

- 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, and RA#; and a copy of your receipt clearly showing the purchase date.

United States & Canada

EHX CUSTOMER SERVICE
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This warranty gives a purchaser specific legal rights. A purchaser may have even greater rights depending upon the laws of the jurisdiction within which the product was purchased.

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.

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step
E F F E C T S

EXPRESSION EXPRESSION / CV PEDAL

Congratulations on your purchase of the Electro-Harmonix **EXPRESSION** pedal from our ground-breaking NEXT STEP series! The **EXPRESSION** pedal has no moving parts: it does not use a potentiometer, optics or magnetism to sweep expression enabled controls on other devices. The result is a responsive expression pedal that allows precise control over your expression or control-voltage capable effects and instruments.

GETTING STARTED

The EHX **EXPRESSION** pedal ships from the factory with a TRS cable. The TRS cable is necessary when connecting the **EXPRESSION** pedal to a device with an expression control input. Plug one end of the included ¼" TRS cable into the OUTPUT jack of the **EXPRESSION** pedal; connect the other end of the TRS cable into an effect or instrument with an expression input. Within seconds the EHX logo in the center of the pedal will light. Your **EXPRESSION** pedal is now ready for use. **Please note:** as long as a plug is inserted into the OUTPUT jack, a drain is placed on the 9V battery inside the **EXPRESSION** pedal. We recommend you unplug the OUTPUT jack when the **EXPRESSION** pedal is not in use to extend battery life.

CALIBRATION

To ensure the **EXPRESSION** pedal responds to its full sweep range, it may be necessary to calibrate the sweep of the **EXPRESSION** pedal when it is used on a different surface since its last use. It is particularly important to calibrate if the **EXPRESSION** pedal is used on a slanted surface. We also recommend calibrating the **EXPRESSION** pedal during your first use of the pedal.

CALIBRATION PROCEDURE

1. Place the pedal on the surface where it will be used.
2. Ensure the **EXPRESSION** pedal is sitting flat on the surface then press and release the CALIBRATE button once; the EHX logo begins to blink indicating the Toe position has been saved.
3. While the EHX logo continues to blink, rock the pedal all the way back to the extreme Heel position and hold it there.

4. Press and release the CALIBRATE button once more.
5. The EHX logo will stop blinking to indicate that the Heel position has been saved. The calibration procedure is complete.

If you accidentally press the CALIBRATE button and the EHX logo blinks, do not press CALIBRATE again. After approximately 7 seconds, the EXPRESSION pedal will stop blinking and ignore the button press.

RANGE Control

The RANGE dial located on the right side of the EXPRESSION pedal controls the Heel setting of the pedal's sweep (or Toe setting with REVERSE engaged). As the numbers on the dial increase, the expression sweep range increases. Minimum range occurs when the control is set to 0; maximum range is achieved at a setting of 10. **Please note:** When the REVERSE button is out, the RANGE control only restricts the Heel setting, not the Toe. If REVERSE is pushed in, the RANGE control only restricts the Toe setting, not the Heel.

BYPASS SETTING Control

This dial controls the EXPRESSION pedal's output setting while in bypass mode. A setting of 0 for BYPASS SETTING is equivalent to the Heel position. A setting of 10 on the dial is equivalent to the Toe position. Setting the dial anywhere in between will yield an intermediate bypass setting. **Please note:** the RANGE and REVERSE controls have no effect on the BYPASS SETTING control. BYPASS SETTING always sweeps through the entire EXPRESSION pedal's range.

REVERSE Button

The REVERSE button reverses the direction of the EXPRESSION pedal's output as it is swept from Heel to Toe. This button has two positions: **out** and **in**. Set to **out**, REVERSE is disengaged and the EXPRESSION pedal's output increases as you move the pedal from Heel to Toe. In most cases, this is the equivalent of turning a knob in the clockwise direction or pushing a slider control upward. Pushing the REVERSE button to the **in** position engages the Reverse function. When set to the **in** position, the output of the EXPRESSION pedal decreases as you move the pedal from Heel to Toe. This is the equivalent of turning a knob counter-clockwise or pushing a slider downward. **Please note:** the REVERSE button does not change the polarity of the TRS OUTPUT jack, it only changes the direction of the EXPRESSION pedal's sweep.

OUTPUT Jack: TRS = EXP, TS = CV

The type of cable inserted into the OUTPUT jack determines the output state of the EXPRESSION pedal. When a TRS cable (the cable supplied with the EHX EXPRESSION pedal) is plugged into the OUTPUT jack, the pedal works as a standard expression pedal with the following connections: **TIP** = potentiometer wiper or output signal, **RING** = Toe position and **SLEEVE** = Heel position. This is the standard polarity for the TRS plug of an expression pedal that many in the industry follow including all EHX products as well as Boss®/Roland®, Moog®, Nord® etc. The REVERSE button does not change the TRS plug polarity, it only changes the direction of the output sweep.

If you plug a standard ¼" instrument cable, with mono TS plug, into the EXPRESSION pedal's OUTPUT jack, the EXPRESSION pedal output will automatically change over to Control-Voltage (CV) mode. In CV mode you can use the EXPRESSION pedal as a CV source. The maximum range in CV mode is 0V to 5V.

Adjusting the RANGE control will move the minimum voltage from 0V up to approximately 4.5V, the maximum voltage of 5V does not change.

ENTERING/EXITING BYPASS

Toggle between bypass and effect mode by tipping the EXPRESSION pedal forward, in the Toe direction, past the flat position of the EXPRESSION pedal. You do not need to tip the EXPRESSION pedal all the way forward; 25% of the total forward travel will do it. The EXPRESSION pedal needs to return to its flat position before you can toggle between bypass and effect mode again. **Please note:** while in bypass mode, the BYPASS SETTING control on the right side of the EXPRESSION pedal adjusts the output setting.

When the EXPRESSION pedal is in effect mode, the EHX logo in the center of the pedal will light up. In bypass mode, the logo does not light.

POWER

Plugging into the OUTPUT jack activates power from the internal 9 Volt battery. The input cable should be removed when the unit is not in use to avoid running down the battery. If an AC Adapter is used, the EXPRESSION pedal will be powered up as long as the AC Adapter is correctly plugged in.

The EXPRESSION pedal's power jack is located on the same side as the OUTPUT jack. A 9 Volt AC Adapter capable of delivering at least 25mA of current at 9VDC is required to power the EXPRESSION pedal. The inner ring of the 9 Volt AC Adapter must be negative, the outer ring positive. The optional 9V power supply from Electro-Harmonix is 9.6DC-200BI (same as used by Boss® & Ibanez®) supplies 9.6 Volts DC/200mA. The unit's battery may be left in or taken out when the AC Adapter is in use. **The actual current draw of the EXPRESSION pedal is 12mA.**

CHANGING THE BATTERY

1. Locate the battery door at the front of the EXPRESSION pedal, under the Toe area of the top plate.
2. Remove the large black screw that holds the battery door to the case, most coins or larger slotted screwdrivers can be used to remove this screw.
3. Connect your new 9V battery to the wired battery connector.
4. Insert the 9V battery into the battery holder clip on the battery door so that the wired connector is on the same side as the hole in the battery door.
5. Place the battery door back into its window in the case of the EXPRESSION pedal and re-install the screw.