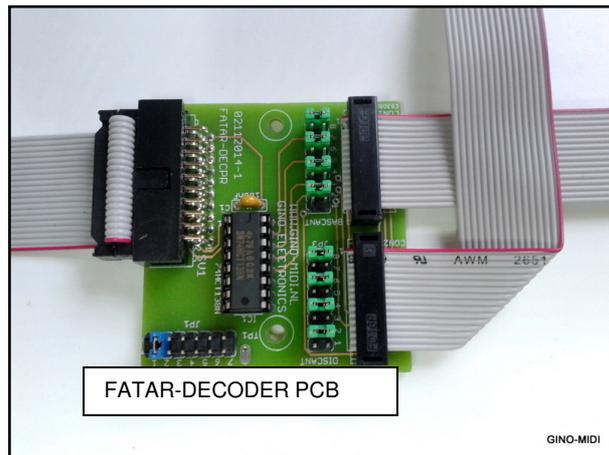


User manual FATAR DECODER PCB

Introduction.

The FATAR keyboards are becoming increasingly more used in the construction of virtual organs. These keyboards are of good quality and have well functioning key contacts and a diode matrix. The key contacts even been executed double and therefore these keyboards are also suitable for use in velocity-sensitive instruments. At the organ the velocity is irrelevant, but we can use this double set of contacts by choosing fast or later response when pressing the keys.



Explanation of the operation of a decoder PCB.

The decoder PCB's forms the link between the MIDI main board (which may be the main board of the Small-MIDI or the main board of the Big-MIDI) and (diode) matrixes of keyboards and / or register switches.

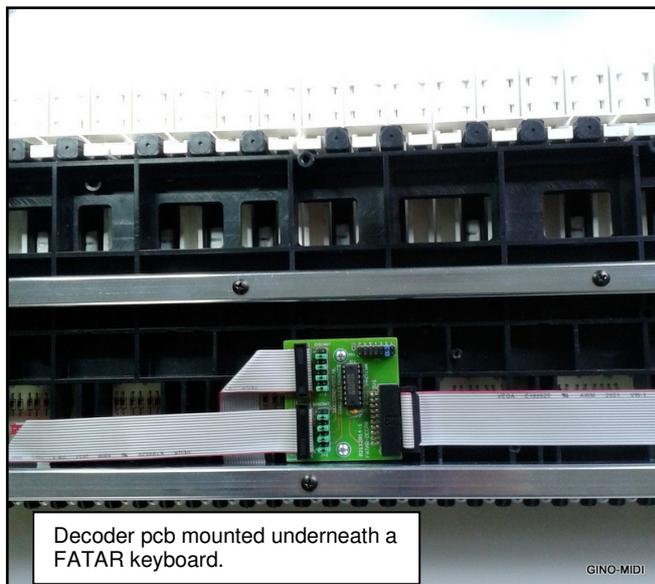
The microcontroller of the main board gives every time a signal to each decoder circuit board, with the message, "Now it's your turn to pass the keystrokes." The identification of each decoder circuit board for the microcontroller is accomplished by the jumper which we make at JP1. With this jumper we give an "address" to each decoder PCB.

A total of 4 (Small-MIDI) or 7 (Big-MIDI) decoder PCB's clock signals is coming from the MIDI main board, and therefore 4 or 7 decoder PCB's could be connected c.q. can be addressed.

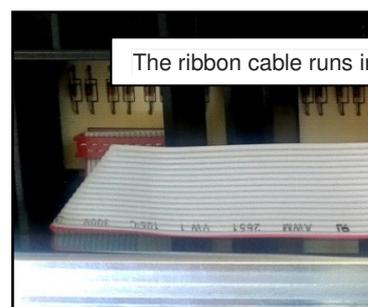
For the 8th decoder PCB is also a clock signal (TP1) but this signal does not come with the GINO Bus. In extreme cases an 8th decoder PCB should be connected, one needs to make a separate connection from TP1 of the main board of the Big-MIDI to point TP1 of the appropriate decoder PCB. It is not necessary to place a jumper on the 8th PCB decoder.

