

PIGTRONIX

RESOTRON

User's Guide



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PROPHETIC SYNTH TONE.

Resotron is an analog filter pedal that brings the sound of 70s keyboard synthesizers to the world of envelope pedals for guitar, bass, and beyond. The filter at the heart of the Resotron is based on the SSM2040 chip found in the legendary Prophet 5 and Octave CAT synthesizers. This 24db/octave, state-variable filter provides the full gamut of familiar envelope filter sounds with Up and Down sweeping modes, as well as a Sensitivity control to dial in the response of the effect based on how hard you play.

In addition to these vintage-correct filter tones, the Resotron incorporates an analog pitch-tracking system to move the cutoff frequency of the filter up and down. The pitch-following filter effect found in the Resotron moves around based on the notes you play instead of how hard you play. The attack time and rate of filter motion can be adjusted using the Glide knob to dial in how long it takes for the cutoff to travel between pitches.

EXPLANATION OF CONTROLS



- 1 **Cutoff:** Sets the cutoff frequency of the filter when you are not playing.
- 2 **Peak:** Sets the amount of Resonance “Q” of the filter.
- 3 **Sensitivity:** Sets the dynamic response of the filter cutoff in ENV modes.
- 4 **Glide:** Sets the attack time for the filter cutoff in Pitch mode.

- 5 Blend:** Sets the amount of optical compression that is blended in before the filter.
- 6 HPF / BPF / LPF:** Selects the filter type.
- 7 ENV UP / PITCH / ENV DOWN:** Selects the filter motion.
- 8 Oscillate:** Switches the filter into self oscillation for a pitch tracking synth in PITCH mode.

Interface Jacks

9 DC 18V

Use only the 18-Volt, 300mA, negative tip power supply that came with your Resotron. Using the wrong power supply is likely to result in a damaged pedal.

10 Input

Effect input. Plug in your instrument here.

11 Out

Effect output. Plug in your amp, mixer, or DI box here.

12 Expression

The expression pedal input allows remote control of the filter cutoff. A passive foot-controller or active (0-5V) CV signal can be used with the EXPRESSION jack to modulate the cutoff frequency of the filter in parallel with the on-board envelope and pitch tracking systems. When a passive expression pedal is used, the onboard CUTOFF knob sets the maximum sweep range. Since the envelope and pitch following signals are wired in parallel with the expression input, you can effectively use an expression pedal as a wah, with an envelope riding on top of it! Note: Use a TRS (Stereo) cable to connect a standard, low impedance (20K) foot controller to the EXPRESSION jack. Note: Use a TS (Mono) cable to send control voltage (0-5V) signals into the EXPRESSION jack.

13 Trigger

The trigger input is an auxiliary source for the envelope follower and pitch tracking system. When the TRIGGER jack is in use, the audio signal at the INPUT jack is disconnected from the envelope follower and pitch tracking system that modulates the filter in the Resotron. When using the TRIGGER input, it is recommended that the BLEND knob be set fully counterclockwise. This allows the signal feeding into the TRIGGER jack to control the filtering of the signal from the INPUT jack. Turning up the BLEND knob when using the TRIGGER input will feed the audio from the TRIGGER jack directly through the compressor and into the main audio path, in parallel with the signal from the INPUT jack.

Resotron requires a negative tip, 18VDC power supply.
Resotron does not take batteries.

Guided Tour

The following steps will guide you through the sonic palette of the Resotron and show you how to access the range of tones that it has to offer.

1. Set all of the controls fully counter-clockwise, and set each toggle in the up position. Make sure the LED is off. The Resotron is in bypass mode. Play your instrument and make sure a clean sound is passing through the pedal.
2. Turn the CUTOFF knob to 3:00, and the PEAK, and SENSITIVITY knobs to 12:00. Put the FILTER MODE toggle to LPF mode. Click the Engage footswitch to turn the Resotron on. The LED will come on.
3. Play your instrument to hear the low pass filter sweep based on the volume of your instrument.
4. Explore the range of the CUTOFF knob. Adjusting the CUTOFF will change the frequency content of your effected output as well as the range of filter sweeps.
5. Explore the range of the SENSITIVITY knob. Adjusting the SENSITIVITY knob will change how the filter responds to the volume of your instrument.
6. Explore the range of the BLEND knob. Adjusting the BLEND knob will change the blended amount of your instrument and compressed signal into the filter. This allows for additional dynamic control over the headroom of the filter.
7. Toggle the CUTOFF CONTROL from the upwards envelope to the downward envelope to change the direction the filter sweeps.

