unmodified evaluation version, WITHOUT YOUR PERSONAL REGISTRATION CODE, you are hereby licensed to:

- make as many copies of this software and documentation as you wish;
- give exact copies of the original evaluation version to anyone;
- distribute the evaluation version of the software and documentation in its unmodified form via electronic means.

You are specifically prohibited from charging, or requesting donations, for any such copies, however made;

This software can be bundled with any commercial package or distributed by itself or accompanying books or magazines as long as the package is intact. The license does not grant you any other rights except expressly stated above. The author continues to own and retains all rights to the software. You are not allowed to sell, lease or otherwise make money of this software unless the right to do so is expressly granted to you by this license or by the written permission from the author.

C. UPDATES.

Registered users may obtain free copies of each revision or "Update" to the software and associated documentation. Updates are available for download from the software's web site. You agree to install all updates promptly, since product support will only be provided for the most recent version of the software, incorporating all prior Updates.

D. SUPPORT

Registered users are offered free 90-day customer support through electronic mail.

Customer support will not be provided in any of the following cases:

- The reported error was caused by unauthorized changes in the program source code, program parameters or other user adjustable features, or use of an illegally acquired registration code;
- The error results from operator error, errors in data or software not supplied by Big Tick, or use that is not in accordance with the documentation
- The error has already been fixed in an update that you have not yet installed.

E. DISCLAIMER OF WARRANTY

This software and the accompanying files are provided "as is" and without warranties as to performance or merchantability or any other warranties whether expressed or implied. No warranty of fitness for a particular purpose is offered. Any liability of the provider will be limited exclusively to product replacement or refund of purchase price.