Assembly.

The assembly underneath the FATAR keyboards is fairly simple. The package is supplied with two parkers with which you can assemble the PCB directly underneath the keyboard. Insert the print at the height of the points which you can find under the keyboard. Screw gently the parkers and make sure they are screwed in right otherwise it can happen that you damage the shaft in which the parkers must be screwed.



The board is already equipped with the necessary components and two ribbon cables. A (short) ribbon cable for the Discant of the keyboard and a (long) ribbon cable for the Bascant of the keyboard. Fold the flat cable at an angle of 90 ° at the level of the orange connector. Then the ribbon cable should be in a curl prone to make the orange male connector fits into the orange female connector into the print of the FATAR keyboard.



It is important that you carefully proceed with the insertion and removal of the male connectors. The male connectors can be placed only one way to in the female part. And also when removing the connector it is advisable to grasp the connector itself and not to much pulling on the ribbon cable.

Jumpers.

At the decoder PCB there are some jumper positions. Namely the jumpers with JP1 and jumper with JP2 and JP3.

The jumpers with JP1 are designed to determine the address of the decoder PCB. Below is an overview of the functions.

Jumper bij JP1

Jumper 1 is the address for port 1, for instance stops panel 1	Small-MIDI	Big-MIDI
Jumper 2 is the address for port 2, for instance manual 1	Small-MIDI	Big-MIDI
Jumper 3 is the address for port 3, for instance manual 2	Small-MIDI	Big-MIDI
Jumper 4 is the address for port 4, for instance pedal	Small-MIDI	Big-MIDI

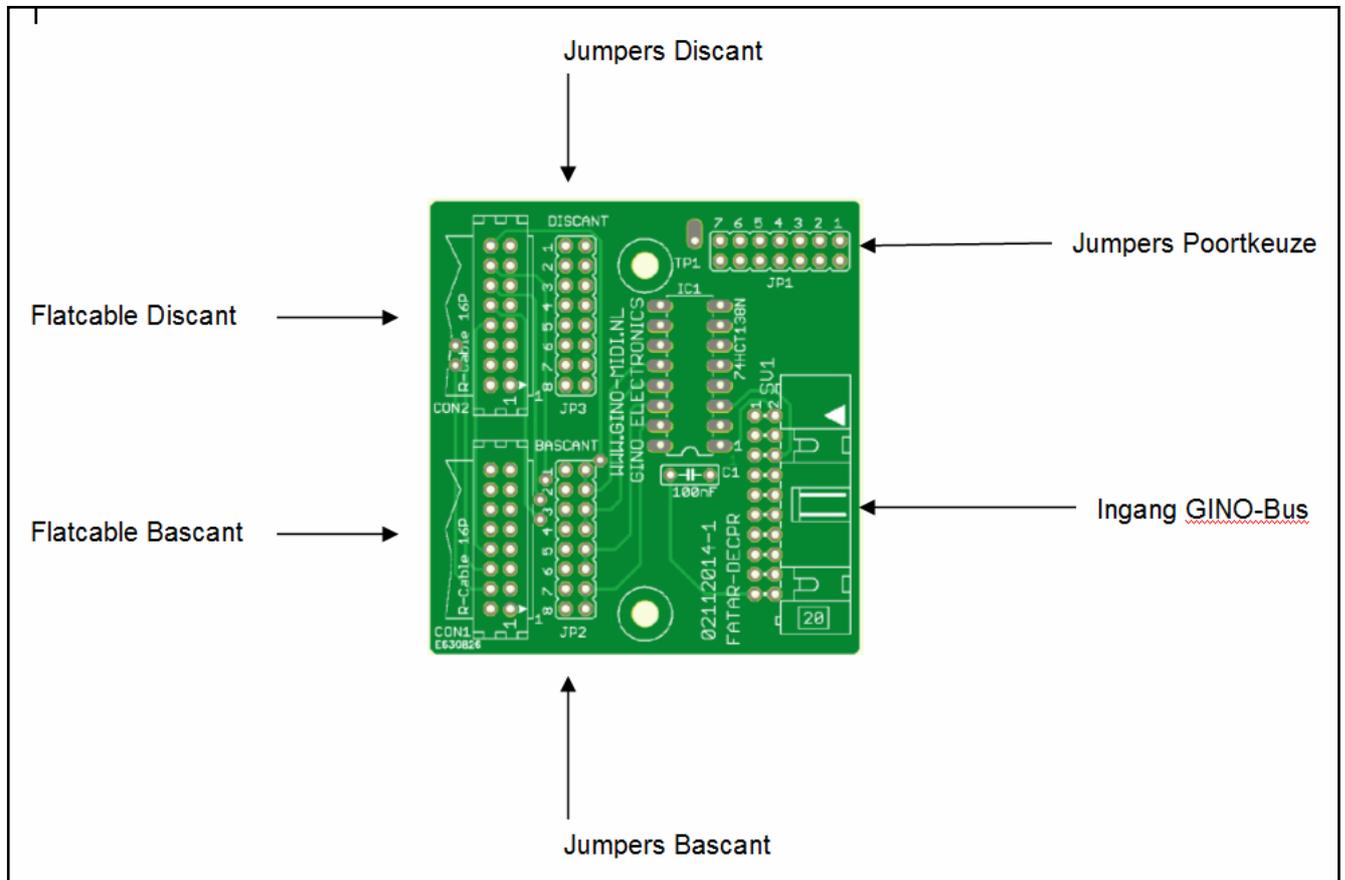
Jumper 5 is the address for port 5, for instance stops panel 2	Big-MIDI
Jumper 6 is the address for port 6, for instance manual 3	Big-MIDI
Jumper 7 is the address for port 7, for instance manual 4	Big-MIDI

