

8X4 MIDI SELECTOR

8 AMPLIFIERS/ 4 SPEAKER SELECTOR



OPERATOR'S MANUAL

Version 1.6

KAHAYAN®
P R O A U D I O

Avd. de la Estación 4, local bajo
Zarzalejo, Madrid 28293
España
admin@kahayan.es

www.kahayan.es

TABLE OF CONTENTS

IMPORTANT SAFETY INSTRUCTIONS.....	3
INTRODUCTION.....	4
RECOMMENDATIONS.....	5
SETUP.....	6
WARNING OF SETUP.....	7
ADVANCED SETUP (BUS INSERT, MIDI & TUNER).....	8
MIDI PROGRAMMING.....	13
Q&A.....	14
SPECIFICATIONS & WARRANTY.....	15
CREDITS.....	17

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions
2. Keep these instructions
3. Heed all warnings
4. Follow all instructions
5. Do not use this apparatus near water
6. Clean only with dry cloth
7. Install in accordance with the manufacturer's instructions
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat
9. Protect the power cord from being walked on or pinched particularly at plugs and the point where they exit from the apparatus
10. Unplug this apparatus during lightning storms or when unused for long periods of time
11. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped

INTRODUCTION

The 8x4 MIDI Amplifier/Speaker Selector is a system which allows you to connect **8 amplifiers to 4 speakers, providing the possibility of easily selecting combinations of amplifiers and speakers.** Thus avoiding waste of time and making work easier. Useful for studio recording as well as live performance.

Thanks to the Kahayan 8x4 MIDI Selector we can select/choose any amplifier and speaker combination with the front panel buttons, with a MIDI pedalboard and also with your Tablet using a MIDI/Bluetooth® interface (see page 7). That means, if everything is connected correctly and our recommendations are followed, you can link the amplifier that you want with the speaker that you choose in many modes.

For more information visit: www.kahayan.es

RECOMMENDATIONS

Listed below are the most important recommendations for the use of the 8x4 Selector:

1- To avoid any equipment failures its vital **to connect to the 8x4 Selector the following things**: the instrument, the amplifier inputs, the amplifier outputs and the speakers. The initial connection should be with the amplifiers turned off or Stand by.

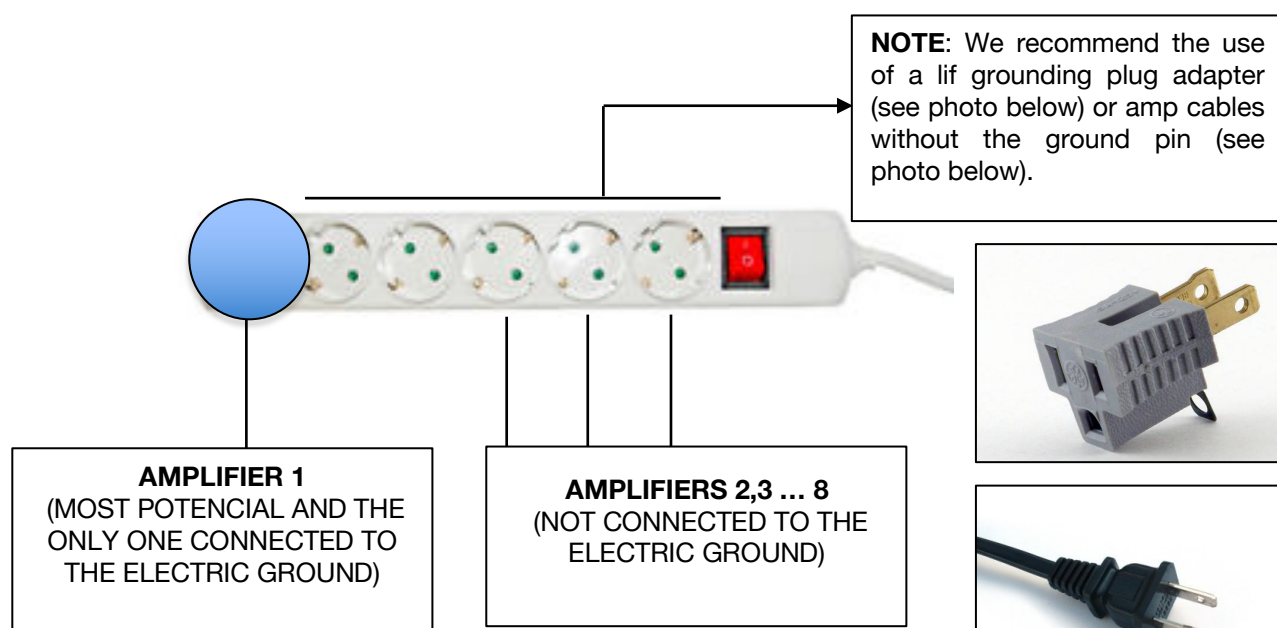
2- Once **everything has been connected with cables with soldered connectors** you can use the 8x4 MIDI Selector with all the **amplifiers permanently switched on**. It's not necessary to use the Stand By mode each time that you want to change the amplifier.