8. Toggle the CUTOFF CONTROL to the PITCH mode to cause the filter to track to the pitch of your instrument. Explore the range of the CUTOFF knob. In PITCH mode, the filter will keep the tone consistent as you play in different registers of your instrument.
9. Explore the range of the GLIDE knob. Adjusting the GLIDE knob will change the amount of time it takes for the filter to sweep from frequency to another.
10. Explore the range of the PEAK knob. Adjusting the PEAK knob will change the amount of resonance of the filter, based on where the filter cutoff frequency is, different harmonics of your instrument signal will be emphasized. Note: Be careful when turning the PEAK knob fully clockwise as this will cause the Resotron to oscillate at a loud volume without VCA gating.
11. Toggle the FILTER MODE between the different the three types of filters to see how the effect changes.
12. Push the OSCILLATE button inward to put the Resotron in synth mode. Start with the FILTER MODE toggle in the LPF mode and the CUTOFF CONTROL toggle in the PITCH mode.
13. Play the highest string on your instrument and adjust the CUTOFF knob so that the pitch of the sine wave voice is in tune with your instrument signal. Once it is in tune, play your instrument in all registers.
14. Toggle the FILTER MODE between the different the three types of filters to see how the effect changes. LPF and BPF mode produce a clean sine wave with the BPF containing some additional harmonics, whereas the HPF mode produces a voice with high frequency harmonics seen in a square wave.

PIGTRONIX LIMITED WARRANTY

Your new Pigtronix product is warranted to be free from defects in materials and workmanship for 1 year from the original date of purchase. Warranty applies only to the original retail purchaser of a registered Pigtronix product, subject to the limitations contained in this warranty.

THIS WARRANTY IS EXTENDED TO THE ORIGINAL RETAIL PURCHASER OF PIGTRONIX PRODUCTS BOUGHT ON OR AFTER JANUARY 1, 2020 ONLY AND MAY NOT BE TRANSFERRED OR ASSIGNED TO SUBSEQUENT OWNERS. IN ORDER TO VALIDATE YOUR WARRANTY, AND AS A CONDITION PRECEDENT TO WARRANTY COVERAGE HEREUNDER, YOU MUST REGISTER YOUR PRODUCT WITHIN THIRTY (30) DAYS FOLLOWING THE ORIGINAL DATE OF PURCHASE. YOUR PROOF OF PURCHASE OR SALES RECEIPT MUST ACCOMPANY ALL REQUESTS FOR WARRANTY COVERAGE— YOU MAY SUBMIT YOUR RECEIPT ON THE REGISTRATION FORM. IF YOU DO NOT REGISTER THE PRODUCT WITHIN 30 DAYS OF PURCHASE, YOUR PRODUCT WILL NOT BE SERVICED UNDER WARRANTY.

If your product is destroyed, lost or damaged beyond repair while in the possession of Pigtronix for repair, Pigtronix will replace that product with one of the same or most similar style of a value not in excess of the original purchase price of your pedal. Any insurance covering the pedal, including but not limited to collector's value insurance, must be carried by you at your expense.

This warranty covers the cost of both labor and materials on repairs deemed necessary by our Customer Service Representative.

THIS WARRANTY DOES NOT COVER:

- Any product that has been altered or modified in any way or upon which the serial number has been tampered with or altered.
- Any product whose warranty has been altered or upon which false information has been given.
- Any product that has been damaged due to misuse, negligence, accident, or improper operation.
- The subjective issue of tonal characteristics.
- Shipping damages of any kind.
- Any product that has been subjected to extremes of humidity or temperature
- Normal wear and tear
- Any product that has been purchased from an unauthorized dealer, or upon which unauthorized repair or service has been performed.

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Steps To File for Warranty Coverage:

1. Register your new guitar at [**http://pigtronix.com/warranty**](http://pigtronix.com/warranty)
2. Complete the warranty request form available at [**http://pigtronix.com/support**](http://pigtronix.com/support) and we will handle it from there!

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