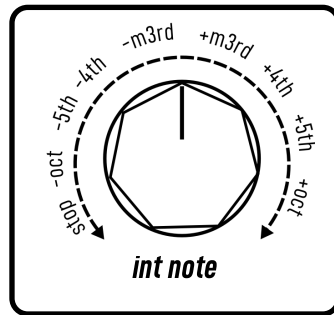


PITCH

1. DUAL

this is a standard pitch shifter but with two voices, so for example you can pitch bend up an octave and down an octave at the same time. **PIT** is like the treadle of the pitch shifter, and sets the amount of pitch shifting happening. **INTA** and **INTB** set the intervals the **PIT** knob bends to. these intervals are outlined in the INT note. **VOLB** sets the volume of the second pitch voice so you can blend in a little or a lot of the second voice.



2. ENVGLD

glide between two pitch intervals based on how hard you strum. the **SEN** knob controls the sensitivity of your incoming signal. turn this down if you play a hot instrument. **P-1** and **P-2** set the two pitch intervals you are gliding between. quiet playing will output the **P-1** setting and loud playing will output the **P-2** setting. these two knobs are quantized in semitones from -16 semitones to +16 semitones. **PORT**, or portamento, will allow you to create smooth gliding pitch bends.

3. ARPPEG

a two step arpeggiator. the **SPD** knob sets the speed of arpeggiation and can be tapped in with the tap tempo switch. the other controls are identical to the controls in the ENVGLD program.

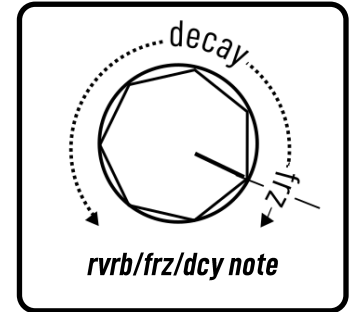
4. ARPFRZ

also a two step pattern, with step one being an octave up and step two being an octave down. the **SPD** knob smoothly glides between two frozen pads, and can be tapped in with the tap tempo switch. step one is an octave up and **OCT+** sets the level of this octave. turn CCW to mute the step. **OCT-** works the same way, but as an...

..octave down. the **FRZ** knob will freeze the pattern if turned up all the way.

5. ORGAN

poly-octave generator with vibrato and cathedral reverb, meant to emulate an organ. **OCT+** blends in an octave up while **OCT-** blends in a lower octave. The **RVRB** knob will add reverb, but at the end of the knob's rotation will freeze the signal; see the RVRB/FRZ/DCY note. add some vibrato to the organ sound by adjusting the **VIBR** knob.



6. GRAINS

this program will analyze a delay line and adjust the playback speed to create pitch shifting. the **SIZE** knob adjusts the size of the grain/delay buffer to be pitch shifted. a non-additive feedback loop is controlled with the **FRZ** knob and can be frozen when fully CW, see the FRZ note above. **PIT** adjusts the pitch/speed of the grain and **FBK** will bring in additive feedback creating ascending pitch bends.

7. GLASS

a reverse reverb with pitch/speed playback adjustment. **DCY** works as the reverb decay with ability to freeze when fully CW, see the DCY note above. **PIT** sets the pitch of the reverb from no pitch to an octave up. the **SLICE** knob adjusts the size of the pitch shifted grain (similar concept to program 7, GRAINS). finally **PROM** prominence or aggressiveness of the pitch shifter.

8. CRYSTL

dual pitch shifted reverse delays, whose proportional mix is set by the **BAL** knob. **P-1** and **P-2** determine the pitch of the individual delay lines, from the root pitch to an octave up. the **FBK** knob creates ascending additive feedback loops within the pitch shifting delays.