3- In the case where **some speaker outputs are not being used**, be careful **not to select them** to avoid the amplifiers functioning without being charged.

4- This Selector contains an **input mute** system and phantom charge for the amplifiers which have not been selected.

5- We recommend, to avoid any possible **ground noise** (This is not mandatory and may the type of amplifier configuration you use, you will not have ground noise), that **only one of the amplifiers is connected to the electric ground***. Preferably the most powerful amplifier or that which has the highest consumption. By doing this avoid hum noise caused by ground loops.

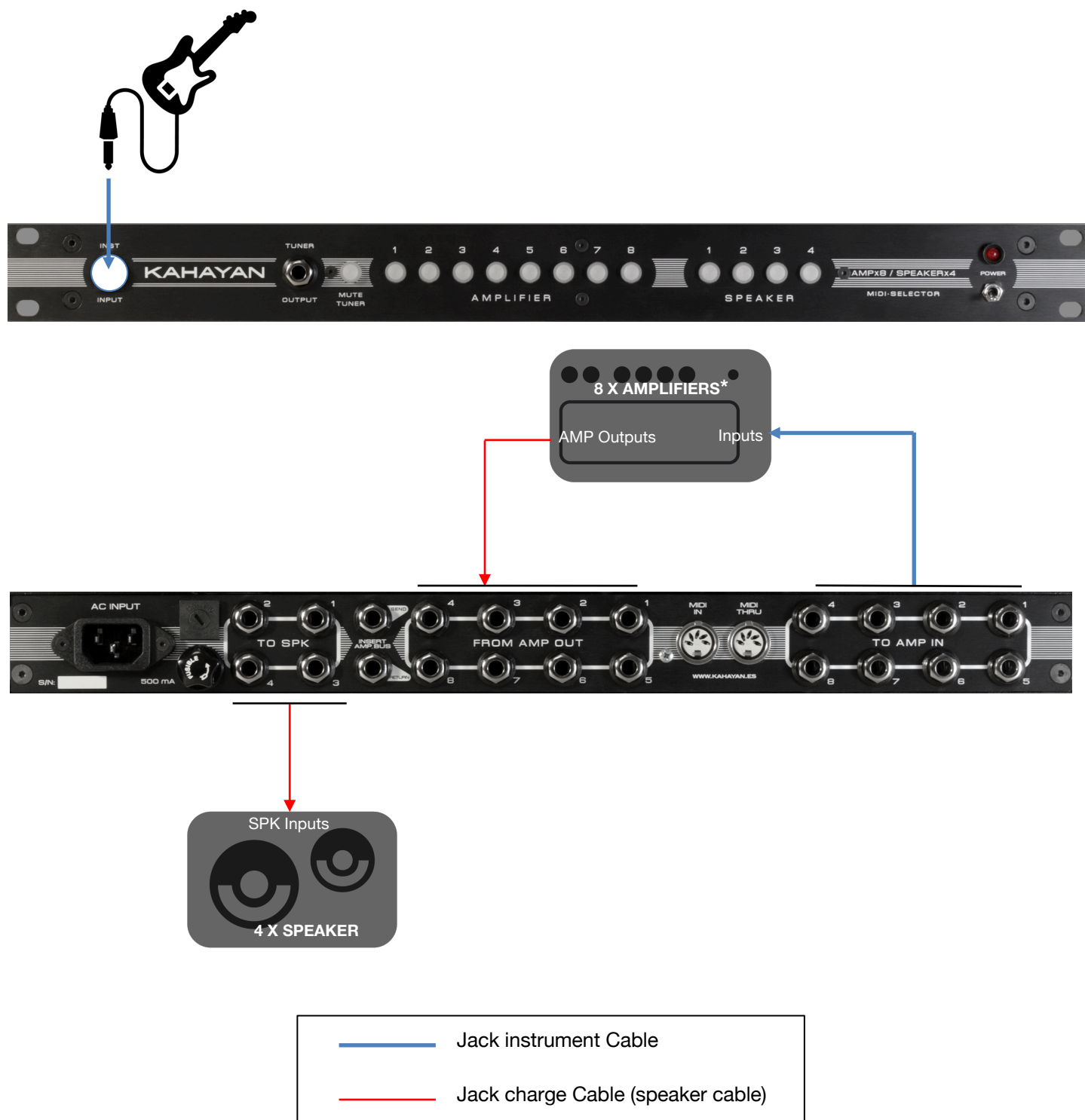
NOTE: That doesn't mean that the other amplifiers are not connected to the ground. They are connected through the Selector. See the following chart:



*This ground technique is very common in live performance setups and referenced in many guitar electronic books, example: TUBE GUITAR AMPLIFIER ESSENTIALS by Gerald Weber - Foreword by Joe Bonamassa.

