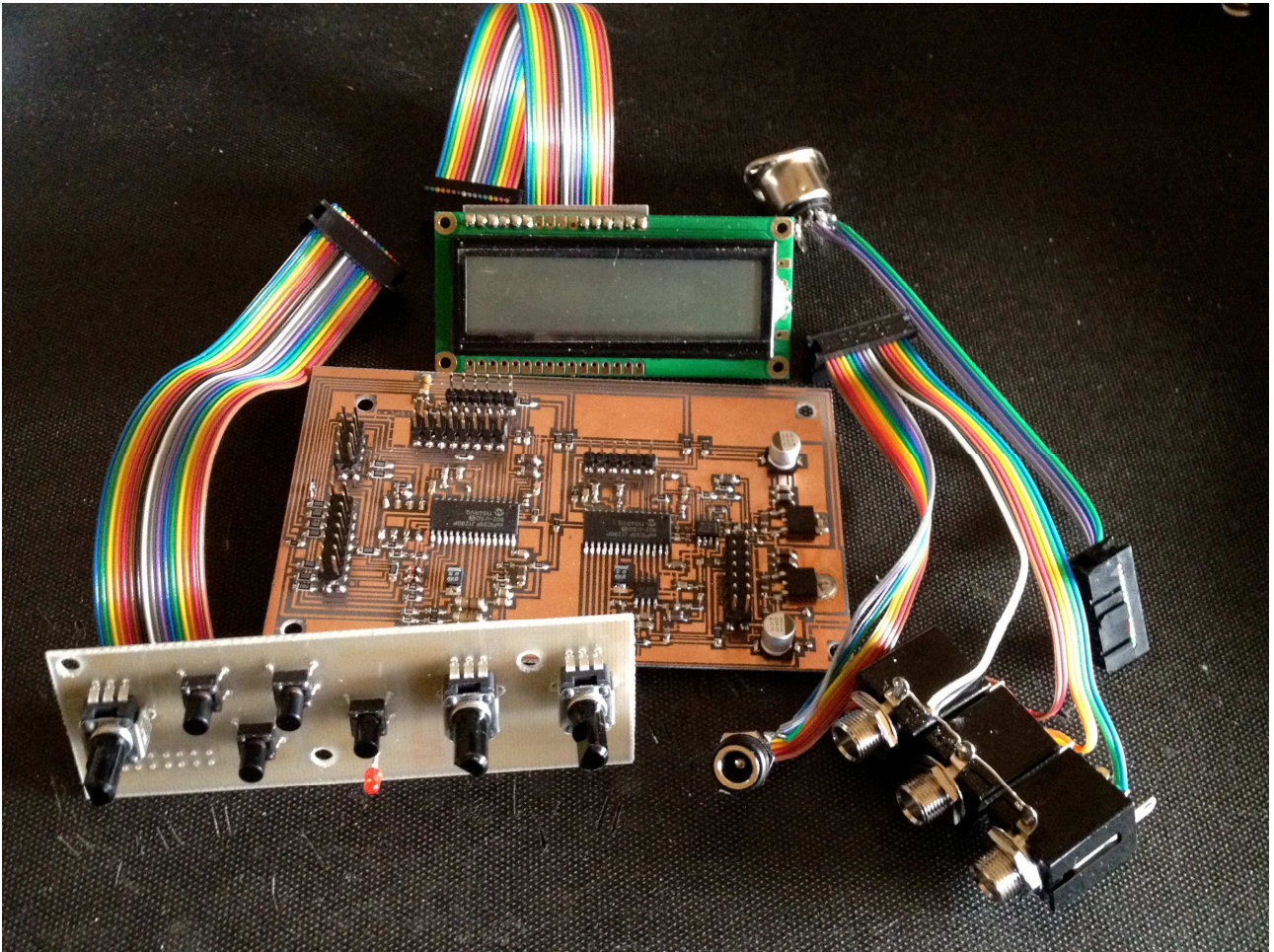


Gotharman's DIY deMOON



Assembly Manual

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Introduction

Thank you very much for purchasing a deMOON DIY kit.

I hope you will have fun assembling this and playing it.

This manual is mostly concentrating around assembling the kit. For details about operating the deMOON, please download the 24 bit deMOON user manual at:

http://www.gotharman.dk/deMOON_Manual.htm

Please notice: One difference

There are one difference between the original deMOON and the DIY. The encoder of the original deMOON, has been replaced by 3 pushbuttons on the DIY.

