

# electro-harmonix

## **OCEANS 11** **Multifunction Digital Reverb**

Congratulations on your purchase of the Electro-Harmonix OCEANS 11 Reverb, the compact digital reverb pedal that does it all. Splash your tone with subtle ambience using classic Hall and Plate, or drench your guitar in surreal soundscapes with Shimmer and Modulation. A newly developed Spring algorithm faithfully emulates the iconic drip of vintage Fender® reverb units. Unique and powerful polyphonic, dynamic, and auto-triggering reverbs inspire radical experimentation. Instantaneous control of infinite reverb unleashes a torrent of sonic possibilities for a truly unparalleled reverb experience.

### **- TABLE OF CONTENTS -**

<b>Getting started with OCEANS 11</b>	2
<b>Connections</b>	2
<b>Controls</b>	2
<b>Descriptions of Reverb Types</b>	4
<b>Mode Button Functionality</b>	5
<b>Footswitch Functionality</b>	7
<b>Summary Chart</b>	8
<b>Secondary Knob Functionality</b>	10
<b>Infinite Reverb Functionality</b>	14
<b>Warranty Information and FCC Compliance</b>	16

## - GETTING STARTED WITH OCEANS 11 -

1. Plug the supplied EHX9.6DC AC Adapter into the jack at the top of the OCEANS 11.
2. Plug your guitar into the INPUT jack and plug the OUTPUT jack into your amplifier.
3. Turn the 11-position Reverb Type knob to the HALL setting for a classic warm reverb.
4. Set the decay time using the TIME knob, the reverb tone with the TONE knob, and the reverb volume with the FX LVL knob.

## - CONNECTIONS -

**INPUT Jack** – This ¼" jack is the audio input of the OCEANS 11. The input impedance is 1MΩ.

**OUTPUT Jack** – This ¼" jack is the audio output of the OCEANS 11. The output impedance is 680Ω.

**INFINITE Jack** – Connect an external momentary footswitch to this ¼" jack. Press and hold the external switch to activate infinite reverb. The infinite reverb wash will continue as long as the external switch is pressed.

The external switch should be normally open. Upon engaging the switch, it should create a short circuit between the Tip and Sleeve of the plug. See "Infinite Reverb Functionality" on page 14 for details on using infinite reverb.

**9V Power Jack** – Plug the output of the OCEANS 11's supplied EHX9.6DC 200mA AC adapter in the 9V power jack located at the top of the pedal. The OCEANS 11 requires 150mA at 9VDC with a center-negative plug.

## - CONTROLS -

**FX LVL Knob** – Controls the output volume of the reverb effect. When this knob is at the minimum position, the output is only your dry signal. As the knob is turned up, the reverb output increases in volume. As the knob is turned past 2 o'clock, the dry signal decreases in volume. When the knob is at the maximum position, only the effect is output.

**TIME Knob** – Usually controls the decay time of the OCEANS 11 reverb. As this knob is turned clockwise, the reverb time gets longer and longer, reaching infinite when the knob is as far as it will go.

**TONE Knob** – Usually controls the tone or EQ of the reverb signal. As this knob is turned clockwise, the sound of the reverb gets brighter. As you turn TONE counter-clockwise, the sound of the reverb gets darker.

**Reverb Type Knob** – This knob is an 11-position rotary switch that selects which of the OCEANS 11's reverb types is active. See "Descriptions of Reverb Types" on page 4 for details on the reverb types.

**MODE Button** – This button cycles through the available modes of the active reverb type. Each reverb type has a certain number of modes which modify the behavior of the active reverb type. See "Mode Button Functionality" on page 5 for more details.

**LED** – The LED lights when the OCEANS 11 effect is active and shuts off when in bypass mode. Its color and blinking pattern also indicate information about the reverb mode, tap tempo delay, and infinite status. See "Mode Button Functionality" on page 6, "Footswitch Functionality" on page 8, and "Infinite Reverb Functionality" on page 14 for more details.