BASIC SET UP

The following diagram explains how to connect the equipment:

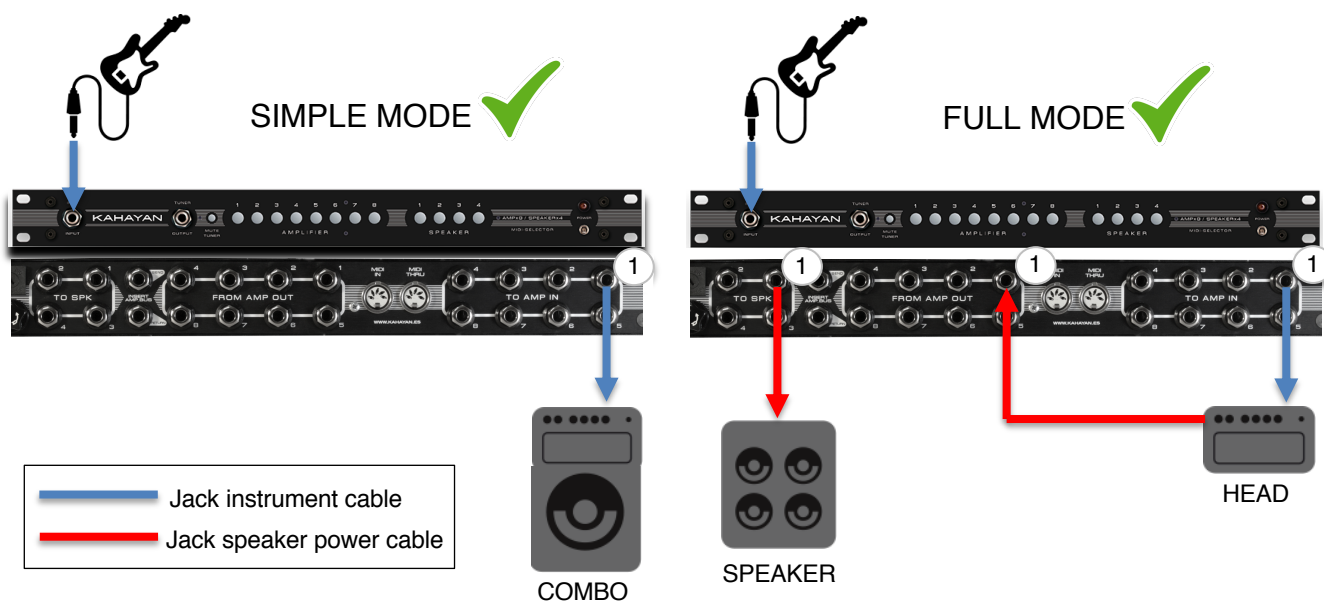


*You can use all the kind of Amplifiers: Head or Combo (the Amp Power part)

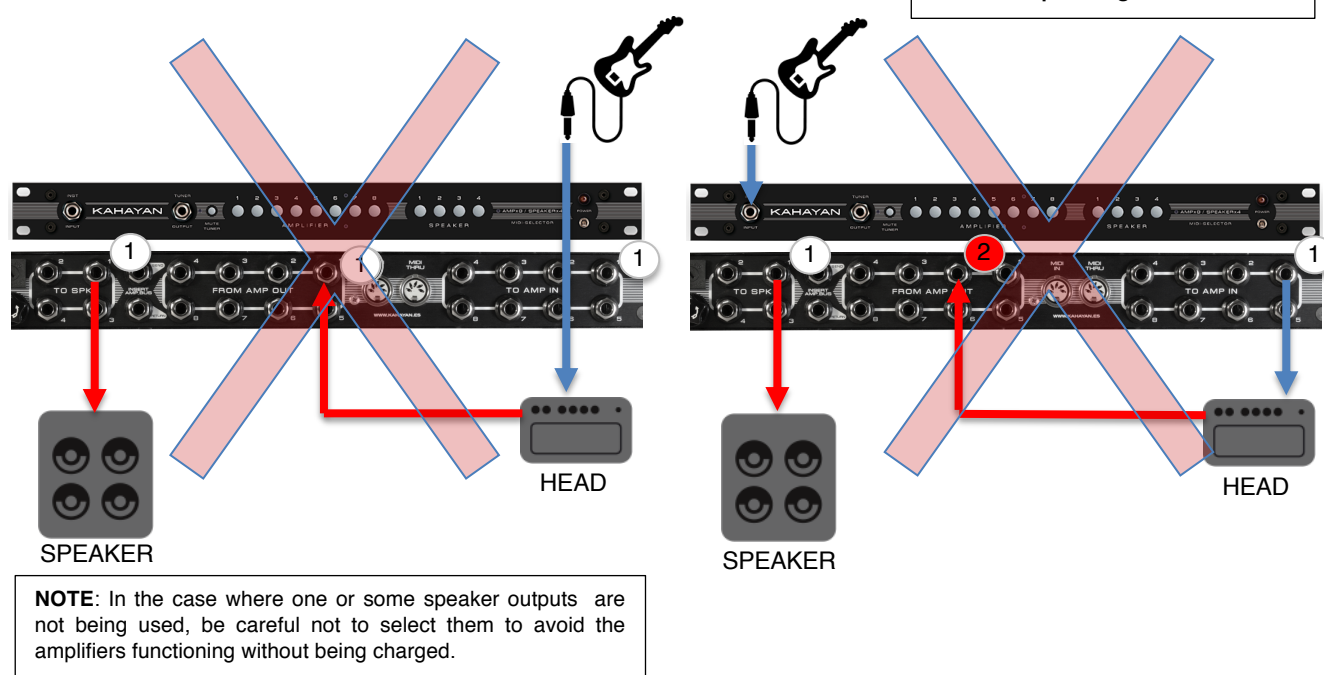
WARNING OF SETUP

Install in accordance with the manufacturer's instructions/manual because a wrong setup could **damage** any unit of the setup including the selector:

Approved setup examples for 1 Amp/Spk:



Non-approved setup examples for 1 Amp/Spk:



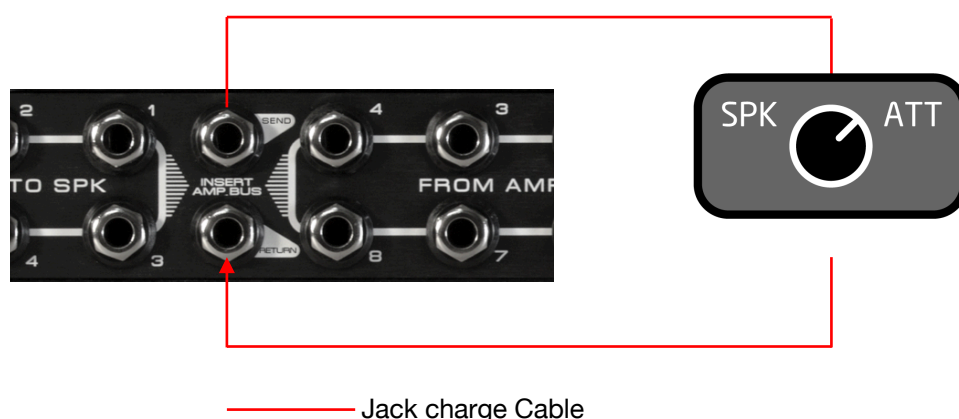
For any alternative setup please contact us: www.kahayan.es

ADVANCED SETUP

AMP BUS INSERT:

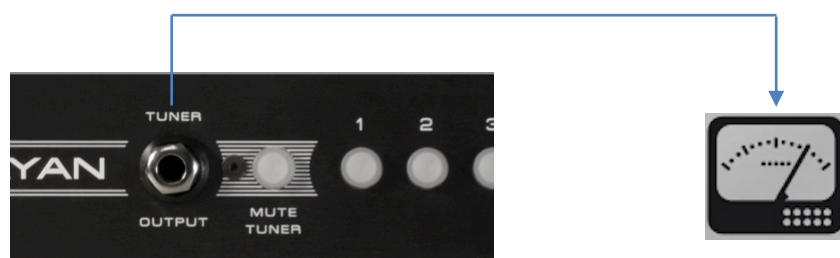
The 8x4 MIDI Selector allows you to **insert an Amp Attenuator or a Speaker Simulator**. In this way, **all the Amps and Speakers** connected to the Selector will be **working thru this attenuator or speaker simulator**. This insert opens the bus amp and is located electronically in between amp power inputs and speaker outputs of the Selector. The use of modern Speaker Simulator gives you an extra analog or digital output to a DAW or other applications.

IMPORTANT NOTE: Before connect any attenuator unit all the Amps and Selector must be turned off. The insert send and return must be properly connected before turn on any amp. If not, the Selector may be damaged internally. And also if the attenuator / speaker simulator load is erroneous or damaged, the Selector may suffer internal damage.



MUTED TUNER OUTPUT:

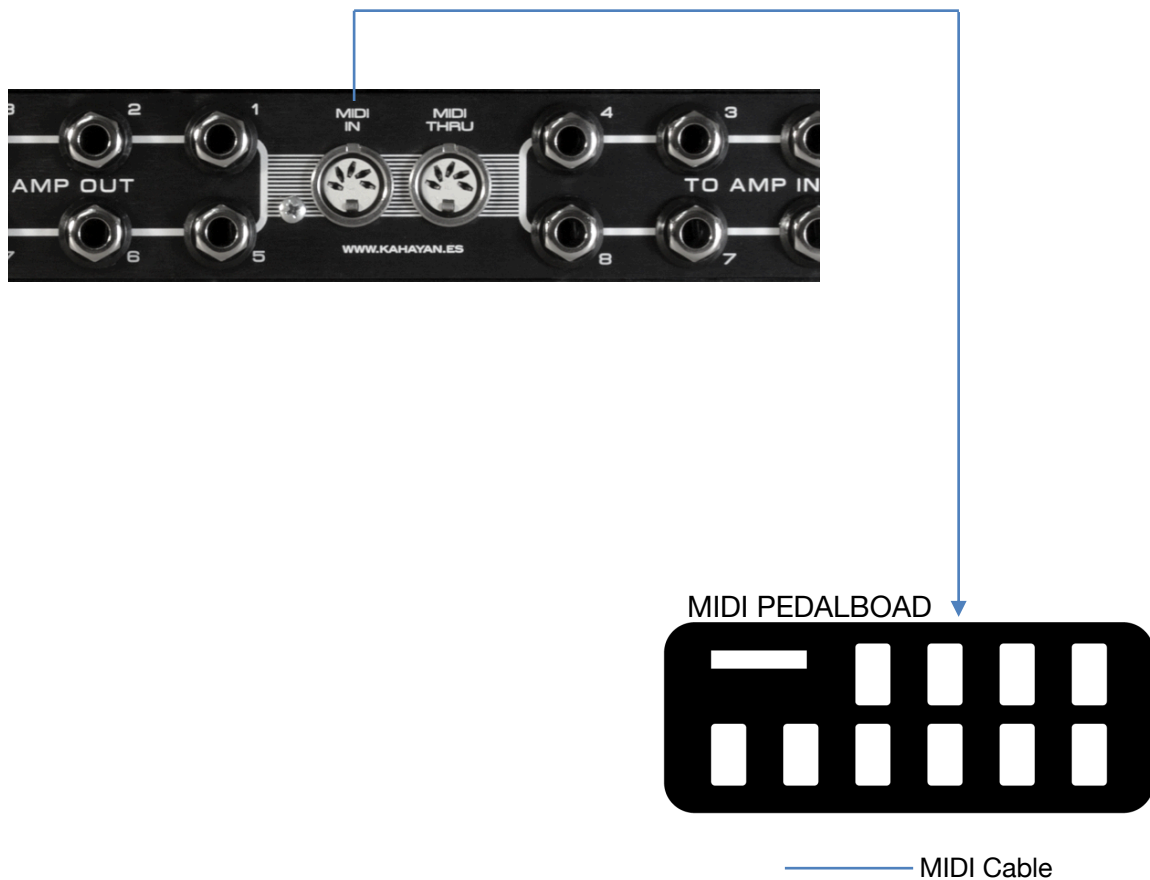
The 8x4 MIDI Selector allows you to connect an external **Tuner** using the Jack Output in the front panel. This Output only Works when you **press the MUTE TUNER switch**. This is a useful mode to have a more clean pedal rig routing. Also you can use this output to other functions: For example to connect in cascade a second 8x4 selector unit, when you have a lot of Amps.



MIDI INPUT/THRU:

The 8x4 MIDI Selector can be controlled by MIDI data. For this function you can use a MIDI Pedalboard or a MIDI/Bluetooth® interface (not included). Also the unit incorporates a MIDI thru output.

1-MIDI PEDALBOARD: Using a Pedalboard allows to control the 8x4 MIDI Selector and also many options for **Live** and **studio** applications: Recall and multi FX setups.



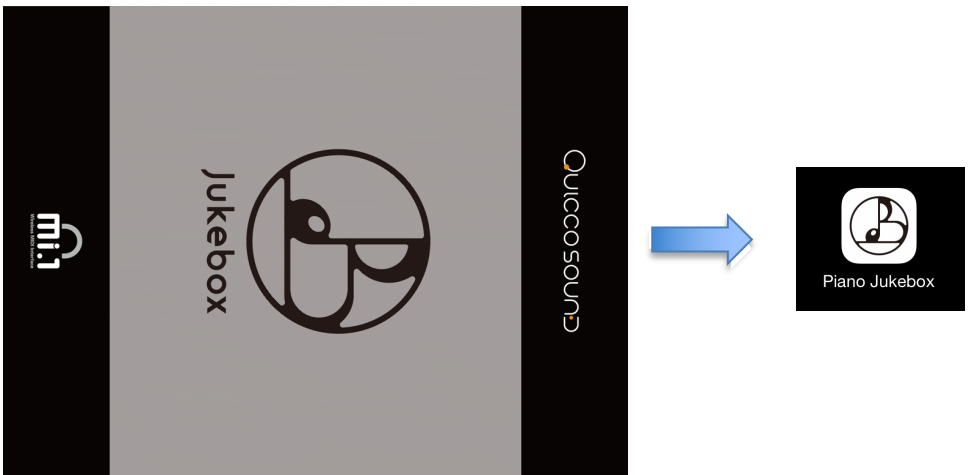
2-MIDI/BLUETOOTH® INTERFACE: When you connect a MIDI/Bluetooth® interface at the rear of the 8x4 MIDI Selector, the world of the control by **Tablets** and **Smartphones** opens. This Means that you can use any MIDI app.

