
SSL
E-DYN
RATIO
1
∞
THRESH
LIN
REL
0
+4
-26
dB
RELEASE
.1
4
s
FAST
ATTK
COMP
20
14
IN
10
6
GATE / EXP
3
RANGE
0
40
THRESH
0
EXP
-30
+10
dB
RELEASE
FAST

Solid State Logic E Series XRackEDyn Logic E Series Dynamics Module for 500 Series Racks User Guide

Solid State Logic
OXFORD • ENGLAND

Contents

Solid State Logic E Series XRackEDyn Logic E Series Dynamics Module for 500 Series Racks User Guide

Safety and Installation Considerations

This page contains definitions, warnings, and practical information to ensure a safe working environment. Please take time to read this page before installing or using this apparatus.

General Safety

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Do not expose this apparatus to rain or moisture.
- Clean only with dry cloth.
- Do not block any ventilation openings.

- Install in accordance with the rack manufacturer’s instructions.
- There are no user-adjustments, or user-servicable items, on this apparatus.
- Adjustments or alterations to this apparatus may affect the performance such that safety and/or international compliance standards may no longer be met.
- This apparatus is not to be used in safety critical applications

Caution

- This apparatus should not be used outside of the scope of API 500 series compatible racks.
- Do not operate this apparatus with any covers removed.
- To reduce the risk of electric shock, do not perform any servicing other than that contained in these Installation Instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

Installation

- Ensure power is removed from the rack before fitting or removing this apparatus to or from the rack.
- Use the panel fixing screws supplied with the rack to secure this apparatus into the rack.

Standards Compliance

This apparatus is designed to be installed and used in API 500 series compatible racks which are CE marked. The CE mark on a rack is indicative that the manufacturer confirms that it meets both EMC and the Low Voltage Directive (2006/95/EC).

Instructions for Disposal of WEEE by Users in the European Union

The symbol shown here is on the product or on its packaging, which indicates that this product must not be disposed of with other waste. Instead, it is the user’s responsibility to dispose of their waste equipment by handing it over to a designated collection point for recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or where you purchased the product.

Limited Warranty

Please refer any warranty claim to the supplier of this equipment in the first instance. Full warranty information for equipment supplied directly by Solid State Logic can be found on our website: **www.solidstatelogic.com**

Introduction

Congratulations on your purchase of this API 500 series compatible SSL E Series Dynamics module.

This module has been specifically designed to operate in an API 500 series rack such as the API lunchbox® or equivalent. In common with many such modules, the nominal input/output level is +4dBu.

Your new module comprises a compressor/limiter and an expander/gate, the design of which returns faithfully to the circuit and key components which defined the sound of the original SSL E Series channel strip. A true RMS converter is used in the side chain whilst the gain element is an all discrete design identical to the Class A VCA chip used in the original.

The compressor contains additional switching options to defeat the over-easy curve and to use a linear release instead of the more usual logarithmic curve. The result is a compressor with three distinct voicings, all of which contributed to the many classic records tracked and mixed on early E Series consoles.

As well as replicating the feel of the classic E Series dynamics, this module provides, with the exception of access to a 'link' bus, the same facilities as the SSL X-Rack XR418 E Series Dynamics module.

Operation

Please refer to the illustration opposite.

The IN button 1, located centre left, switches the entire module in and out of circuit.

The two vertical rows of LEDs 2, located centre right, provide an indication of dynamics activity. The row of green LEDs to the left show Gate/Expander activity whilst those to the right indicate operation of the Compressor/Limiter.


SSL
E-DYN
RATIO
1
∞
THRESH
0
+4
-26
dB
LIN
REL
RELEASE
.1
s
4
FAST
ATTK
3
COMP
IN
GATE / EXP
20
14
10
6
3
1
2
RANGE
0
40
4
THRESH
0
-30
+10
dB
EXP
RELEASE
.1
s
4
FAST
ATTK
611

3 Compressor/Limiter

RATIO	When turned to 1:1, the compressor/limiter section is inactive. Turning the control clockwise increases the compression ratio, giving a true limiter at the fully clockwise position. The compressor normally has an 'over-easy' characteristic – pressing the button replaces this with a 'hard knee' characteristic, providing an alternative for some instruments.
THRESH	Whenever a signal exceeds the level set by this control, the compressor will start to act at the ratio set by the RATIO control. The THRESHold and RATIO controls also provide automatic make-up gain, so as you lower the threshold and introduce more compression, the output level is increased, maintaining a steady output level regardless of the amount of compression.
LIN REL	Changes the release curve from logarithmic to linear. This also raises the threshold by 6dB.
FAST ATT	Provides a faster attack time (3mS for 20dB gain reduction). When off the attack time is slower and less aggressive (30mS for 20dB gain reduction).
RELEASE	Sets the time constant (speed) with which the compressor returns to normal gain settings once the signal has passed its maximum.

4 Gate/Expander

This section can act as a 20:1 Gate or as a 2:1 Expander when the EXP button is pressed.

RANGE	Determines the depth of gating or expansion. When turned fully anti-clockwise, this section is inactive. When turned fully clockwise, a gate depth or range of 40dB can be obtained.
THRESH	Determines the level at which the gate opens or the level below which gain reduction begins (EXP selected), adjustable from approximately -30dBu to +10dBu. Variable hysteresis is incorporated in the threshold circuitry which increases as the threshold is lowered. This is very useful in music recording as it allows instruments to decay below the 'open' threshold before gating or expansion takes place.
FAST ATT	Normally, a controlled linear attack time of 1.5ms per 40dB is provided. Press this button to select a fast attack time (100µs per 40dB). The attack time is the time taken for the Gate/Expander to 'open' once the signal level is above the threshold. When gating signals with a steep rising edge, such as drums, a slow attack may effectively mask the initial 'THWACK', so you should be aware of this when selecting the appropriate attack time.
RELEASE	This determines the time constant (speed), variable from 0.1 to 4 seconds, at which the Gate/Expander reduces the signal level once it has passed below the threshold.Note that this control interacts with the RANGE control.

Solid State Logic

OXFORD • ENGLAND

October 2021

Revision History

Revision V2.0, June 2020 – Revised Layout Release for Module Update

Revision V2.1, October 2021 – corrected Threshold level description