**Footswitch** – Press the footswitch to toggle the pedal between buffered bypass and effect modes. When the pedal is in effect mode, the LED will be lit. In most reverbs, the footswitch can also engage Infinite by pressing and holding it down. Moreover, the footswitch can be used for tap tempo in ECHO reverb. For more details see "Footswitch Functionality" on page 7 and "Infinite Reverb Functionality" on page 14.

**TAILS Switch** – The OCEANS 11 allows you to choose whether reverb continues to play or stop immediately after the pedal is switched to bypass. To control this, remove the OCEANS 11's bottom cover and locate the small slide switch on the bottom of the board labeled "TAILS." When TAILS is set to ON, the reverb will continue to play after the pedal switched to bypass, with the decay time set by the TIME knob. Anything you play after entering bypass will not reverberate. If the pedal is set for infinite decay time (i.e. TIME is set to maximum) the reverb will continue until you turn TIME down or switch to a different mode.

## - DESCRIPTIONS OF REVERB TYPES -

**HALL** – a warm and versatile reverb algorithm modeled after a spacious performance hall.

**SPRING** – a newly developed reverb capturing the iconic drip of a vintage 1962 Fender® 6G15 reverb unit. TIME behaves like DWELL on the Fender® unit, so infinite reverberation is unavailable.

**PLATE** – an emulation of a smooth, bright metal plate reverb commonly found in high-end recording studios during the 1960's and 70's.

**REVR5** – Reverse reverb – a rendition of the reverse reverb trick commonly performed in studios. TIME controls the length of time between playing a note and hearing its reverse reverb fade in.

**ECHO** – Reverb plus delay – a simple digital delay which feeds into a plate reverb. Both TIME and the footswitch can control the time between echoes, and TONE controls the feedback of the echoes.

**TREM** – Reverb plus tremolo – a classic, periodic volume envelope applied to both the dry and wet mix of a hall reverb. TIME controls the LFO rate, and TONE controls the LFO depth.

**MOD** – Modulated reverb – a lush combo of various modulations for creamy rich reverb tails. TIME and TONE behave differently in each mode. See "Mode Button Functionality" on page 5.

**DYNA** – Dynamic reverb – a dynamic trio of experimental reverb algorithms: swell, gate, and duck. TIME behaves differently depending on the mode. See "Mode Button Functionality" on page 5.

**AUTO-INF** – Auto infinite reverb – an inventive reverb that listens to your playing and crossfades to a new reverb wash upon detection of newly-struck notes and chords. Works best with long decay times.

**SHIM** – Shimmer – a rich octave-shifted wash of harmony in a reverberant cloud. TONE controls the frequency content of both the reverb tail and octave-shifts.

**POLY** – Polyphonic reverb – two configurable bidirectional pitch-shifts that add startling dimensionality to the reverb tail.

## - MODE BUTTON FUNCTIONALITY -

Each reverb type on the OCEANS 11 has up to three unique modes of operation. Pressing the MODE button cycles through these available modes. The LED color – green, red, or orange – shows the current mode. If the LED does not change color when pressing this button, the active reverb type has only one mode. When you switch reverb types, the OCEANS 11 will recall the last mode you were using in that reverb type. Below is a description of the available modes in each reverb type. See the chart on page 8 for a summary of these descriptions.

**HALL** – 1 mode available.

**SPRING** – 1 mode available.

**PLATE** – 1 mode available.

**REVRS** – 1 mode available.

**ECHO** – The mode button cycles through three subdivisions of your tapped echo time. See “Footswitch Functionality” on page 7 for details on using tap-tempo with ECHO reverb. In Green mode, the subdivision is  $\frac{1}{2}$  of your tapped echo time for an eighth-note rhythm. In Red mode, the echo rhythm is your tapped quarter-note time. In Orange mode, the subdivision is  $\frac{3}{4}$  of your tapped echo time for a dotted-eighth note rhythm. The LED blinks at the current tapped delay time. If the delay is set by the TIME knob, the LED stops blinking and the mode button has no effect.