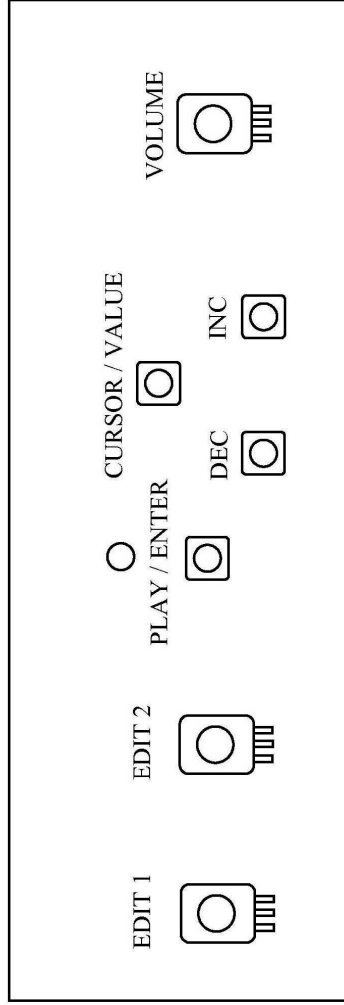
-One that replaces the encoder "Cursor/Value" push function.

-1 "increment" cursor position/value and 1 "decrement".

The functionality of the pushbuttons are the same as the encoder.

When holding the "inc" or "dec" button down for more than around a half second, it will start to auto increment/decrement.

DIY deMOON control panel



Assembling the full kit

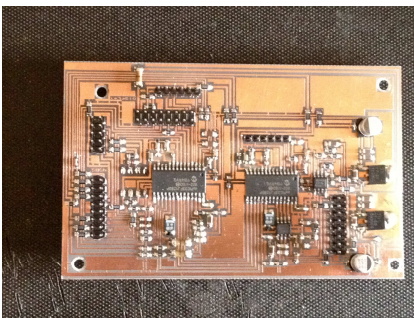
Tools needed: None right now. If mounting deMOON in a box, you will need a soldering iron and some other tools though.

You will need an additional powersupply for this kit. See powersupply specs later in this manual.

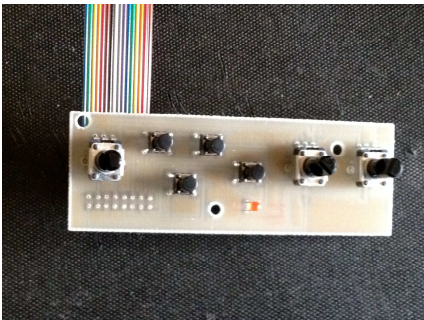
You might also want to add an on/off switch.

1. Please check that all items are present.

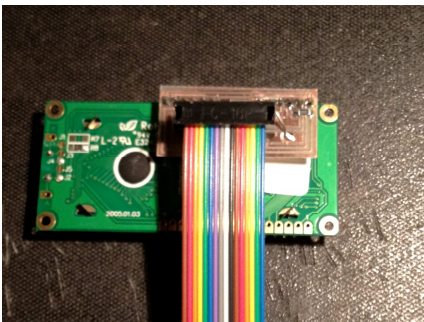
Included in the package should be:



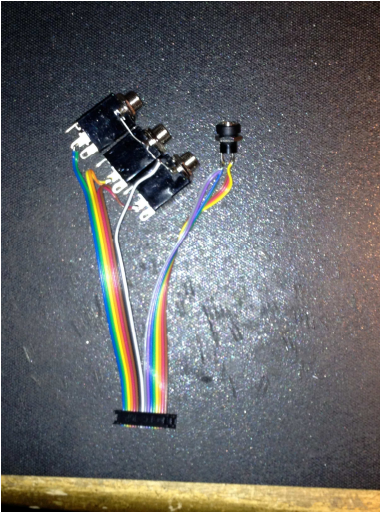
1 deMOON mainboard



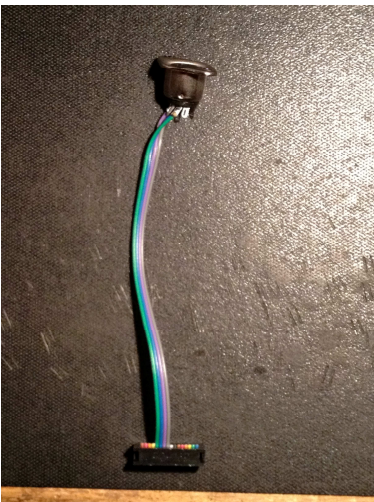
1 control panel with ribbon cable



1 display with ribbon cable

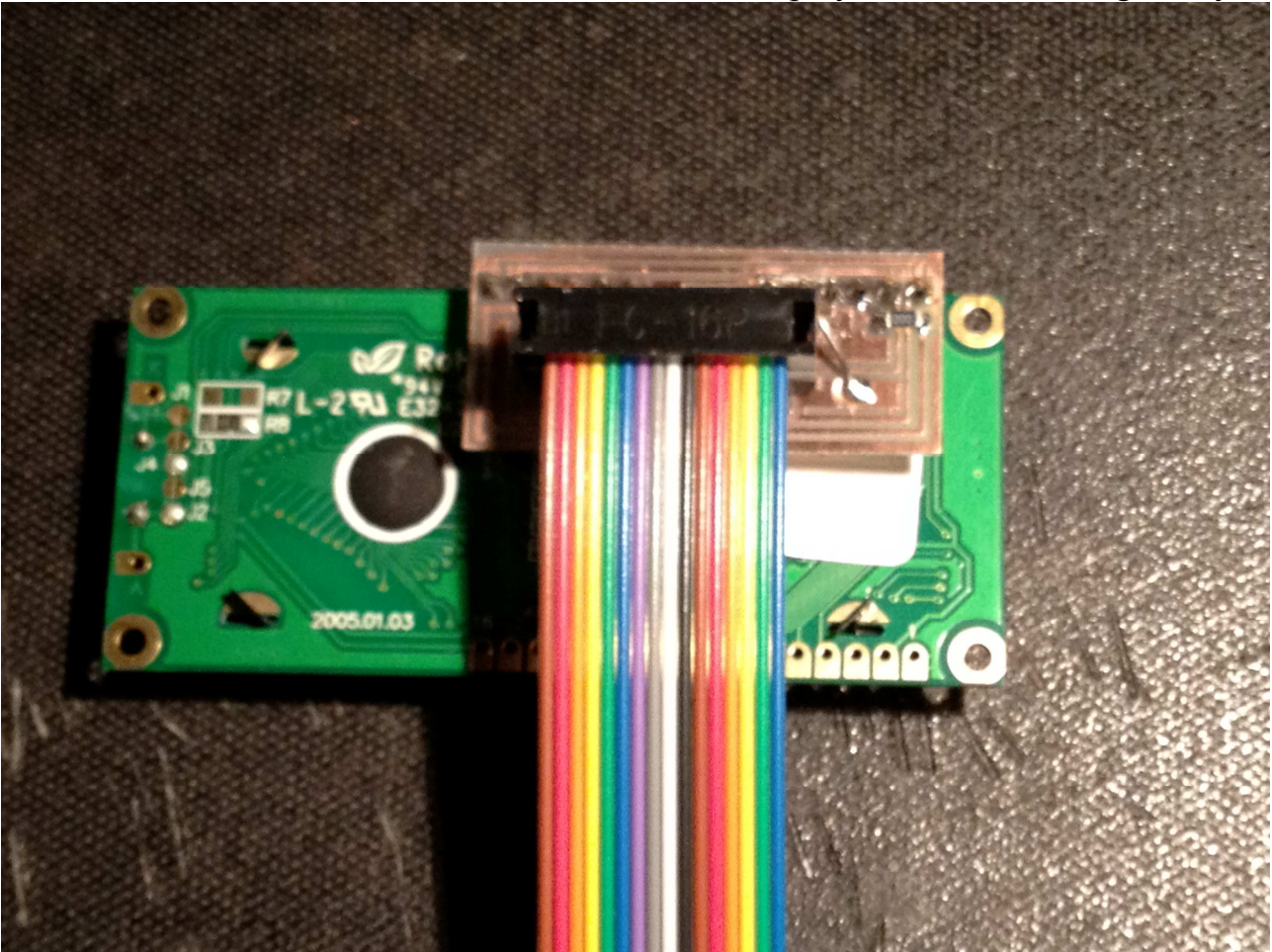


1 ribbon cable with 3 jack sockets for audio input/outputs and a DC socket for powersupply.



