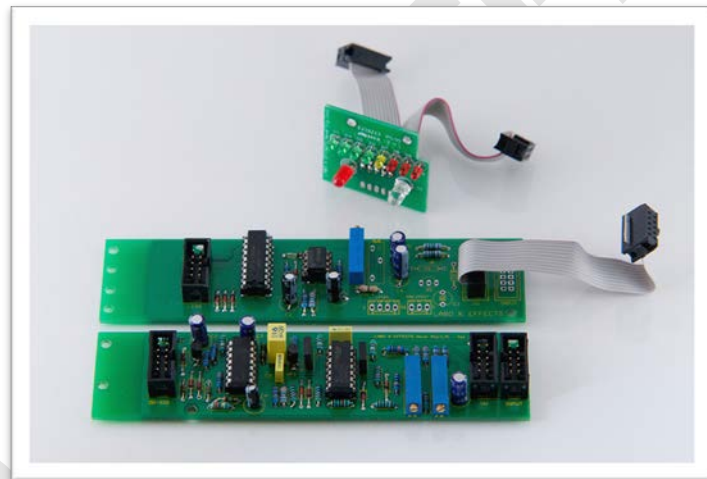


LABO ★ K EFFECTS

NEVE V SERIES METER KIT



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INTRODUCTION

This kit contains a led Vu-meter for the input level indication.

A gain reduction led. The led indicates green for a small gain reduction, orange for a medium and red for a large (1,5 and 10dB respectively).

A signal LED that lights up when the input level is 0 dB

Optional accessory

Labo★K Effects Mounting clip

Matching NEVE 51 and V series
Allow to fix module on front plate.
Matching with Input & Equalizer.
It is planned to fix the Meter section on this attachment



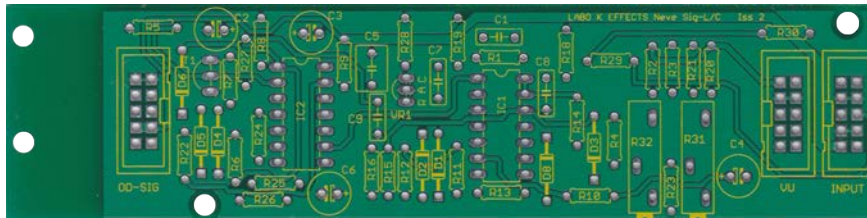
For proper operation of the unit, it is advisable to use modules in good conditions and with coupling capacitors that will have been replaced if necessary.

The poor condition of the capacitors can greatly affect the sound quality or even cut the signal. Similarly, one will ensure that the various switches have been cleaned using a contact cleaner spray.

KIT OVERVIEW

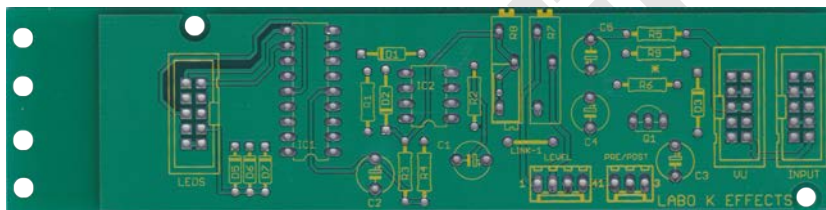
- **1 PCB 2 layers plated pads to connect:**

- Gain reduction metering
- Signal indicator
- Vu-meter board
- PSU bus



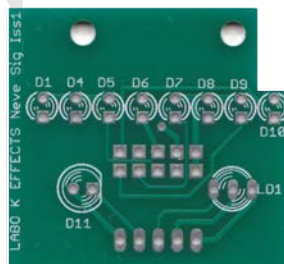
- **1 PCB 2 layers plated pads to connect:**

- Vu meter
- PSU bus



- **1 PCB 2 layers plated pads to connect:**

- Signal (SIG) and gain reduction (DYN) leds
- Vumeter leds

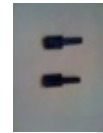


- **Connectors, components and ribbons**

ASSEMBLY INSTRUCTIONS

- 1) Solder components on PCBs.
- 2) Prepare the interconnection ribbons
- 3) Set up Led, VU and GIS cards using columns.
- 4) Connect the cards.
- 5) Connect the kit to the input interface.

It is planned to be able to use 2 small NEVE columns to assemble 2 boards



Fixing on the attachment unit.