**TREM** – The mode button cycles through three LFO wave shapes. In Green mode, the shape is a triangle. In Red mode, the shape is a square. In Orange mode, the shape is a sine.

**MOD** – The mode button cycles through three different modulations. In Green mode, a chorus and subtle vibrato are applied to the reverb. TIME and TONE control chorus rate and depth, respectively. In Red mode, flanging is applied to achieve a classic EHX flerb. TIME and TONE control flerb rate and feedback, respectively. In Orange mode, the chorus and flerb are combined. Orange mode remembers and applies the last-used parameters of the individual chorus and flerb effects. TIME controls the mix balance: fully counter-clockwise is only chorus, and fully clockwise is only flerb. TONE is unused.

**DYNA** – The mode button cycles through three dynamic algorithms with non-linear outputs. In Green mode, a Swell algorithm is selected that suppresses note attacks and fades-in their reverb tails. TIME behaves normally and controls the reverb decay. In Red mode, a noise gate is selected that opens the reverb sound for only louder notes. TIME controls the length of time the gate stays open once it's been triggered. In Orange mode, a ducking algorithm is applied which reduces the volume of the reverb while notes are being played. TIME behaves normally and controls the reverb decay.

**AUTO-INF** – 1 mode available.

**SHIM** – 1 mode available.

**POLY** – The mode button cycles through two sets of control parameters, allowing for deep customization of the polyphonic reverb sound. In Green mode, the reverb is in "interval edit mode" in which the secondary knobs control the intervals of the two pitch shifts. In Red mode, the reverb is in "mix edit mode" in which the secondary knobs command the mix balances of the various signals.

## **- FOOTSWITCH FUNCTIONALITY -**

### **INFINITE REVERB**

In most reverb types (see the chart on page 8 for which ones), infinite reverb is instantaneously accessible by holding down either the internal footswitch or an external footswitch connected to the INFINITE jack. This makes the active reverb play in the background indefinitely while granting access to a fresh, independently controllable reverb of the same type. For more details, see "Infinite Reverb Functionality" on page 14.

### **TAP TEMPO**

In ECHO reverb, the quarter-note echo delay can be set with tap tempo. You can use either the built-in footswitch or an external tap tempo switch connected to the INFINITE jack. Plugging in an external footswitch, however, always disables the internal footswitch's tap tempo functionality. With either footswitch, you can achieve different rhythms using the MODE button, per the ECHO reverb's MODE descriptions on page 5. Tap twice at your desired quarter-note tempo to lock in your tap time.

You can disable the internal footswitch's tap tempo function. To disable/enable internal tap tempo, unplug power from the OCEANS 11, press and hold the footswitch, then plug power back in while holding the footswitch (this will also disable/enable the internal footswitch's infinite reverb control, see "Infinite Reverb Functionality" on page 15). The LED will slowly blink five times if tap tempo is turned off or will blink twice if tap tempo is turned on. The OCEANS 11 saves your tap tempo enable/disable setting until it is changed again, even if the pedal is removed from power.

You can also reset the internal footswitch's tap tempo to the factory default setting of enabled by holding the footswitch when resetting secondary knob settings. See step 3 in "Erasing Secondary Knob Settings" on page 11.

### **KICKING THE SPRING TANK**

In SPRING reverb, if "TAILS" is on (see "Controls" on page 3), quickly double tap the internal footswitch to "kick" the emulated spring tank. If an external footswitch is connected to the INFINITE jack, then you must use that one instead of the internal one. This will send a loud bouncy jolt through the OCEANS 11, as it would a real spring reverb unit.

