

LABO ★ K EFFECTS

FORMAT K551X

The 500 format created by API allows the use of different preamplifiers, compressors... in the same box that provides the supply voltages and inputs/outputs. (*API is a registered trademark of Automated Processes Incorporated*)

The size of the modules is standardized and each module is equipped with a board edge connector that plugs into a female connector on the backplane.

The 15 pins of the connector provide the standard +16V/-16V and 48V for phantom power. A balanced input and output as well as a link for the compressors.

There are still some pins used by some PLC modules (2nd unbalanced input/output for 512 preamps, gain resistance for 515 modules etc.)

A new 51X standard has been introduced to provide additional options by using an 18-pin connector. This allows to add the necessary +/- 24V voltages to some modules while keeping the compatibility with modules typically in 500 format.

Indeed, the 500 modules only use 15 of the 18 available pins.

This allows new functions but we can go even further by making the backplane modular. This is why Labo K Effects has studied the problem and is able to offer 3 types of backplanes that can be fitted to the 500 boxes.

These backplanes use 18-pin connectors to be compatible with the 500 and X51 standards. These backplanes have been named the K551X.

The K551X are available in 3 versions for the moment.

A standard version with 4 slots, a standard version with 2 slots to create a 10 slot backplane (4+4+2)

The 3rd version with 2 slots is special. It allows 2 adjacent modules to communicate via a relay system controlled by one of the 2 modules.

This allows 2 adjacent modules to have independent inputs and outputs while being able to be chained if desired.

Take for example a microphone preamplifier and equalizer connected to this backplane. An Insert switch on the preamp module would allow the EQ to be inserted into the preamp path.

The different types of backplanes are powered by a PSU BUS using IDC connectors. This modular system makes it possible to develop modules using different connectors if more options are required. It is sufficient that the backplane is compatible with the PSU bus.

This system allows you to change configuration very easily by replacing one backplane with another adapted to the new module.

K551X FORMAT

PIN #	K551X 02 01	K551X 04 01	K551X 02 02	K551X 02 02
	2 Slots	4 Slots	Connector 1	Connector 2
1	Chassis	Chassis	Chassis	Chassis
2	OUT +	OUT +	OUT +	OUT +
3	OUT+ (2) / SND	OUT+ (2) / SND	SND	S1
4	OUT –	OUT –	OUT –	OUT –
5	PSU/Audio GND	PSU/Audio GND	PSU/Audio GND	PSU/Audio GND
6	Stereo Link	Stereo Link	RTN	R1
7	INPUT– (-2) / RTN	INPUT- (-2) / RTN	INPUT2 (Line) –	R2
8	INPUT – (+4)	INPUT – (+4)	INPUT1 (Mic) –	INPUT – (+4)
9	INPUT + (-2)	INPUT + (-2)	INPUT2 (Line) +	S2
10	INPUT + (+4)	INPUT + (+4)	INPUT1 (Mic) +	INPUT + (+4)
11	Gain Adjust / Vrel	Gain Adjust / Vrel	Remote	Remote
12	+ 16V DC	+ 16V DC	+ 16V DC	+ 16V DC
13	PSU/Audio GND	PSU/Audio GND	PSU GND	PSU/Audio GND
14	-16V DC	-16V DC	-16V DC	-16V DC
15	+ 48V Phantom	+ 48V Phantom	+ 48V Phantom	+ 48V Phantom
16	NC	NC	NC	NC
17	+ 24V DC	+ 24V DC	+ 24V DC	+ 24V DC
18	- 24V DC	-24V DC	-24V DC	-24V DC