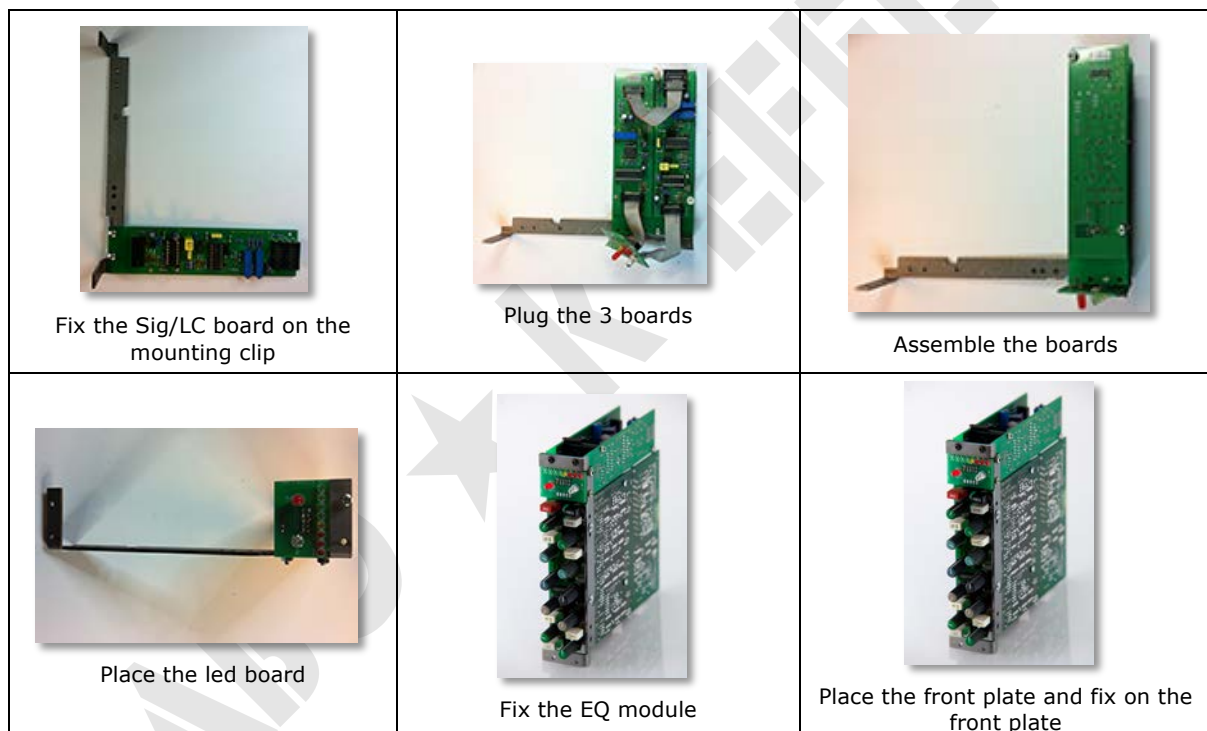


Figure 1

VU METRE BOARD PART LIST

I N	Designation	Description	Qty
	Link-1	Strap	1
0	Led	IDC 10 connector	2
1	VU	3M AWLP-10	
2	R1	1K resistor	1
3	R2	47K resistor	1
4	R3	180R resistor	1
5	R4	3K3 resistor	1
6	R5, 9	100R resistor	2
7	VR8	200K trimmer (VU setup)	1
8	C1, 2	1µF/100V capacitor	2
9	C4, 5	22µF/25V capacitor	2
10	D1, 2, 5, 6, 7	1N4148 diode	5
11	IC1	TL071	1
12	IC2	LM3915	1
13	Socket	DIL 08 Socket for item 11	1
14	Socket	DIL 18 Socket for item 12	1

Optional components			
15	R6	300R resistor	1
16	C3	1µF/63V capacitor	1
17	D3	Zener diode 12V	1
18	Q1	2N2222A transistor	1

All resistors are 1/4w metal film 1%

Note:

If you use this Meter card in another project and are using the power of the audio portion of the preamp, it may be necessary to implement the small regulator made using components option1 (D3, R6, C3, Q1) and in this case R9 (100R) will not be used.