Reverb Type	MODE Descriptions	LED Color	MODE Effect	TIME
HALL	---	Green	---	Reverb time
SPRING	---	Green	---	Reverb time
PLATE	---	Green	---	Reverb time
REVRS	---	Green	---	Reverb time
ECHO	Echo rhythm	Green	1/8	Echo time
		Red	1/4	
		Orange	Dotted 1/8	
TREM	LFO shape	Green	Triangle	LFO speed
		Red	Square	
		Orange	Sine	
MOD	Modulation type	Green	Chorus	Chorus rate
		Red	Flerb	Flerb rate
		Orange	Chorus + Flerb	Chorus/Flerb mix
DYNA	Algorithm select	Green	Swell	Reverb time
		Red	Gate	Hold time
		Orange	Duck	Reverb time
AUTO-INF	---	Green	---	Reverb time
SHIM	---	Green	---	Reverb time
POLY	Parameter Control	Green	Interval edit	Reverb time
		Red	Mix edit	

<b>TONE</b>	<b>Secondary TIME</b>	<b>Secondary TONE</b>	<b>Infinite Reverb?</b>
Reverb tone	Predelay time	Predelay feedback	Yes
Reverb tone	Spring length	Preamp drive	NO
Reverb tone	Predelay time	Predelay feedback	Yes
Reverb tone	Predelay time	Predelay feedback	Yes
Echo feedback	Reverb time	Echo tone	Yes
LFO depth	Reverb time	Reverb tone	Yes
Chorus depth			
Flerb feedback	Reverb time	Reverb tone	Yes
---			
	Swell time	---	Yes
Reverb tone	Release time	Threshold	NO
	Release time	Threshold	Yes
Reverb tone	Crossfade time between washes	Trigger sensitivity	NO
Reverb tone	Mod rate	Mod depth	Yes
Reverb tone	Shift interval #1	Shift interval #2	Yes
	Dry/shifted mix	Shift #1/#2 mix	

## **- SECONDARY KNOB FUNCTIONALITY -**

The OCEANS 11 allows you to take even more control over the tone of each reverb by accessing “hidden” parameters through Secondary Knob Mode. Use the secondary knob parameters to fine tune the exact tone you want, or push the OCEANS 11 into wild, unexpected sonic territory.

### **USING SECONDARY KNOB MODE**

1. Turn the REVERB TYPE knob to the reverb you would like to edit. Secondary knob functions are available for every reverb.
2. Press and hold the MODE button for 1 second. The LED will blink in an on-on-off pattern to indicate that the OCEANS 11 is now in Secondary Knob Mode.
3. Turn the TIME or TONE knobs to edit the secondary knob function for that reverb type and its selected mode.
4. To exit Secondary Knob Mode, press and release the MODE button. The LED will stop blinking. The reverb time and tone set by the TIME and TONE knobs before entering Secondary Knob Mode are preserved until those knobs are moved.

### **USING OTHER CONTROLS IN SECONDARY KNOB MODE**

1. The FX LVL and REVERB TYPE knobs always function normally in Secondary Knob Mode.
2. When using the TIME or TONE knob to set a secondary knob function, the reverb time and tone that was set by those knobs before entering Secondary Knob Mode are preserved.
3. The footswitch functions normally in Secondary Knob Mode. If the footswitch is used to put the OCEANS 11 in bypass mode, Secondary Knob Mode will remain active, and moving the knobs will change their secondary knob parameters. The LED will blink in a shorter version of the Secondary Knob Mode pattern. If Infinite Reverb is engaged while in Secondary Knob Mode, the positions of the secondary knobs will be preserved for when Infinite Reverb is disengaged and the pedal returns to Secondary Knob Mode. If tap tempo mode is enabled, you can use the footswitch to tap in a new delay time as usual.
4. Secondary knob settings are preserved when switching away from a particular reverb type and are preserved when power cycling the OCEANS 11. When secondary knob functions are set in one reverb type, they do not affect the secondary knob functions of another reverb type (example: changing the modulation depth of MOD reverb does not change the modulation depth of SHIM reverb).