STANDARD K551X 02-01 AND K551X 04-01 PIN ASSIGNMENT

- **1 CHASSIS**
 - Connects the module to the chassis
- **2 Output +**
 - Module Hi output
- **3 Out+ (2) / SND**
 - Unbalanced output
 - Insertion send (SND) to Insertion socket (unbalanced)
- **4 Output -**
 - Module Lo output
- **5 PSU/Audio GND**
- **6 Stereo link**
 - Stereo link for compressor (API 525)
- **7 Input - (-2) / RTN**
 - Unbalanced input (API module)
 - Input 2 Lo (Line)
 - Insertion Return (RTN) from insertion socket (unbalanced)
- **8 Input - (+4)**
 - Input 1 Lo
- **9 Input + (-2)**
 - Input 2 Hi (Line)
- **10 Input + (+4)**
 - Input 1 Hi
- **11 Gain adjust / Vrel**
 - Allows to connect a gain adjustment resistor (API Modules)
 - Allows to send +12V DC to power a relay on the module
 - Placing a jumper on the PCB allows you to choose an option.
- **12 +16V DC**
- **13 PSU/Audio GND**
- **14 -16V DC**
- **15 +48V Phantom**
- **16 NC**
- **17 +24V DC**
- **18 -24V DC**

Pins 16, 17, 18 allow the 51X and K551X format modules to have new supply voltages.

BROCHAGE DE LA CARTE SPECIALE K551X 02 - 02

The K551X 02-02 board allows you to temporarily connect 2 adjacent modules to form a single device. For example, a preamp module can insert an adjacent equalizer module into its channel simply by operating a switch. When the adjacent module is not connected to the main module via the switch, it remains independent and can be used in stand-alone mode.

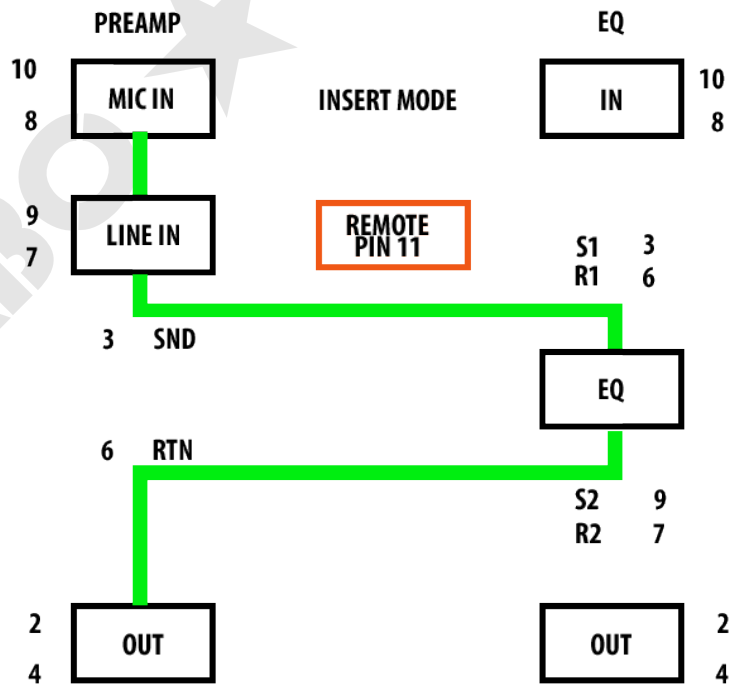
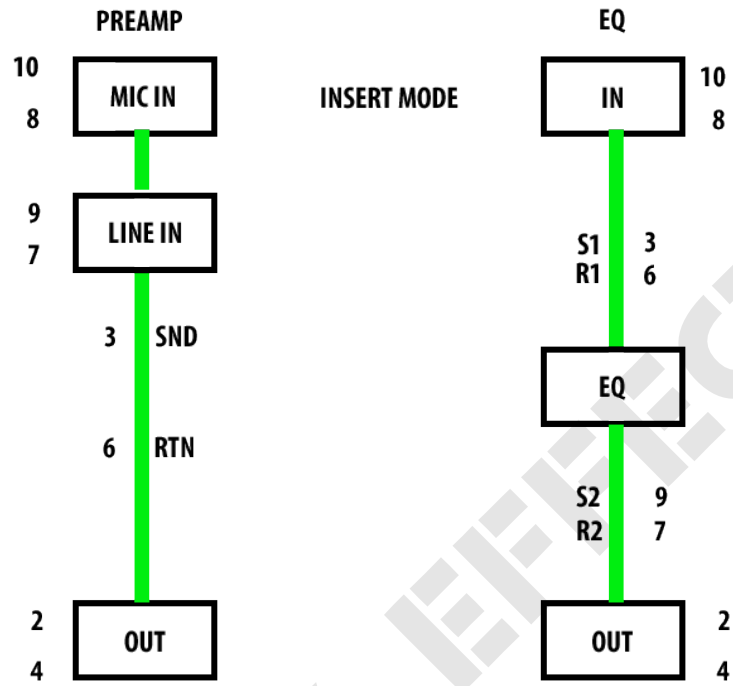
BROCHAGE DU CONNECTEUR 1