VUMETRE BOARD CONNECTORS PINOUTS

Input connecteur:

(Not fitted)

VU connector :

1	+16V
2	+16V
3	GND
4	GND
5	-16V
6	-16V
7	-15V
8	-15V
9	GND
10	Sig

LED connector:

1	+16V
2	+16V
3	LED1
4	LED4
5	LED5
6	LED6
7	LED7
8	LED8
9	LED9
10	LED10

SIG / LC BOARD PART LIST

I N	Designation	Description	Qnt
1	Input, Vu, Sig	IDC 10 connector	3
2	R1, 29, 30	100K resistor	3
3	R2, 3	330K resistor	2
4	R4	1M resistor	1
5	R5, 10, 11, 12, 13, 14	10K resistor	6
6	R6, 22	1K3 resistor	2
7	R7	680R resistor	1
8	R8, 18, 19	51R resistor	3
9	R9	10R resistor	1
10	R15	3K3 resistor	1
11	R16	2M2 resistor	1
12	R20, 21	68K resistor	2
13	R23	560K resistor	1
14	R24	330R resistor	1
15	R25	300R resistor	1
16	R26	33R resistor	1
17	R27	1K resistor	1
18	R28	1K5 resistor	1
19	R31, 32	10K trimmer	2
20	C1, 9	10n film capacitor	2
21	C2, 3, 4	22 μ F/25V capacitor	3
22	C5	680n film capacitor	1
23	C6	2.2 μ F/50V capacitor	2
24	C7, 8	22n film capacitor	2
25	D1, 2, 3, 4, 5, 6, 7	1N4148 diode	7
26	VR1	TL431	1
27	T1	2N2222	1
28	IC1	CI TL064	1
29	IC2	CI LM339	1
30	Sockets	DIL 14 socket for Item 28,29	2

All resistors are 1/4w metal film 1%.

SIG / LC BOARD CONNECTORS PINOUTS

jInput connector:

1	+16V
2	Expand Meter
3	GND
4	GND
5	-16V
6	Compress Meter
7	GND
8	GND
9	-15V
10	SIG

Vu connector :

1	+16V
2	+16V
3	GND
4	GND
5	-16V
6	-16V
7	+15V
8	-15V
9	GND
10	SIG

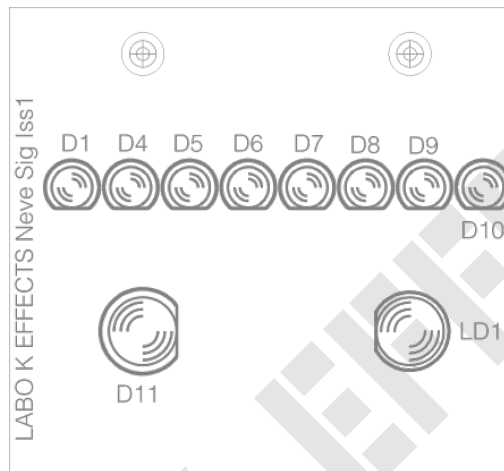
OD-SIG connector :

1	Anode DYN LED green
2	Anode DYN LED green
3	Kathode DYN LED
4	Kathode DYN LED
5	Anode DYN LED red
6	Anode DYN LED red
7	Anode SIG LED
8	Anode SIG LED
9	Kathode SIG LED
10	Kathode SIG LED

LED BOARD PART LIST

I N	Designation	Description	Qnt
1	X1	IDC 3M AWLP-10 connector	1
2	D1, 4, 5, 6	3mm LED green	4
3	D7	3mm LED yellow	1
4	D8, 9, 10	3mm LED red	3
5	D11	5mm LED red	1
6	LD1	5mm LED bicolour	1

Leds implementation



The square pad is for the cathode of the led
Respect the position of the flat side of the leds

WIRING COMPONENTS PART LIST

The visualization kit is connected to the connector 'Meter' of Neve V input interface board.

This connection will be made from the connector 'Input' of Sig board.

Interconnection Dynamics Module /Sig board



I N	Designation	Description	Qnt
1	Input, Meter	IDC 3M AWP-10	2
2	Ribbon	10 ways ribbon	1

Interconnection OD-SIG /Leds board

I N	Designation	Description	Qnt
1	OD-SIG	IDC 3M AWP-10	1
2	Ribbon	10 ways ribbon	1

Interconnection VU DRV /Leds board

I N	Designation	Description	Qnt
1	Leds	IDC 3M AWP-10	2
2	Ribbon	10 ways ribbon	1

Interconnection VU DRV /OD/SIG boards

I N	Designation	Description	Qnt
1	VU	IDC 3M AWP-10	1
2	VU	3M AWLP-10	
3	Ribbon	10 ways ribbon	1



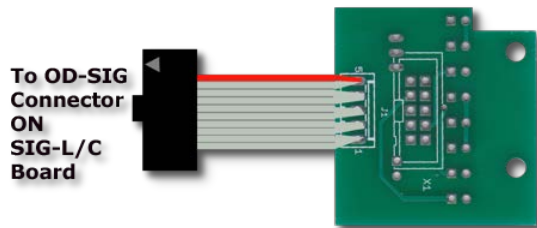
LEDS CARD CONNECTIONS

1-OD-SIG ribbon (about 1.97 inches)

Separate the wires of a 10 ways ribbon to a length of 0.79 inches.

