



## RIDDLE: Q BALLS FOR GUITAR

**Congratulations on your purchase of the Riddle: Q-Balls envelope controlled filter for guitar! This is a very powerful tool for musical expression that opens a new horizon of sonic potential for your guitar. Please take a few minutes to familiarize yourself with the Riddle's controls and how they work.**

**Envelope controlled filters are a unique type of sound modifier where the intensity of the effect is controlled by the user's playing dynamics. The volume and dynamic of the incoming audio signal is used to control a swept filter. As the volume increases or decreases so does the frequency of the filter.**

**With 3 selectable filter modes, along with START, STOP, ATTACK, DECAY, Q and SENSITIVITY controls, all of the classic Q sounds are available to the user. Also, many new sounds and vivid textures can be achieved like never before. A new analog distortion circuit was created specifically for the RIDDLE, and adds a dynamic edge to the filters sound. With the addition of an expression pedal input (expression pedal not included), the RIDDLE provides manual control of the filter sweep.**

### — POWER —

**WARNING: Use only the AC Adapter that the RIDDLE comes supplied with. Do not use any other AC Adapters. Using other AC adapters, even those made by Electro-Harmonix, could cause harm to the unit, the adapter or you. The RIDDLE does not use batteries.**

### — CONTROLS —

**BLEND** – Controls the output mix of the dry and effected signal. Fully CCW is 100% dry with no effect added. Fully CW is 100% wet with no remaining dry signal.

**MODE** – This is a rotary switch used to select between the 3 filter modes available on the RIDDLE. Select between LP (low pass), BP (band pass), and HP (high pass) modes to emphasize a different frequency band. Selecting between these modes does not change the start and stop frequencies.

**ATTACK** – This knob controls how quickly the filter will sweep from the frequency set by the “START” knob to the frequency set by the “STOP” knob. Fully CCW will have the fastest attack setting and is good for quick percussive styles of playing. Fully CW will have the slowest attack setting and creates a slower smoother sweep for a bowed sound.

**DECAY** – This knob controls how sensitive the reset circuit is when falling back from the “STOP” setting to the “START” setting. Fully CCW will have the most sensitive reset. In this setting the sweep will reset the fastest and the easiest. Use this when playing quick staccato notes to make sure every note triggers a new envelope sweep. Fully CW will maximize the decay setting. Use a longer decay setting when you don't want every note to reset.

**START** – This knob sets the frequency that the sweep starts at. Fully CCW is the lowest frequency (about 80Hz). Fully CW is the highest setting (about 5Khz). Use this knob along with the “STOP” knob to set the range and direction of the sweep. For example, a low “START” and a high “STOP” will sweep upward. A high “START” and a low “STOP” will sweep downward.

**STOP** – This knob sets the frequency that the filter sweeps to. Fully CCW is the lowest setting (about 80Hz). Fully CW is the highest setting (about 5KHz).

**Q** – This knob controls the resonance of the Q. Fully CCW is the widest bandwidth and fully CW is the most resonant for a more dramatic effect.

**SENSITIVITY** – This knob controls the input sensitivity of the envelope filter circuit. Fully CCW is the least sensitive, and the circuit will be less reactive to the instrument input. Fully CW is the most sensitive and the circuit will be the most reactive to the instrument input.

#### ***A NOTE ON INTERACTIVE CONTROLS:***

The “ATTACK”, “DECAY”, “START”, “STOP” and “SENSITIVITY” knob are highly interactive. If Attack is set to slow, the Decay is set to fast, or the Sensitivity is set to low, the filter sweep may not reach the stop frequency. The lowest frequency sweeps in the RIDDLE can be difficult to hear. If this causes the attack to

sound abrupt, tune the start position so the sweep begins at a more audible frequency. All of the functions depend heavily on how the Sensitivity. Take some time to become familiar with these knobs and functions and learn how they work together to effect different styles of playing.

**DISTORTION FOOTSWITCH/STATUS LED** – This footswitch engages the analog distortion circuitry in the RIDDLE. When distortion is engaged, the LED will turn on, and when distortion is disengaged the LED will turn off. The intensity of the distortion is controlled by the “SENSITIVITY” knob. Inside the pedal there is a Trim Pot labeled “DISTORTION LEVEL”. This can be adjusted by the user to fine tune the volume of the distortion when engaged. This will not affect the gain or intensity of the distortion. **DO NOT** adjust any other trim pot on the board as they have been carefully calibrated for optimum performance.

**EXPRESSION PEDAL INPUT** – An optional expression pedal can be used with the RIDDLE for manual control of the filter. When the pedal is in toe up position, the frequency will be at the “START” position. In the toe down position, the frequency will be at the “STOP” position. Use this along with various “Q” knob setting to get resonant filter sweeps as well as wah-wah sounds with a versatile range.

**BYPASS FOOTSWITCH/STATUS LED** – The footswitch engages/disengages the effect. If the effect is engaged, the LED will light up. When the effect is disengaged, the LED will turn off, and the pedal will be in true bypass.

**INPUT Jack** – Connect your instrument’s output to this ¼” mono jack. The input impedance presented at this jack is 710Kohms

**EFFECT OUT Jack** – Connect this ¼” mono jack to your amplifier’s input. The output impedance presented at this jack is 300ohms.

**DIRECT OUT Jack** – This is a direct out signal from the input. This signal does not go through any of the effects circuitry.

**CAUTION:** This pedal was designed to give the user the maximum potential for user customizability and there are some setting combinations that are extreme. If the Q setting is maxed, at the peak high and low frequency this pedal can be INCREDIBLY loud.

To hear demos by rock stars on all EH pedals visit us on the web at [www.ehx.com](http://www.ehx.com).  
Email us at [info@ehx.com](mailto:info@ehx.com)