

# MINI SSL **USER MANUAL**

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WRITTEN BY: JOPPE VAN CUTSEM

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MARK1 pro audio is a company specialized in repairing, revising, modifying and innovating iconic audio equipment used for professional music/recording studio's throughout the world.

MARK1 pro audio Geldropseweg 114 5591ED, Heeze, The Netherlands e-mail: <u>sales@mark1.nl</u> Telephone: +31 6 52432405 <u>www.mark1.nl</u>



*Disclaimer*: This document is written based on basic knowledge of an SSL (4000) desk. As a result, this manual does not provide information on all the possibilities for using SSL channels. For this information we refer you to the SSL operator's manuals. We are not responsible for any damage of the product due to the actions of the user. Please be thoughtful operating the Mini SSL.

### INTRODUCTION

The mini SSL is a compact version of the iconic SSL 4000 mixing desks, with the purpose to gain the classic sound of an SSL mixing desk without the need of a full SSL 4000. It is a plug & play modular bucket, handy for any situation in every location, for a starters or professionals (private) studio. It is the perfect tool for high quality mixing and recording sessions on a small footprint.

In this manual you'll find the general information and specifications to understand and use the mini SSL in your studio.

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## **PRODUCT OVERVIEW**

The Mini SSL In-Line mixer consists of the following:

- 8x SSL611 4000 series I/O modules.
- I/O panel on Dsub25.
- Internal MARK1 Power Supply Unit (PSU).
- Wheeled frame, with additional 19" rackspace.
- MARK1 summing card. This PCB (printed circuit board) is responsible for summing the main busses, the auxiliary busses and the SSL routing of the SSL channels.

The Mini SSL no longer features a centre section, thanks to clever internal connections and the easily accessible I/O panel. The reduced size of this console has made options such as 'Master Ready Group' impractical. And by using an external Monitor Controller you will get the full SSL experience on a compact scale.

Inside the mini SSL, the triple status option is enabled by default (RECORD + MIX + VCAs to monitor). This status provides versatile options within the Mini SSL without the need for the center section. This status gives you all the necessary options to record, mix or both, depending on the status of READY GROUP and READY TAPE. The status of the desk can be changed internally. More detailed information about the status can be found in chapter 'Operation'.

### OPERATION

The Mini SSL functions similarly to the SSL 4000 console with additional MARK1 exclusive features. To clarify its operation, this chapter focuses on the workflow and the various ways of operation.

Each mode includes two diagrams; one connection diagram and one signal flow.

The entire Mini SSL console is default-enabled with the SSL 4000 'RECORD + MIX + VCA's to monitor' status. By a certain way of connecting the I/O panel and adjusting the condition of READY GROUP and READY TAPE, it is able to get the full workflow of a SSL 4000 console.

Each channel is commenly in MIX mode, however by selecting either READY GROUP or READY TAPE you can put individual channel into record.

### 1. MIX MODE

If READY GROUP and READY TAPE are **not** selected, the channel is in MIX mode. In this case the monitor fader is always fed with the tape monitor signal (the group monitor input is inaccessible in this case).

With Mix mode you've got 2 ways to use the Mini SSL:

- Line Inp Par link established (8 channel mixing): sending 8 channels to both channel path and monitor path, providing more flexibility with signal processing.
- No link (16 channel mixing): sending 8 channels to the monitor path and 8 channels to the channel path, having a total of 16 channels as input for mixing.



#### 1.1 MIX MODE (8/16 DAW CHANNELS)

Signal flow diagram - Mix Mode

Now, the signal fed into Line is also routed into the Tape Monitor input signal through the link. Sending both DAW channels 1-8 to the channel path and monitor path.

If you choose to disconnect the link, Tape Monitor input is open and can be connected with 8 other DAW channels, for example DAW out 9-16. Now channels 1-8 will go to the channel path via Line input and channels 9-16 to the monitor path via Tape Monitor input. Be aware: when disconnecting the link, do not fed another input to Lin Inp Par, this will cause unwanted results.

The two following pictures shows the way of connecting the Mini SSL in both ways of operating the Mini SSL in Mix mode:

- 1. Mix mode with link established: 8 channel mixing.
- 2. Mix mode without link establishes: 16 channel mixing.