Connect the strands 2 by 2 (1 & 2, 3 & 4, 5 & 6, 7 & 8, 9&10). The red line is the number 1.

Welding the pairs on the pcb starting with the pair 1 & 2 on the mark 5 of the pcb.

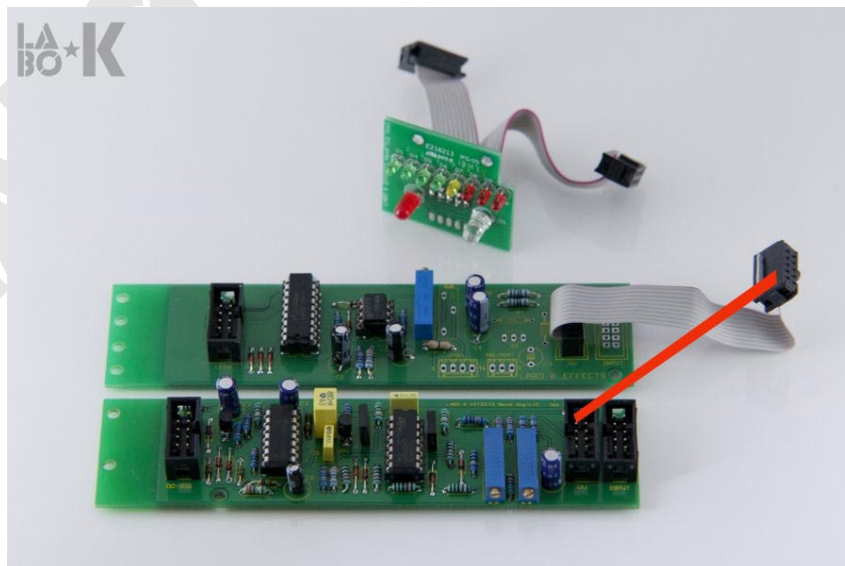
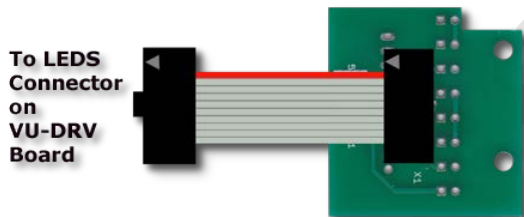


2-Vumeter ribbon (about 1.97 inches)

Crimp a way ribbon on the connector 2 (Item1) on Leds card.

The red line is opposite the small triangle (pin 1 mark).

Solder the connector on the solder side of the pcb as shown below.



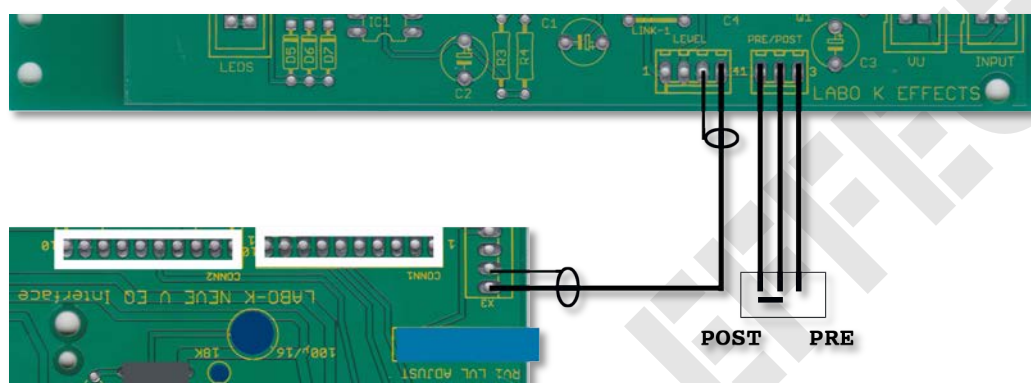
OPTIONS

The PCB of the card Meter is designed to add some options.

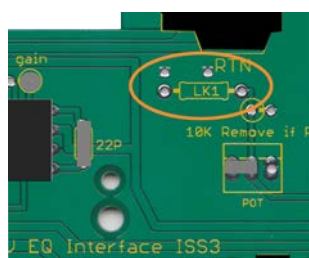
As standard, the meter displays the level of the input signal to the preamp.

To have a VU selector input / output, a SPDT switch must be connected on the PRE / POST connector on the Meter card. Link-1 on the pcb must be removed.

It will connect a shielded cable from connector 'Level' of Vu (hot pin 3 and screen pin 4) to the connector X3 'of the EQ card (hot pin 1 and screen pin 2).