We don't recommend any MIDI app in special but here you have an example:

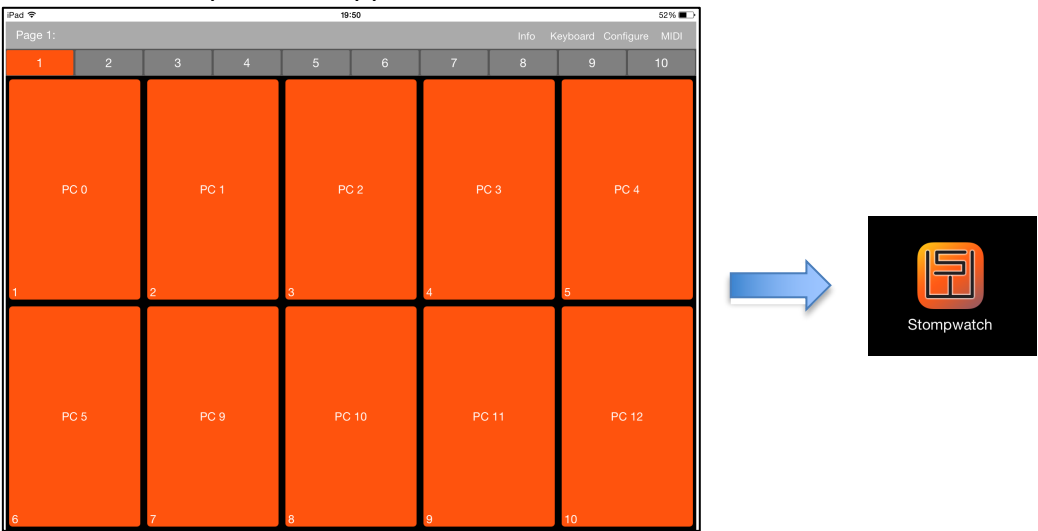
Step1: Connect your MIDI/Bluetooth® interface, in this case the M.1 Quiccosound®.



Step 2: Then download and install the Quiccosound® app just to control the Mi.1:



Step 3: Download and install any MIDI app to control the 8x4 MIDI selector. In this case, the Stompwatch® app:



3-MIDI LIST:

By default the 8x4 MIDI Selector is programmed to work in the MIDI channel 1.
In this channel you have all this function list:

MIDI PROGRAM	SELECTS
Program Change 1	Mute/tuner out
Program Change 2	Amplifier 1
Program Change 3	Amplifier 2
Program Change 4	Amplifier 3
Program Change 5	Amplifier 4
Program Change 6	Amplifier 5
Program Change 7	Amplifier 6
Program Change 8	Amplifier 7
Program Change 9	Amplifier 8
Program Change 10	Speaker 1
Program Change 11	Speaker 2
Program Change 12	Speaker 3
Program Change 13	Speaker 4
Program Change 14	Mute/tuner out
Program Change 15	Amplifier 1 & Speaker 1
Program Change 16	Amplifier 1 & Speaker 2
Program Change 17	Amplifier 1 & Speaker 3
Program Change 18	Amplifier 1 & Speaker 4
Program Change 19	Mute/tuner out
Program Change 20	Amplifier 2 & Speaker 1
Program Change 21	Amplifier 2 & Speaker 2
Program Change 22	Amplifier 2 & Speaker 3
Program Change 23	Amplifier 2 & Speaker 4
Program Change 24	Mute/tuner out
Program Change 25	Amplifier 3 & Speaker 1
Program Change 26	Amplifier 3 & Speaker 2

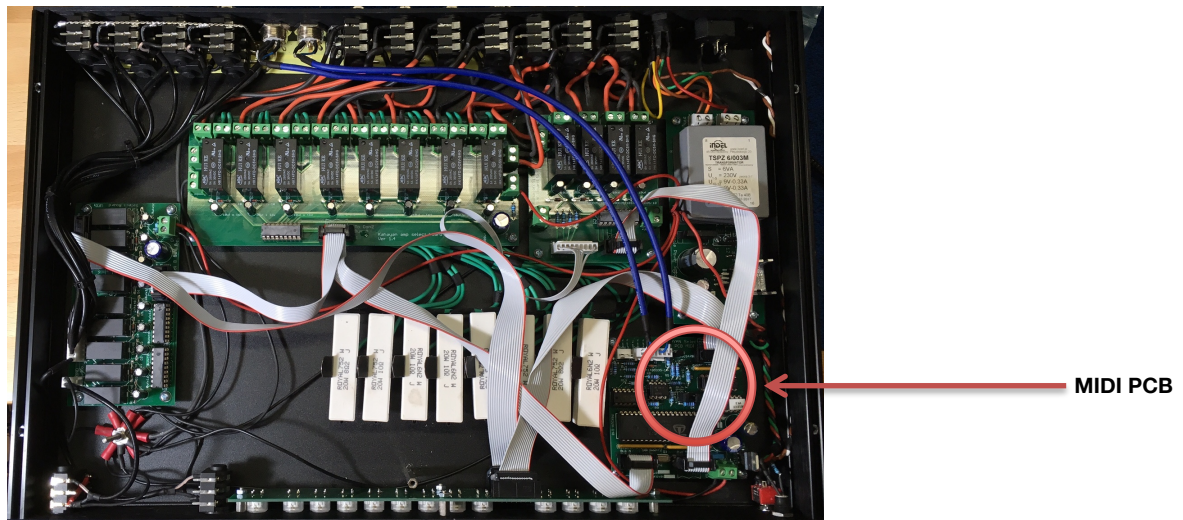
MIDI PROGRAM	SELECTS
Program Change 27	Amplifier 3 & Speaker 3
Program Change 28	Amplifier 3 & Speaker 4
Program Change 29	Mute/tuner out
Program Change 30	Amplifier 4 & Speaker 1
Program Change 31	Amplifier 4 & Speaker 2
Program Change 32	Amplifier 4 & Speaker 3
Program Change 33	Amplifier 4 & Speaker 4
Program Change 34	Mute/tuner out
Program Change 35	Amplifier 5 & Speaker 1
Program Change 36	Amplifier 5 & Speaker 2
Program Change 37	Amplifier 5 & Speaker 3
Program Change 38	Amplifier 5 & Speaker 4
Program Change 39	Mute/tuner out
Program Change 40	Amplifier 6 & Speaker 1
Program Change 41	Amplifier 6 & Speaker 2
Program Change 42	Amplifier 6 & Speaker 3
Program Change 43	Amplifier 6 & Speaker 4
Program Change 44	Mute/tuner out
Program Change 45	Amplifier 7 & Speaker 1
Program Change 46	Amplifier 7 & Speaker 2
Program Change 47	Amplifier 7 & Speaker 3
Program Change 48	Amplifier 7 & Speaker 4
Program Change 49	Mute/tuner out
Program Change 50	Amplifier 8 & Speaker 1
Program Change 51	Amplifier 8 & Speaker 2
Program Change 52	Amplifier 8 & Speaker 3
Program Change 53	Amplifier 8 & Speaker 4
Program Change 54	Mute/tuner out