Connecting diagram - Mix Mode with link



Connecting diagram - Mix Mode without link

#### 1.2 MIX-OVERDUB MODE (24X DAW CHANNELS)

When you activate both READY GROUP and READY TAPE you are able to have 24 DAW channels as inputs to your Mini SSL for mixing:

- 16 inputs for monitoring via TAPE MONITOR and GROUP MONITOR. In this case, the 16 input signals on TAPE MONITOR and GROUP MONITOR are combined into *8 summed signals* going to your monitor path.
- Additionally, there are 8 input signals for recording via MIC/LINE. As in the other example in Mix, LINE could be used to route 8 DAW channels to the channel path. Giving you the opportunity to route a total of 24 channels to the mini SSL.

To use the mini SSL in this mode, you are required to disconnect all links!



Signal flow diagram - Mix-overdub Mode

In this mode you can use individual channels to record via MIC. To do so, switch the flip switch to MIC, presenting the opportunity of overdubbing.



Connecting diagram - Mix-overdub mode

### 2. RECORD MODE

Enabling either READY TAPE or READY GROUP puts your channel in RECORD mode. Sending your MIC/LINE input via the Small Fader to the routing bus and your Group Monitor/Tape Monitor via the Large Fader to the main output.

READY GROUP is primarily used to monitor the recorded output going from the desk to your DAW (Pre-DAW).

READY TAPE, on the other hand, is used to monitor the output from your DAW or tape recorder—allowing you to hear the colored, recorded signal post DAW/Tape recorder.

## 2.1 REC MODE - READY GROUP (MONITOR MINI SSL OUTPUT)

With READY GROUP, ensure the 'Group Out Par link' is connected. This link allows you to monitor the signal being sent to your DAW or tape recorder.



Signal flow diagram - Record Mode Ready Group



Connecting diagram - Record Mode Ready Group

#### 2.2 REC MODE - READY TAPE (MONITOR DAW OUTPUT)



Signal flow diagram - Record Mode Ready Tape



Connecting diagram - Record Mode Ready Tape

## APPENDIX

In the following appendixes you'll find the general specifications of the Mini SSL, including technical specifications and dimensions. Be aware: these specifications are applicable for one (8 channels) Mini SSL!

### A - FEATURE SPECIFICATIONS

Channel count: 8 Channel type: Original SSL611E/G Total input count: 24 Routing busses: 8 EQ type (E-channels): Brown, Black EQ type (G-channels): G-eq (Pink), Black Large Faders: VCA Aux Sends: 1x stereo, 4x mono Summed output: LF, RF, LB, RB (Quad bus) +Auxiliaries

### **B - TECHNICAL SPECIFICATIONS**

Power consumption: 100W, 0,42A Headroom: +25dBu, measured @1kHz THD+N (22Hz-22kHz filter): 8 channels routed, Line to Quad mix bus

- 0,024%, measured @100Hz
- 0,013%, measured @1kHz
- 0,008%, measured @10kHz
- 0,019%, measured Full Range (input: 1kHz sine)

Noise (22Hz-22kHz filter):

- -86 dBu, 1 channel in-line
- -82 dBu, 24 inputs routed to LF bus

Frequency response:

±0,5 dB, 20Hz-22kHz sweep

### **C - DIMENSIONS**

Width: 37 cm Height Mini SSL: 60 cm Height wheeled frame: 44 cm Depth: 115 cm Weight Mini SSL: 60 kg Weight wheeled frame: 10 kg

#### D - GLOSSARY

**Channel Path**: The path with input selection, originally the path used for recording.

**Monitor Path**: The Tape Mon/Group Mon path, mainly used for the return of your DAW/Tape Recorder.

Main Bus: These are the global outputs of the entire desk: Left Front, Right Front, Left Back, and Right Back (LF, RF, LB, RB).

**Aux**: Auxiliary. These are additional outputs on your desk. On each channel, you can send a signal out through the Auxes/Cues, which can be used for routing your signal to outboard gear, like a reverb, or for creating a headphone mix.

**Summing**: Combining multiple audio signals into one. For example the main output combining the 8 channels together.

**Routing Bus**: The output of your routing (top section of a channel) going to the "group out" output.