electro-harmonix

CRASH PAD

Electronic Crash Drum

Congratulations on your purchase of the Crash Pad, a faithful reissue of the Electro-Harmonix Crash Pad drum synthesizer first released in 1980. The Crash Pad uses analog synthesis techniques—such as resonant filter sweeps of a noise source—to create a range of drum sounds from cymbals to snares to otherworldly oscillation sweeps. Trigger the Crash Pad from the on-board push button or an external, non-MIDI, electronic drum pad. Pass external sounds through the resonant filter via the auxilliary input. Use the expression pedal/CV input for external control over the filter in real-time.

- CONTROLS -

SWEEP Controls – Together, these three knobs control the Crash Pad's filter frequency sweep:

> **START Knob –** Sets the starting point of the frequency sweep. Filter sweeps can begin anywhere from 250 Hz at full counterclockwise to 7.5 kHz at full clockwise.
> **STOP Knob –** Sets the end point of the filter's frequency sweep. Sweeps can end anywhere from 50 Hz at full counterclockwise to 7.5 kHz at full clockwise.
> **TIME Knob –** Controls how long it takes to sweep from the START frequency to the STOP frequency. As TIME is turned clockwise, the sweep time slows down. Sweep time ranges from 40 ms to 4 seconds.

SENS. Button – Controls the sensitivity of the Crash Pad to an external trigger. Sensitivity is high in the down position and low in the up position. We recommend you start with the high setting because smaller amplitude pulses are required to trigger the Crash Pad as compared to the low setting. Additionally, the amplitude of the external trigger signal changes the Crash Pad's output volume and start frequency to a limited degree so that hitting your drum pad harder may produce a louder output signal.

RESONANCE Knob – Adjusts the resonance (or Q) of the low pass filter. As you increase RESONANCE the filter's Q increases. The filter begins to self-oscillate at around 3 o'clock on the RESONANCE knob.

VOLUME Knob – Controls the volume of the output signal. As VOLUME is turned clockwise, the output volume increases.

DECAY Knob – Each time the Crash Pad is triggered, an internal volume envelope is activated. The DECAY knob sets the time it takes for the volume envelope to fade out the triggered sound. With DECAY at full counterclockwise, the envelope produces very fast click-type sounds. Turn up DECAY to maximum to allow the Crash Pad's output to ring out for a lengthy 6 seconds.

POWER LED – Lights up when the Crash Pad is powered up.

TRIG LED – Briefly lights when the Crash Pad is triggered from either the onboard push button or an external trigger.

PUSH BUTTON TRIGGER – The white button at the center of the logo. This push button triggers the Crash Pad. Push this button to create amazing sounds.

OUTPUT Jack – This ¼" jack is the audio output from the Crash Pad. The output impedance varies from 100Ω to 25kΩ. **Please note:** when powering from a battery, inserting a plug into the OUTPUT jack turns on the Crash Pad. Remove the plug from the OUTPUT jack to prolong battery life.

EXT. TRIG Jack – This ¼" jack is the input for an external trigger. The Crash Pad triggers on positive going pulses or clock signals ranging from 3V to 15V or +/- 3V to +/-8V. Nearly all types of gate, clock and trigger signals that fall within this voltage range will trigger the Crash Pad. Some examples of acceptable trigger signals include electronic drum trigger pads, an electronic pulse (as produced by the EHX Clockworks), a clock generator (as produced by the EHX 8 Step), gate signals from synthesizers such as V-Trigger, or sync signals from drum machines. The input impedance is 2MΩ.

AUX IN Jack – This ¼" jack is the auxiliary input for an external sound source. The signal present at the AUX IN jack connects to the Crash Pad's resonant filter and then into the Crash Pad's volume envelope. When a plug is inserted into the AUX IN jack the Crash Pad's internal noise source is disconnected from the filter. The input impedance is 10MΩ.

The AUX IN jack allows external instruments and sound sources to be filtered by the Crash Pad, turning it into a useful resonant filter effect in its own right. Use control voltage (CV) or an expression pedal in conjunction with an external sound source to expand the Crash Pad's filter effect even further.

EXP. PED Jack – Connect an expression pedal with a TRS plug to this jack to control the filter sweep with your foot. Additionally, the EXP. PED jack can be connected to a CV source using a TS plug; the acceptable control voltage range is 0V to 5V. Some suggested Expression Pedals: EHX Expression Pedal, M-Audio® EX-P, Moog® EP-2 and EP-3, Roland® EV-5 or Boss® FV-500L. The polarity of the expression pedal's plug must have SLEEVE connected to the heel position (usually GND), RING connected to the toe position, and the TIP connected to the wiper. Although the nominal expression pedal impedance is 10kΩ, most other

values will work fine. Please do not go below 6kΩ on your expression pedal's potentiometer impedance.

EXPRESSION PEDAL FIXED VOLUME DIP Switch – Inside the Crash Pad is a DIP switch labeled S3, EXP FIXED VOLUME; it is located just above the OUTPUT jack. When the DIP switch is set to the ON position (towards the edge of the unit) and a plug is inserted into the EXP. PED jack, the Crash Pad's volume envelope is disabled, allowing the Crash Pad to continuously send the output of its filter to the OUTPUT jack. This setting lets you use the Crash Pad's filter without providing a trigger signal. Please note: the DECAY knob is inactive when the DIP switch is set to ON. S3 is set by default at the factory to the OFF position (towards the center of the unit). In the OFF position, a trigger action is required to use the Crash Pad. The fixed volume setting is only available when a plug is inserted into the EXP. PED jack and S3 is set to ON.

9V Power Jack – Although the Crash Pad accepts 9V Batteries, EHX supplies your Crash Pad with an Electro-Harmonix 9.6DC-200BI power supply. Plug the output of the AC adapter into the 9V power jack located at the top of the Crash Pad. The Crash Pad draws 22mA at 9VDC with a center negative plug. Please do not exceed 10VDC on the Crash Pad's power jack.

- REMOVING BOTTOM COVER - CHANGING THE BATTERY -

To replace the 9V battery or change the setting of S3, remove the 4 screws on the bottom of the Crash Pad. Once the screws are removed, take off the bottom plate. While the bottom plate is off you risk damaging a component. Please do not touch the circuit board, except to change the setting for S3, the EXP FIXED VOLUME switch.

- WARRANTY INFORMATION -

Please register online at http://www.ehx.com/product-registration or complete and return the enclosed warranty card within 10 days of purchase. Electro-Harmonix will repair or replace, at its discretion, a product that fails to operate due to defects in materials or workmanship for a period of one year from date of purchase. This applies only to original purchasers who have bought their product from an authorized Electro-Harmonix retailer. Repaired or replaced units will then be warranted for the unexpired portion of the original warranty term.

If you should need to return your unit for service within the warranty period, please contact the appropriate office listed below. Customers outside the regions listed below, please contact EHX Customer Service for information on warranty repairs at info@ehx.com or +1-718-937-8300. USA and Canadian customers: please obtain a **Return Authorization Number** (RA#) from EHX Customer Service before returning your product. Include– with your returned unit – a written description of the problem as well as your name, address, telephone number, e-mail address, RA# and a copy of your receipt clearly showing the purchase date.

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To hear demos on all EHX pedals visit us on the web at **www.ehx.com**
Email us at **info@ehx.com**

- FCC COMPLIANCE -

Note: *This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:*

- *Reorient or relocate the receiving antenna.*
- *Increase the separation between the equipment and receiver.*
- *Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- *Consult the dealer or an experienced radio/TV technician for help.*

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.