Hauptwerk Hardware

Interface Board

for the

Universal Midi Encoder

User Manual

Release 2.0 – December 2024

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Introduction

Please note that this manual is for the Second Generation interface board which is coloured blue on both sides. If you have an earlier board, only coloured blue on one side, please refer to the original Generation 1 manual.

This manual is for the interface board only. It should be read in conjunction with the manual for the Universal Midi Encoder which is available from our website on the downloads page under the downloads tab.

The Universal Midi Encoder has been developed especially for the purpose of generating Midi data from the many different types and styles of input devices commonly found in an organ console. It can process inputs from keyboards, stops, pistons and pedal-boards as well as analogue devices such as expression shoes.

In order to operate correctly the encoder requires that several resistors are connected externally to it's circuit board. Because of this and the fact that connections are made to the encoder by simple plug in pins which are not ideal for long term individual wire connections, we have developed this interface board (sold separately) which contains all these external components along with a built in 5 pin DIN Midi out socket and header pins which the encoder board plugs on to. This considerably simplifies connections to the encoder board and provides a reliable long term solution.

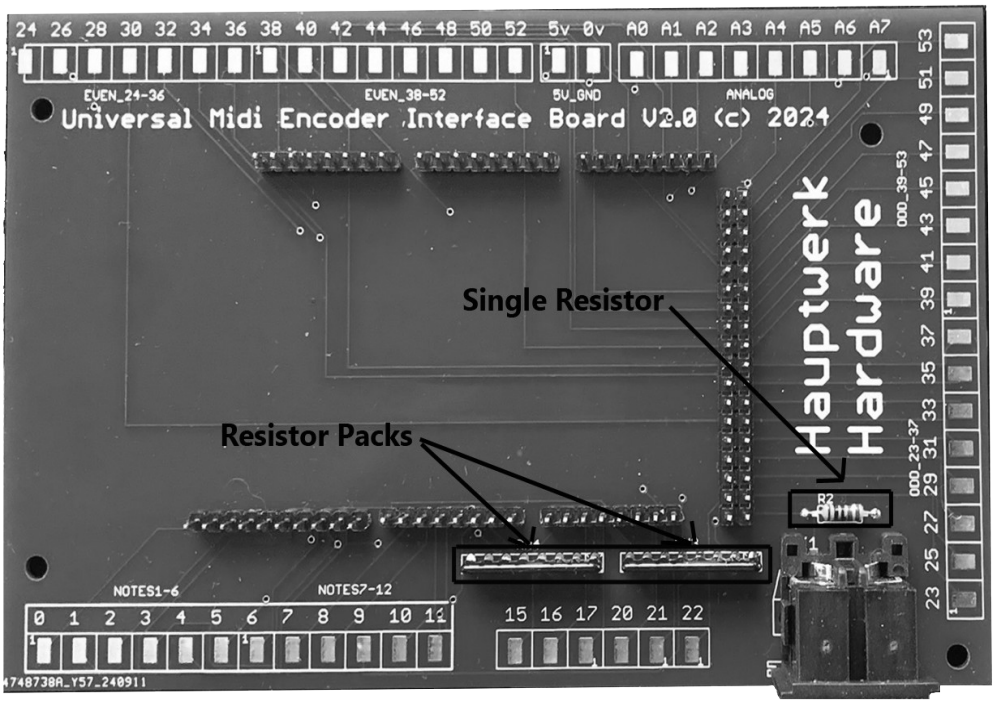
This manual explains all the necessary information about the interface board and gives diagrams of its various connection points that are designed for you to solder to.

The Interface board is available to buy from our website under the 'Products' menu.

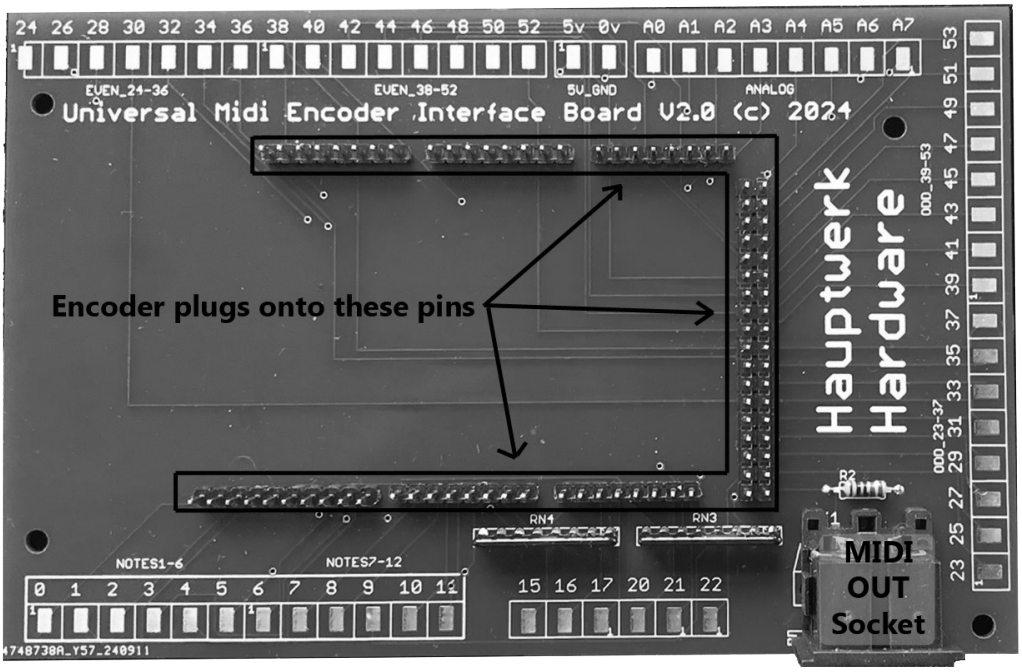
www.hauptwerkhardware.com

Board Overview

The board contains the external resistors that are required for the correct operation of the encoder.