## **ERASING SECONDARY KNOB SETTINGS**

1. To erase the secondary knob settings of a particular reverb, press and hold the MODE button. Then, while holding MODE, press and hold the footswitch for 2 seconds. The LED will blink quickly indicating that the secondary knob settings of the current reverb have been reset to the default factory settings.
2. To erase the secondary knob settings of every reverb and restore them all to factory defaults, first unplug the OCEANS 11 from power. Press and hold the MODE button. Then, while holding MODE, plug power back in to the OCEANS 11. The LED will blink quickly, indicating that all secondary knob functions have been restored to the factory default.
3. To erase the secondary knob settings of every reverb and reset both the tap tempo and infinite reverb functionalities of the internal footswitch to the factory default, first unplug the OCEANS 11 from power. Press and hold both the MODE button and the footswitch. Then, while holding both, plug power back in to the OCEANS 11. The LED will cycle through red, orange and green to indicate that the OCEANS 11 has been restored to factory default secondary knob settings, infinite reverb settings, and tap tempo settings.

## **SECONDARY KNOB FUNCTIONS BY REVERB TYPE**

See the chart on page 8 for a summary of these secondary knob functions.

**HALL** – The TIME knob controls Predelay time from a minimum of 0 sec to a maximum of 1 sec. Factory default position is off, at the fully counter-clockwise position. The TONE knob controls Predelay feedback. Factory default position is zero, at the fully counter-clockwise position.

**SPRING** – The TIME knob selects spring length. The lowest third of the knob's travel selects 9.25-in. springs, the middle third selects 16.75-in. springs, and the top third selects 24-in. springs. Factory default position is 12 o'clock. The TONE knob controls a subtle amount of preamp drive before the reverb circuit. Factory default position is 11 o'clock.

**PLATE** – The TIME knob controls Predelay time from a minimum of 0 sec to a maximum of 1 sec. Factory default position is off, at the fully counter-clockwise position. The TONE knob controls Predelay feedback. Factory default position is zero, at the fully counter-clockwise position.

**REVRS** – The TIME knob controls Predelay time from a minimum of 0 sec to a maximum of 1 sec. Factory default position is off, at the fully counter-clockwise position. The TONE knob controls Predelay feedback. Factory default position is zero, at the fully counter-clockwise position.

**ECHO** – The TIME knob controls the reverb decay time of each echo in every mode. Factory default position is fully counter-clockwise for no reverb. The TONE knob controls the tone damping of the echo in every mode. Factory default position is 12 o'clock.

**TREM** – The TIME knob controls the reverb decay in every mode. Factory default position is 12 o'clock. The TONE knob controls the reverb tone in every mode. Factory default position is also 12 o'clock.

**MOD** – The TIME knob controls the reverb decay in every mode. Factory default position is 2 o'clock. The TONE knob controls the reverb tone in every mode.

**DYNA** – In green mode (Swell), the TIME knob controls the time it takes for the reverb swell to fully bloom, and the TONE knob has no secondary functionality.

In red mode (Gate), the TIME knob controls the length of time it takes for the noise gate to close, and the TONE knob controls the input volume threshold at which the noise gate triggers and opens.

In orange mode (Duck), the TIME knob controls the length of time it takes for the volume reduction to fade back to normal volume, and the TONE knob controls the input volume threshold at which the ducking is triggered.

**AUTO-INF** – The TIME knob controls the time it takes to crossfade between subsequent reverb washes. Longer times are achieved by turning the knob clockwise. Factory default position is 10 o'clock. The TONE knob controls the sensitivity of the detection trigger. Turning the knob clockwise makes AUTO-INF more sensitive and more likely to trigger a new reverb wash with quieter notes. Factory default position is 1 o'clock.

**SHIM** – The TIME knob controls the modulation rate, from 0 Hz to 8 Hz. Factory default position is 10 o'clock. The TONE knob controls the modulation depth. Factory default position is 10 o'clock.

**POLY** – In green mode (interval edit), the TIME knob controls the shift interval of the first pitch shifter in semitone steps, ranging from down one octave (-12 semitones) at the fully counter-clockwise position, to up one octave (+12 semitones) at the fully clockwise position. No shift occurs at 12 o'clock. The factory default position is 2 o'clock for a shift upwards of a perfect fifth. The TONE knob controls the shift interval of the second pitch shifter in semitone steps, over the same range. The factory default position is fully counter-clockwise for a downwards shift of an octave.

