

::vtol:: vol ϕ ram

semi-modular handmade noise synthesizer and fx-processor

part of the ::vtol:: "system"



::vtol:: 2009-2011 s/n_____

maual ver. 1.2

<http://vtol.tk>

caution

- use only DC PSU, AC power supply will damage the synth
- use only stabilized PSU: 9V, 500mA (or higher), negative tip
- to prevent risk of damage, never touch banana connectors with power sockets/plugs
- volfram is NOT compatible with any other modular system (Doepfer , Serge, Buchla etc...) don't plug standard CV to banana or jack connectors

banana patchords



A banana connector (banana plug or banana jack for the male, banana socket for the female) is a single-wire (one conductor) electrical connector used for joining wires to equipment.

Most banana connectors used for modular synths have a special link-hole on the side or on the top for splitting or multiplying signals.

That will help find more complex patches for `::vto1::` modules



starting

!!! important !!!

before connecting the power supply, make sure that "Pitch/Time" knob is not fully clockwise:



_____ wrong position for powering up



_____ right position for powering up

internal processor needs some buffer size for loading, since this knob controls the buffer size it should be higher then 0 (counter clockwise position).

there is no risk of damaging the synth if the knob is at minimum or at maximum position while powering up - just unplug the power, put the knob in the middle position and switch the power back on

you can do whatever you want with this knob after Volfram is switched ON.

starting

if the feedback knob is turned fully clockwise, volfram can produce sounds without any patchcord connected

all points can be connected to any points without any limitation

it's better to start building a patch with "Stab" (Voltage) knob at maximum (fully clockwise) position and only after finding some interesting connections search for variations by tweaking it

"input" banana socket is the most active and interesting point to start patching

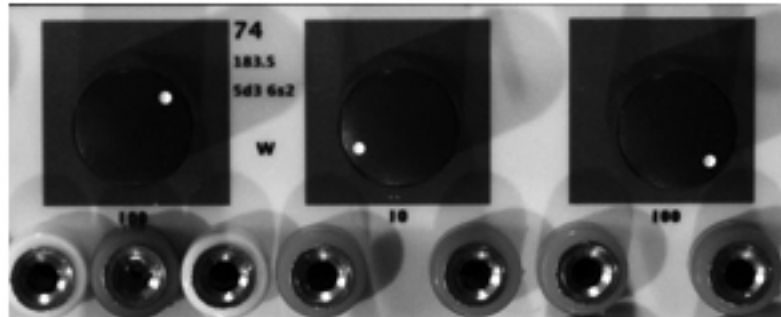
use "input gain" knob only for external signals, when using Volfram as sound source it's better to keep it in right position

if some connection cut the sound - try another one or put it through attenuators

all banana sockets can be used as touch-sensors

attenuators

volfram has 3 passive attenuators for more flexible control over any connections



100kOm 10kOm 100kOm

the three attenuators have interchangeable in and out sockets



the 1-st one has 2 inputs and it can be used as cross-fader / mixer / volume control



Feedback knob

Feedback knob has two different functions:

- turn it clockwise to add feedback
- if turned counterclockwise it works as low-pass filter



Mode switcher



switches between two different modes of Volfram

one patchcord combination can give 2 different patches by switching this switch

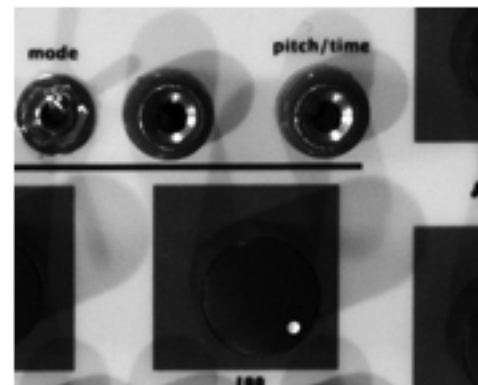
Pitch control

it is possible to control pitch/time of the Volfram with LFO, attenuators or some of the "bent points" / outputs

Pitch control has 2 sockets - positive (marked "pitch") and negative (not marked or marked with the "-") which is ground

Resistance between this two sockets is the actual pitch/time control

If you will use attenuator it will be parallel with main "time" knob but with smaller range.



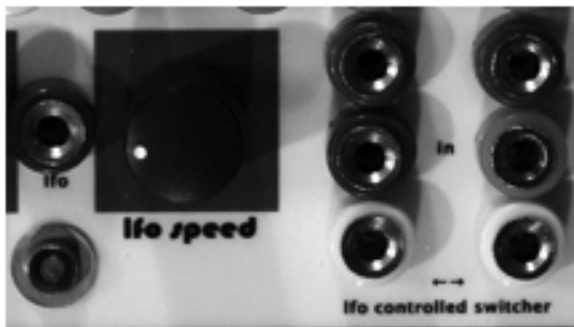
connecting positive pitch socket to some of the "bent points" can give interesting results

demo patch of an LFO controlled switcher with pitch control sockets:



LFO

LFO is another fun way to make your patches more flexible/rhythmical/mad



it can be used as independent sound source, modulation source or it can control other connections via "LFO controlled switcher" (resistor on some versions)

LFO controlled switcher has two interchangeable in/out sockets

example of a patch with LFO switcher:



experiment

experiment!

experiment!

experiment!!

experiment!!

experiment!!!

experiment!!!

experiment!!!!

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