4-THE MIDI CHANNEL:

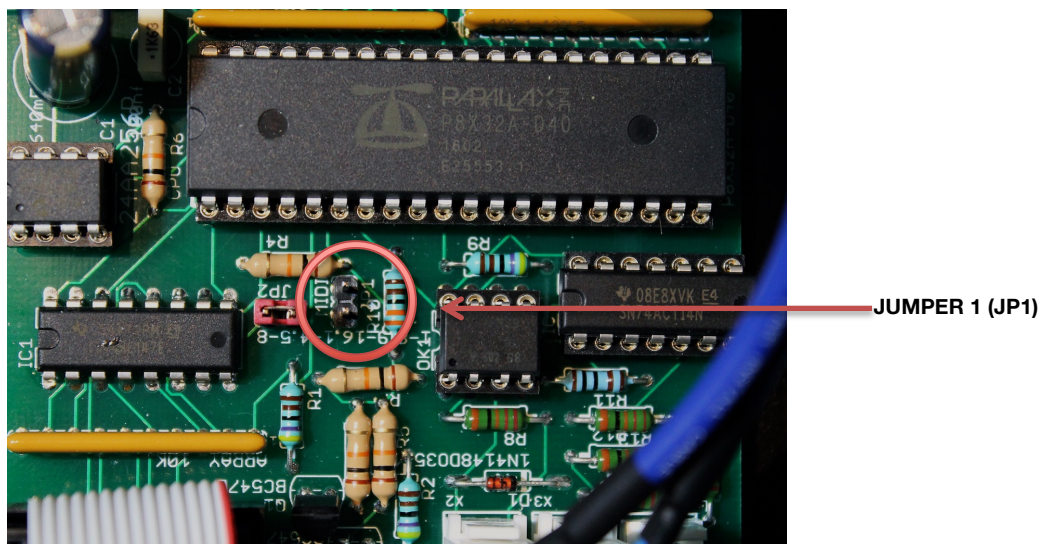
By default the Kahayan Selector works in the **MIDI CHANNEL 1**. If you need to use other MIDI CHANNEL please follow these steps:

1-Turn off the Selector.

2-Open your MIDI Selector unit: Top cover:



3-Go to the MIDI Pcb and just remove the jumper number 1 as you can see below:



4-Close and turn on the unit. Now the Kahayan Selector will accept the MIDI data of the rest of the MIDI CHANNELS. Please check MIDI PROGRAMMING in next page 12.

NOTE 1: The MIDI Pcb has been updated to have only one jumper in the last selector units. And visually, the MIDI Pcb is slightly different but the jumper number is still the same.

MIDI PROGRAMMING

From serial number 1053, all Kahayan Selectors have been updated with a new eeprom memory (1.3 version) that allows you to choose the MIDI CHANNEL you need. By default the unit works in the MIDI CHANNEL number 1. To setup another MIDI CHANNEL follows this steps:

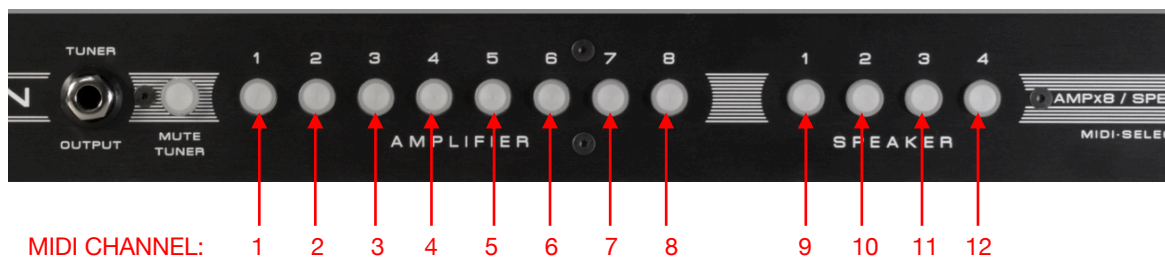
1- Turn off all the **Amps** connected to the switcher during this process: **very important**.