Note: On each decoder PCB there may be made only one jumper at JP1

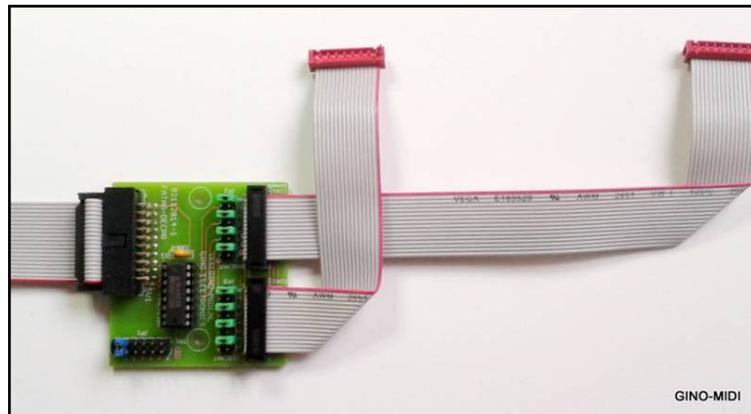
Jumpers with JP2 and JP3

At JP2 and JP3 we can choose which set of key contacts of the keyboard we will use. As mentioned earlier, these keyboards have two contacts per key. Namely an early-closing contact and late-closing contact. By default, this PCB comes set up with the jumpers on the late-closing contacts. Therefore the jumpers are at JP2 and JP3 placed at positions 2, 4, 6 and 8. Would you like a faster key touch then you can move these jumpers to the position 1, 3, 5 and 7.

Finally the GINO BUS can be connected to connector SV1



Some other pictures.



Disclaimer

Before you start building any of the projects on this website, keep in mind that I can't be held responsible for any damage that is caused by building and using the designs related to the GINO-MIDI Interface. All effort has been done to make the schematics and instructions as correct as possible and the whole project is successfully tested and used by not only me, but also by others then me.

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