It also carries the Midi Out Socket. The encoder plugs onto the three sided square of pins in the centre of the board.



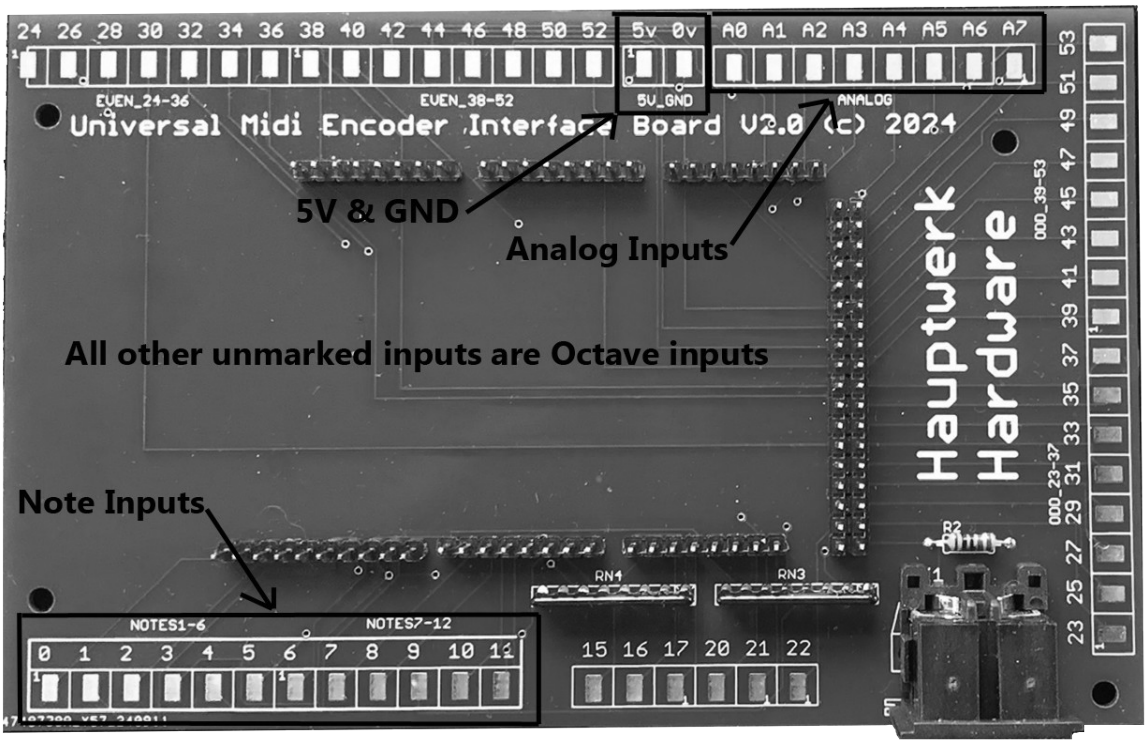
IMPORTANT PLEASE READ....

It is important to pay close attention to the alignment of the pins when plugging in the encoder board because it is quite easy to miss-align some of them and have them bend when you press the encoder down. ***If some pins are bent towards the centre of the board it is not possible to see them once the encoder is in place!***

It should be obvious that if any of the pins are bent and fail to make connection with their sockets on the encoder then the whole thing will fail to work as expected. Therefore if you have any problems with operation check and check again that the encoder has seated properly on ***all*** the pins.

The other potential issue is that it requires a reasonable amount of hand pressure to seat the encoder board and it is very easy to press some pins out of the board. Remember that they are only held in by their solder connection to a very thin and small copper pad on the reverse side of the board. It is important therefore to place the board on a flat surface whilst pressing the encoder home onto it's pins. Doing it like this eliminates the possibility of pushing any pins through the board and damaging the copper on the reverse side. ***Please note that any damage to the copper side of the board caused in this way is not covered by the warranty, therefore please ensure that you follow these instructions correctly.***

The following picture shows all the connections. Please refer to the encoder user manual for what the connections are and how to use them. All external connections on the board are solder pads and are easy to solder to. If you are not familiar with soldering to solder pads then please consider the



fact that whilst they offer a quick end easy way to connect external wires, they are bonded to the substrate of the board. This means that if you overheat them whilst soldering or apply excessive force to the connected wire it is possible to pull the pad off the board. **If this happens it is not repairable and not covered by the warranty.** If you are in doubt and would like to try out and practice soldering to pads before you begin using the interface we offer a solder practice kit which

will help with this. Please see the 'Products' page of the website here https://www.hauptwerkhardware.com/shop1/

Mounting

The interface board has 4 mounting holes of 3mm diameter each. These are for mounting the board in a convenient place within your console. It is important to consider that the reverse of the board is made from copper and that parts of this copper surface carry the electrical signals to and from the encoder. It is therefore necessary to ensure that whatever mounting method you use does not allow the reverse of the board to come into contact with any conductive surface as doing so may present a fire risk and or cause irreparable damage to both the board and the encoder itself. It is suggested that suitable insulating spacers be used in mounting the board leaving a gap of at least 5mm between the board and the mounting surface.

The board is suitable for mounting at any angle in any plane. The board must be installed in a position where it will not suffer condensing moisture, water, physical shock or any contact with moving parts. It must be protected from any conductive items, parts or waste that may fall on it.