2- Check that the Jumper 1 (Jp1) in the MIDI PCB is removed (see page 11). This Jumper (Jp1) works like a memory channel blocker with the MIDI CHANNEL choosed.

3-Hold the 'Mute' button until you see that this button starts to blink. Around 4 seconds.



4-Now choose the MIDI CHANNEL you want to use, from 1 to 12 with the Amp and Speaker buttons as you can see below:



5-Hold the 'MIDI CHANNEL' button you need during a few seconds until the led selected blinks slowly. And hold again the 'Mute' button until you see that this led stops to blink, this mean the new setup is recorded and working.

6-Repeat this process to change the MIDI CHANNEL in case you need it.

NOTE 1: All the MIDI 8x4 Kahayan Selectors with older eeprom memories will work in 'omni' mode, this mean that accept all the MIDI data from all the MIDI CHANNELS.

NOTE 2: Because of the relays internal speed (30 ms) we recommend that all the custom MIDI systems and softwares created by third parts to control our MIDI 8x4 Selector, must be send program changes midi messages with a minimum length of 30ms, like the standard MIDI systems (pedalboards, MIDI/bluetooth interfaces, etc).

Q&A

Listed below are the most typical questions that we have received from the users of the 8x4 Selector:

- Does the selector have an input buffer?

No, this unit is a transparent amp/speaker selector, with no active electronics components in the signal path, just a very short high quality cable in the instrument input.

- What impedance 8x4 selector uses? Can the 8x4 selector adjust the amp impedance?

This is like a 'patchbay', you connect your amp with the speaker you want, we don't make adaptations. For example if you have an 8 ohm amp and you have 2 cabinets (16 and 8 ohm), you have to choose the 'correct' speaker.

- What guitar cable do you recommend? We don't have a preferable brand but the cables must **have good quality and good soldering**. We have detected that a configuration with no quality cables changes the sound, then users tends to think there is a problem in our 8x4 selector. Then, changes the cables and recovers the definition and sound quality.

-Can I put all my amp heads in 'tower' configuration (One above the other)? You can configure all your amp heads in the way you want but the users must take attention of the position of the power transformer (connected to the power grid) of the amps. Some amp brands put the power transformer in the left side of the head, and others in the right side. If you combine this two cases amp, probably the induction of this power transformer will affect to the second amp and you could have some noise. We recommend put the same head amps (transformer position) in one 'tower' and the others in a second 'tower'.

- If I turn off the 8x4 selector and amps are on, is there a problem? No, because all the amps go directly to the internal phantom load in that case, and all your amps will be loaded.

SPECIFICATIONS

- 8 Amplifiers and 4 Speakers Selector
- 1 Jack instrument input and 1 Jack Tuner output (front panel)
- 8 Jack instrument outputs to Amplifiers
- 8 Jack charge (speaker) inputs from Amplifiers
- 4 Jack charge (speaker) outputs to Speaker
- 1 Jack charge output and 1 Jack charge input for Insert in the Amp-Bus
- 1 MIDI output and 1 MIDI thru
- Power Supply: 220/110V and 50/60 Hz. Consumption: 6W.
- Weight: 5Kg
- Max. Watt input from Amplifiers: 180W
- Dimensions: 42x435x285 mm (Height/Width/Depth)
- The manufacturer reserves the right to change the technical specification of the product without prior notice.

Note: As of serial 1097 there is no voltage selector in the rear panel:
-From serial 1097 to 1104 the voltage switching (110/230) is automatic.
-As of serial 1105 the voltage switching is internal and located inside the unit in the power board with a swichter. For more info please contact us.

WARRANTY

These products are guaranteed for a period of two years from the date of shipment to the end user for countries of the European Union. For other countries, please refer to the law in effect.

During the warranty period Kahayan Pro-Audio will, at their discretion, either repair or replace products which prove to be defective, provided that the product is returned to an authorised Kahayan service facility. The warranty will not cover shipping the unit back to the Kahayan service facility, unless the customer determines otherwise with his dealer/distributor.

Defects caused by unauthorised modifications, accident, negligence or any misuse are not covered by this warranty. For further information please contact your dealer or the distributor in your country.

NOTICE OF COPYRIGHT AND OWNERSHIP

All designs, circuit board artwork, front panel artwork, text contained herein and therein, and all other intellectual material is the sole property of Pablo Kahayan from Kahayan Audio. Unauthorized use, distribution, reproduction, etc. is strictly prohibited. Kahayan intellectual property is protected by international copyright laws. Violators will be prosecuted to the fullest extent of all applicable laws.

Transfer of ownership of this unit neither confers nor implies any transfer of ownership of the intellectual property, proprietary design, etc. contained herein.

CREDITS

Concept: Pablo Kahayan

Written by: Pablo Kahayan and Luis del Toro

Edited by: Luis del Toro and Pablo Kahayan