On the EQ card the link 'LK1' has to be implemented



SETTINGS

1) Output level:

- Inject a 0dBm 1khz sinus signal in Line input.
- Plug a dB-meter on preamp output connector.
- Set the Neve line gain trimmer on 0dB.
- Make shure that filters, equalizer and Dynamics are disabled.
- Set fader pot on 0dB if fitted.
- Adjust the trimmer VU (R8) to turn the Yellow LED corresponding to 0dB on the VU meter.
- Adjust the trimmer LVL (R7) of the EQ card to read 0dBm output.
-

2) Threshold of signal indicator:

- Adjust trimmer (R31) of the Sig card so that the signal LED is close to extinction.

It is possible to select another trigger point.

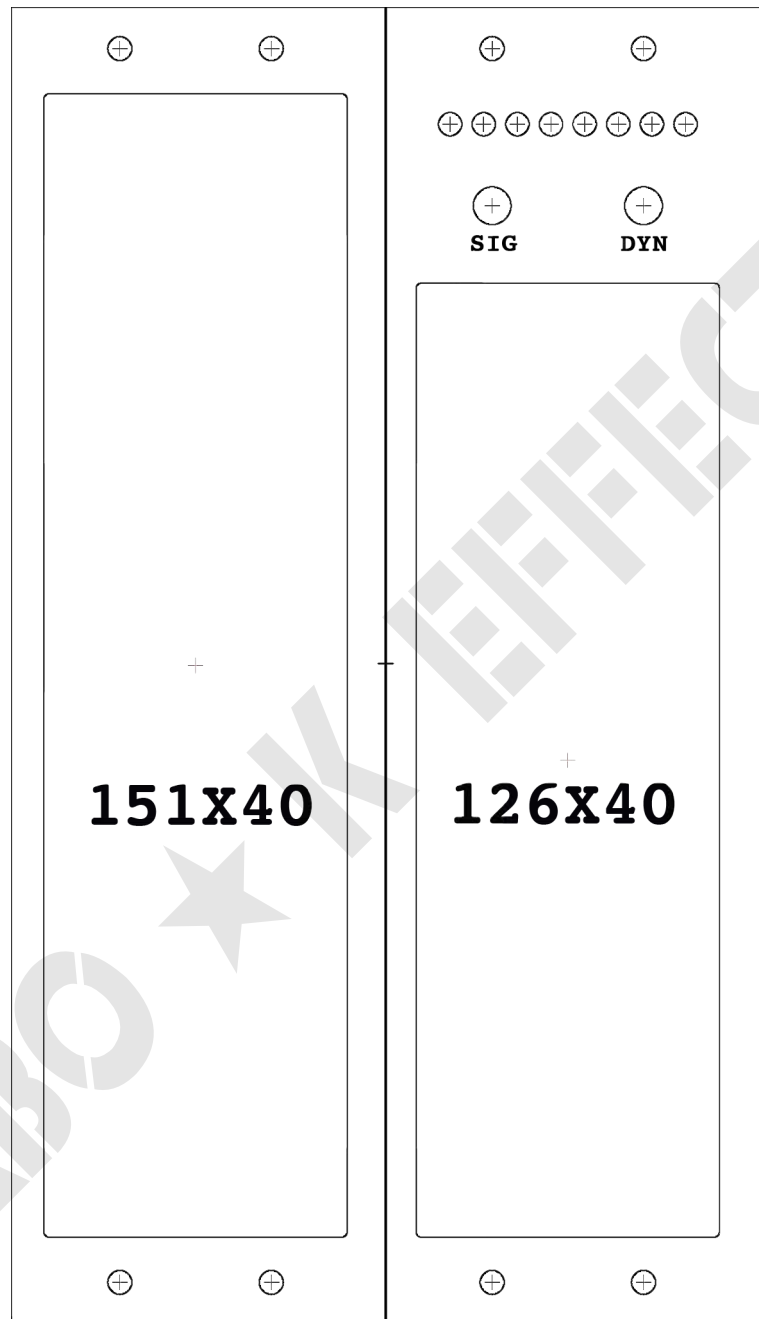
Simply apply the desired level at the input of the module and adjust the trimmer R31 as above

3) Dynamics offset :

- Using Dyn trimmer (R32) to adjust the offset voltage 0VDC measured between the cursor of the same trimmer and ground using a millivolt meter.



DRILLING TEMPLATE



Legal notice:

Labo★K Effect shall not be responsible and disclaims all liability for any damage (whether direct or consequential) that may result from a wrong use of the kit by the user.