# RED WITCH

analog quitar effects pedals

# The Synthotron synthesizer filter sample hold!

My heartiest congratulations to you for purchasing a Red Witch SYNTHOTRON!

The device you are now holding in your hands offers several unique features, which cannot be found anywhere else.

I strongly recommend that you read on to discover the full potential of your new pedal!

Such hours have I labored.... such blood sweat and tears spilt in the creation of this small, wonderful object that you now hold in your hot little hands. The Synthotron is an all analog (100% pure analog) synthesizer, envelope filter/ sample hold pedal. The Synthesizer section and the Filter section can be used independently or simultaneously – in essence two effects in one box – the Synth comes first and the Filter last.

Read on, dear friend, for details of the splendid dials, switches and adjustors that control this temple of Synthesizian Glory!

## The Controls

syn footswitch – this turns on the synthesizer section of the pedal – the LED will glow Blue when only the Synthesizer

is activated. It is True bypass.

filter footswitch – this turns on the filter section of the pedal – the LED will glow Red when only the Synthesizer is

activated. It is True bypass.

Simultaneously ..........When both Synthesizer and Filter sections are engaged the LED will glow a beautiful, mesmerizing Purple!

# **Synth Section Controls**

Controls for the Synth section of the pedal are found in the Red, Orange and Light Blue boxes.

Engaging the "SYN" footswitch accesses these controls.

Red Box - the three controls in the Red Box control the first oscillator

**Red 8ve Toggle** - This determines the pitch of the oscillator note: toggle up toggle down = 1 octave above the note being played = same pitch as the note being played

**Red "Level"** - This sets the volume level of the Red oscillator

Red "Decay" - This determines the decay time of the Red oscillator. Counter clockwise for zero decay (staccato) fully

clockwise for a long decay time.

Orange Box - the three controls in the Orange Box control the second oscillator

Orange 8ve Toggle - This determines the pitch of the oscillator note: toggle up = 2 octaves below the note being played

toggle down = 1 octave below the note being played

Orange "Level" - This sets the volume level of the Orange oscillator

Orange "Decay" - This determines the decay time of the Orange oscillator. Counter clockwise for zero decay (staccato) fully

clockwise for a long decay time.

Light Blue Box - Amplitude modulation controls and dry guitar signal level.

"Trem" toggle - turns amplitude modulation on or off. Up = tremolo off. Down = tremolo on.

"Velocity" - Sets the speed of the tremolo

"Dry" - sets the clean, unaffected dry guitar signal – good to blend some of this in with the oscillator voices for

enhanced clarity.

#### **Filter Section Controls**

Controls for the Filter section of the pedal are found in the Red, Orange and Light Blue boxes. Engaging the "FILTER" footswitch accesses these controls.

- this toggle determines the filter mode - toggle up = Envelope Filter mode. Toggle down = Sample hold "s/h" toggle mode.

"Range" - This sets the sweep of the envelope filter. Only functions in envelope filter mode - This sets the speed of the sample hold. Only functions in Sample Hold mode. "Velocity"

#### Some general thoughts about the Synthotron and its use......

As this device is entirely analog it relies on a process called signal to voltage conversion. It basically turns your guitar signal into a voltage that tells the oscillator to create a specific pitch. This is a glorious and intrepid quest and will have varying results. You will find that playing anywhere above the 10th fret will have substantially better tracking than at the lower end of the fretboard.

The Synthotron is a monophonic device which means that it will track on one note at a time. Trying to force the 'Tron into doing more than one note at a time has some wonderful "side of a mountain falling onto the village below" type sounds. Beautiful. Be warned. Abandon hope of order all ve who enter here.

The key when playing the Synthotron is to approach the guitar as a new instrument – it no longer sounds like a guitar – it no longer responds like a guitar – therefore.... It is something else!!!! Try adjusting your pick attack, try using your neck pick up, try backing off your guitars volume, try increasing your guitars volume.... Experiment, experiment, experiment..... you will find the promised land.... Perseverance and an open heart/ mind is all that is needed!

# Some specifics about setting the input level and dialing in your perfect "Sample Hold" setting

#### INPUT LEVEL ADJUSTMENT

Please remove the back of the pedal whilst it is plugged in.

Please engage the SYN footswitch and set both levels at 11 o'clock, both decays fully counterclockwise and the two 8ve toggle switches into the down position.

Play some notes on your auitar (neck pickup position).

Locate the trimpot slot in the center of the circuit board. (It says "Set Master Input here V" just above the trimmer I'm talking

Adjust this trimmer with a Philips screwdriver until you find the optimum synth tracking

# SAMPLE HOLD ADJUSTMENT

Please remove the back of the pedal whilst it is plugged in.

Please engage the "filter" footswitch

Please set the "s/h" toggle switch to the down position

Please set the dark blue velocity control to the "12 o'clock" position

Locate the small trimmer that is to the left of the Master Input trimmer – the S/H trimmer takes a jewelers flat head screwdriver and is to the right of the white text "D8" on the circuit board.

Adjust this trimmer until the optimal sample hold intervals are heard.

Engage the synthesizer by depressing the "syn" footswitch – keep the filter turned on.

Confirm the s/h synthesizer sound is optimal. Adjust trimmer if intervals are not pronounced enough.

Adjust to taste.

Power - The SYNTHOTRON comes with it's own regulated 9v DC power supply. You must not use this pedal with a daisy chain supply as the negative terminal of the power input is not the same as the ground of the pedal.

# DO NOT USE A DAISY CHAIN SUPPLY - FAILURE TO OBSERVE THIS WILL RESULT IN DAMAGE TO YOUR POWER SUPPLY AND/ OR OTHER PEDALS.

You can use other power supplies as long as each output is ground/ negative isolated from each other. The Synthotron requires 9v DC, regulated – with the center pin positive and the barrel negative (standard pedal power supply plug arrangement)

Keep it clean - only use a soft dry cloth on your pedals finish - abrasives will ruin the finish and speed up the wear on the lettering. The finish will obviously take some knocks over time, it will show signs of wear and tear as you gig with, be prepared for this - ensure you have enough canned goods and fresh drinking water.

- This includes; immersing it in beer or other liquids, throwing it at stuff or people, rewiring it, setting it on Do Not Treat it rough fire or using it as a weapon. It is a tough pedal but everything lasts a little longer with a little love.

### Red Witch Analog Limited Lifetime Warranty

All electronics carry a lifetime warranty providing the owner purchases the pedal new and retains proof of purchase. All switches, jacks, potentiometers and other mechanical parts are warranted for one year after the date of purchase or for two years when the owner returns the following information to warranty@redwitchanalogpedals.com Name of purchaser, date of purchase, location of purchase, your email address and pedal serial number. As well as an extension of your mechanical warranty you will be informed of new pedals and other guitar gizmos as we invent them! All external fixtures finish, lettering and knobs are not warranted. Damage or failure of product due to misuse will void the warranty. All repairs must be made by Red Witch Analog only. Unauthorized repair/modification will void warranty.

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Our Youtube channel is a wholelotta fun <a href="https://www.youtube.com/user/redwitchPedals">https://www.youtube.com/user/redwitchPedals</a>

### THREE BELOVED SYNTHOTRON SETTINGS!!!

