User manual BIGMIDI-1

WWW.GINO-MIDI.NL

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.

Introduction.
With the BIGMIDI-1 one can midify a console with an extend of 8 matrices (keyboards, pedal, stop switches). In total the BIGMIDI-1 has the capacity to translate the data of 8x64 = 512 input switches to midi messages. It is also possible for 6 matrices to connect (keyboards or pedal) to connect a volume control.

This extend is great but one should remember that 2 of the 8 matrices are used to stop switches, pistons and other switches which we can use on the console. There remain 6 matrices for the keyboards and pedal.

The BIGMIDI-1 consist of a main board and a board on which an LCD display and three push buttons are assembled. There is also an LED that indicates any MIDI event.

Using this push buttons, hereinafter referred to as function keys one can set and change several parameters of the BIGMIDI-1.

These parameters are:
- Changing the first key number. In this case one can transpose the whole organ to a different key, to an octave up or down in steps of a semitone.
- Changing of the midi channel number of each keyboard or pedal.
- Changing of the output midi messages of the stop switches.

One can store these parameters in the permanent memory of the microcontroller. The microcontroller remembers these settings, even though the BIGMIDI is off.

It is always possible to restore the default settings.

The function keys.
F1, F2 and F3 are function keys to change various parameters. With F1 you can scroll through the menu options and has also a confirming function.
The functions of F2 and F3 are diverse, but also + and – when appropriate.
The red LED indicates when a midi event occurs.

When starting up the BIGMIDI-1 the main screen will be shown.
If you pres F1, the BIGMIDI-1 comes in the PROGMODUS (the program modus).
With F1 you can confirm whether you wish to continue and with F2 you can choose to go back again to the main screen.

If we are in the PROGMODUS, no midi messages will be sent and you can not play. You can scroll woth F1 through all the menu options. We are going to these menu options one by one.

The first menu option is **Change first keynumber.** Push on F2 and you will see a screen in which the pitch of the first key is shown. By pushing on F1 or F2 you can change per semi tone the pitch of this first key up to one octave up or one octave down. Press F1 to confirm your choice.

The next menu option is **Change port numbers.** If you press on F1 you will go to the next menu option and if one push on F2 you can change the channel numbers of the matrices (keyboard and pedal). Push now on F2. Now the screen will show "PORT". This is the same as matrix.

First, the midi channel of Port 1 or Port 2 is shown. This depends on the P-C setting. Read the following paragraph. Pressing F2 or F3 you can change the midi channel number of this particular port. These channel numbers has a range from 01 to 16. F2 is up and F3 is down. After you have or don't have changed the channel number, you can press on F1 to change the channel number of the following port.

This continues to port 8. If you have had all ports, you press twice on F1. All parameters are now stored (temporarily) in the memory of the microcontroller.

At the following menu option you will be asked for **P-C Change** ?
This is the **P-C parameter**. This parameter determines which midi messages will be sending for the matrices 1 and 5. These are namely the matrices which are used for the stops of the organ. In totally you can connect 2 x 64 switches on these matrices. The default setting for these switches connected to these matrices is that the give the midi code **Note On** and **Note Off**. This is the same code as with a normal keyboard.
But it can also occur that you MIDI equipment better listen to the midi code **Program Change On** and **Program Change Off**. This depends on the software you are using on the computer, like Hauptwerk, GrandOrgue etc. Many software can handle both sort of codes, but it can occur that the software remain strictly within the midi protocol and than it is nice if the midi hardware can react on that.

So, make your choice. You will see this immediately on the screen. Press F1 to confirm.
Note: If you choose to activate the Program Change parameter (set on 'Y'), you will notice that the channel numbers of port 1 and 5 are no longer available. In this case you can only change the channel numbers of port 2, 3, 4, 6, 7 and 8.

Exit Progmodus and Save Parameters.
P-C Change was the last menu option in the Progmodus. You will be asked now to leave the Progmodus or not. By pressing F2 you will return in the Progmodus and by pressing F1 you will leave the Progmodus. In that case you will be asked to save the settings of the parameters. The preset parameters are now in the memory of the microcontroller, but are not yet stored in the permanent memory (the EEprom).
If the parameters are stored in the permanent memory (EEprom), then they will be stored there even you switch the BIGMIDI-1 off. They will be called again if you switch the BIGMIDI-1 on. Make your choice by pressing F1 for the permanently or pressing F2 for the temporary storage. In the last case with starting up the parameters are called which are saved the last time you have made a permanent storage.
After you have pressed F1 a message will be shown on the screen **Parameters are saved.**
Press F3 to go further; you will be directed to the main screen and you will be able to play again.

Default parameters.
It may be that after some experimentation you are confused and lost the way. One can always recall the default parameters when booting the BIGMIDI-1 by holding the F1 key pressed.
In that case the BIGMIDI-1 will start with the screen text **Restore default?**
Wait a moment and you can make your choice. F1 is yes, and F2 is no. Then the main screen start with the normal text and you can play.

All Notes Off.
In the normal mode the F1 key has the function to come in the Progmodus, F2 has no function and F3 is a sort of panic button.
With the F3 key you can send the midi codes All Notes Off for all channels. This is done in case all different notes are being played by your system without any control. A panic button. The writer of this article has never experienced that, but it is common to have such a facility at hand.

Potentiometers/volume meters.
You can connect up to 6 potentiometers which either belong to one of the 6 matrices. Namely the matrices 2, 3, 4, 6, 7, 8. Even if you have changed the channel numbers of these matrices/ports, so is the channel number of the volume potentiometers also. The value of the potentiometers is 100K linear.

Finally.
I have tried in this guide to mention many items according the use of this GINO-MIDI interface.
If you have remarks and comments, please let me know. Also my English is a little bit poor, so feel free to correct me. This allows other users to take advantage of them. Good luck with the construction of the BIGMIDI-1 Midi Interface.

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