In red mode (mix edit), the TIME knob controls the volume balance of the unshifted and shifted signals before they enter the reverb. A fully counter-clockwise knob corresponds to a fully unshifted mix, while a fully clockwise knob corresponds to a mix of only the shifted signals. Factory default is fully clockwise. The TONE knob controls the volume balance of the two shifted signals. Using the factory default shift intervals as an example, the counter-clockwise extreme of the TONE knob mixes 100% of the upward perfect fifth and 0% of the downward octave, while the clockwise extreme mixes the opposite: 0% of the upward perfect fifth and 100% of the downward octave. Factory default is 12 o'clock for a 50% mix of each interval shift.

## **- INFINITE REVERB FUNCTIONALITY –**

In most OCEANS 11 reverb types, infinite reverb is accessible. Infinite reverb increases the decay time of the currently-selected reverb to infinite and redirects the musician's playing to a fresh reverb of the same type. Infinite reverb also disables the MODE button and overrides the TIME and TONE knobs such that they respectively control the TIME and TONE knobs of the fresh reverb. This allows you to sculpt the fresh reverb sound to your liking without altering the infinite reverb in the background.

### **USING INFINITE REVERB**

1. Decide which footswitch to use for controlling this feature. You can use either the internal footswitch or an external footswitch connected to the INFINITE jack. Plugging in an external footswitch, however, always disables the internal footswitch's infinite reverb functionality.
2. If using the internal footswitch, ensure that the internal "TAILS" switch is ON; infinite reverb is inaccessible when this switch is OFF. If using the external footswitch, however, infinite reverb can be engaged regardless of whether TAILS is on or off.
3. Press and hold down the footswitch for more than 350 milliseconds. The LED will quickly cycle green, red, then orange to indicate that infinite reverb is engaged.
4. To exit infinite reverb, release the footswitch. The pedal will return to the state it was in before engaging infinite reverb.

### **USING OTHER CONTROLS WITH INFINITE REVERB**

1. The FX LVL and Reverb Type knobs always function normally when Infinite Reverb is engaged.
2. When using the TIME or TONE knob to sculpt the fresh reverb sound, the infinite reverb's time and tone that was set by those knobs before engaging infinite reverb are preserved.
3. As long as infinite reverb is accessible, it can be engaged regardless of whether the OCEANS 11 is in Secondary Knob Mode.
4. When entering infinite reverb, the OCEANS 11 preserves its TIME and TONE knob values. If the overriding TIME and TONE knobs are moved while infinite reverb is engaged, and infinite reverb is then disengaged, the original TIME and TONE knob values will be recalled (until they are moved again). Note: In this case, the physical positions of the TIME and TONE knobs will no longer match their actual values.
5. After disengaging infinite reverb, the fresh reverb will continue to play according to the decay rate and tone specified by the overriding TIME and TONE knob values. Additionally, these values are preserved for the next time infinite reverb is engaged. Changing reverb types or

bypassing the pedal won't reset the preserved TIME and TONE values. Power-cycling the OCEANS 11, however, will.

You can disable/enable the internal footswitch's infinite reverb functionality. To do so, unplug power from the OCEANS 11, press and hold the footswitch, then plug power back in while holding the footswitch (this will also disable/enable the internal footswitch's tap tempo control, see "Footswitch Functionality" on page 7). The LED will slowly blink five times if infinite reverb is turned off or will blink twice if infinite reverb is turned on. The OCEANS 11 saves your infinite reverb enable/disable setting until it is changed again, even if the pedal is removed from power.

You can also reset the internal footswitch's infinite reverb functionality to the factory default setting of enabled by holding the footswitch when resetting secondary knob settings. See step 3 in "Erasing Secondary Knob Settings" on page 11.

## – 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.*

## - 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](mailto: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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