- **1 CHASSIS**
 - Connects the module to the chassis
- **2 Output +**
 - Module Hi output
- **3 SND**
 - Insertion send to the adjacent module
- **4 Output -**
 - Module Lo output
- **5 PSU/Audio GND**
- **6 RTN**
 - Insertion return from the adjacent module
- **7 Input 2 (Line) -**
 - Input 2 (Line) Lo
- **8 Input 1 (Mic) -**
 - Input 1 (Mic) Lo
- **9 Input 2 (Line) +**
 - Input 2 (Line) Hi
- **10 Input 1 (Mic) +**
 - Input 1 (Mic) Hi
- **11 Remote**
 - Controls the card relay to activate insertion.
 - Connect this pin to the GND via a switch activates the relay.
 - The placement of a jumper on the PCB allows you to choose the master module.
- **12 +16V DC**
- **13 PSU/Audio GND**
- **14 -16V DC**
- **15 +48V Phantom**
- **16 NC**
- **17 +24V DC**
- **18 -24V DC**

BROCHAGE DU CONNECTEUR 2

- **1 CHASSIS**
 - Connects the module to the chassis
- **2 Output +**
 - Module Hi output
- **3 S1**
 - Output of the module input stage
 - In standard mode the signal is directed to audio processing.
 - In insert mode this output is disconnected.
- **4 Output -**
 - Module Lo output
- **5 PSU/Audio GND**
- **6 R1**
 - Audio processing input
- **7 R2**
 - Input of the module output stage
 - In standard mode this input receives the processed audio signal.
 - In insert mode this input is disconnected.
- **8 Input - (+4)**
 - Module Lo input
- **9 S2**
 - Audio processing output
 - In standard mode the signal is directed to the output stage of the module.
 - In insertion mode the signal is directed to the output of the main module
- **10 Input + (+4)**
 - Module Hi input
- **11 Remote**
 - Controls the card relay to activate insertion.
 - Connect this pin to the GND via a switch activates the relay.
 - The placement of a jumper on the PCB allows you to choose the master module.
- **12 +16V DC**
- **13 PSU/Audio GND**
- **14 -16V DC**
- **15 +48V Phantom**
- **16 NC**
- **17 +24V DC**
- **18 -24V DC**

K551X 02 - 02 AUDIO PATH



K551X BOARDS PSU

The K551X cards are powered via a BUS by a 16-pin ribbon cable. This allows you to combine and modify a backplane easily according to your needs.

The boards also have various connections to connect the signals to the input and output connectors.

The K551X standard is compatible with API500, 51X (DIY alliance) and VPR format

K551X Products

K551X 04-01 : 4 slots for connecting 4 modules

K551X 02-01 : 2 slots for connecting 2 modules

K551X 02-02 : 2 slots for connecting 2 modules that can be associated.

K551X PSU : Power supply For backplane KX551
Voltages: +/-16V, +/- 24V, +48V, +12V relay

K551X INOUT : Card with 2 XLR In, 1 XLR out and 1 TRS chassis jack (Link/Insert)
These cards are connected by a ribbon or by cables according to your choice.

Rack 19 K551X series by Labo★K Effects

Rack 19 for 8 Slots with Internal power supply or 10 slots with external power supply.