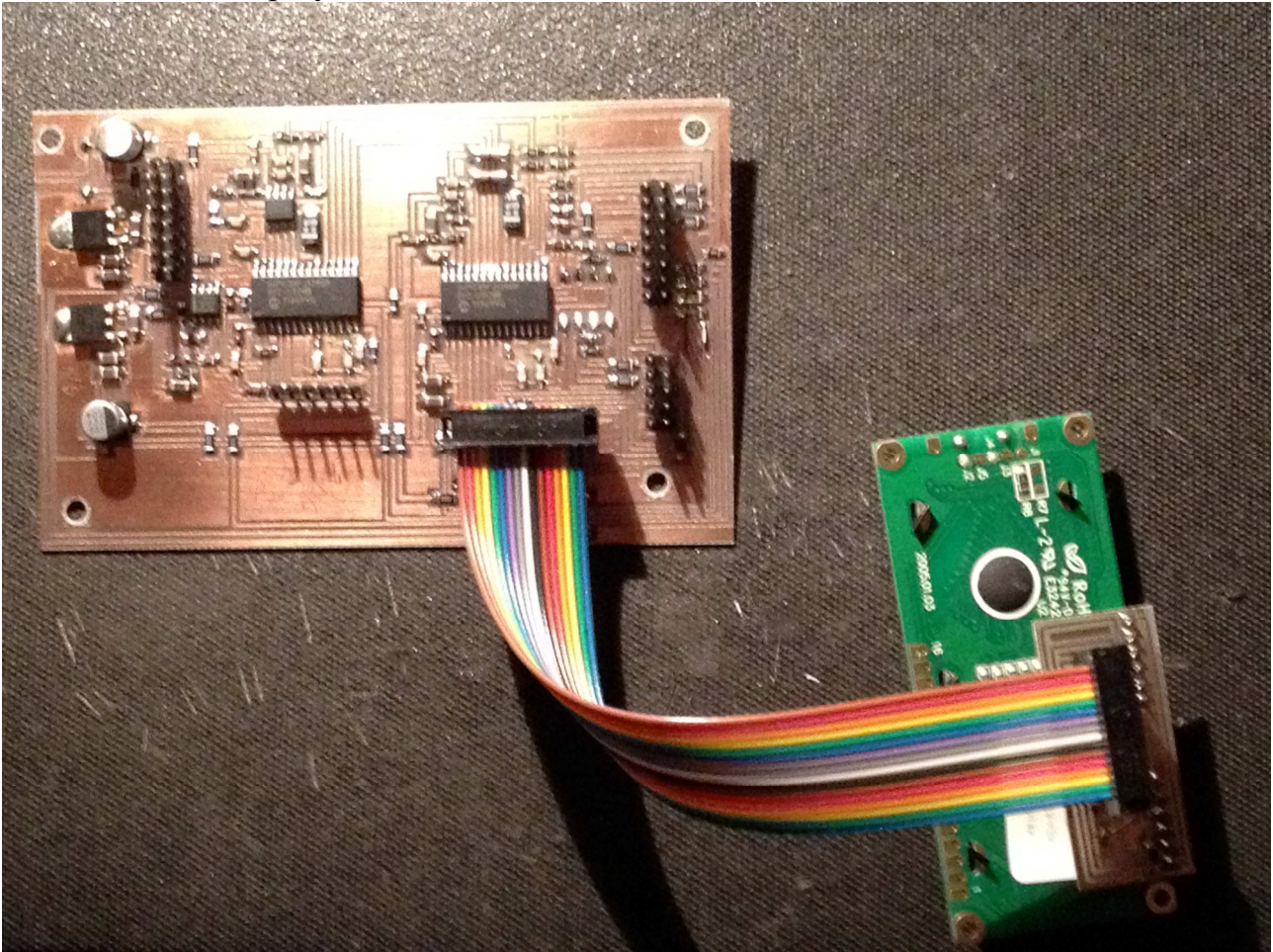
1 ribbon cable with a 5-pole DIN socket for the MIDI input.

2. Make sure, that the ribbon cable attached to the display, is attached the right way.



The brown wire, indicating pin 1, should be in the middle of the display.

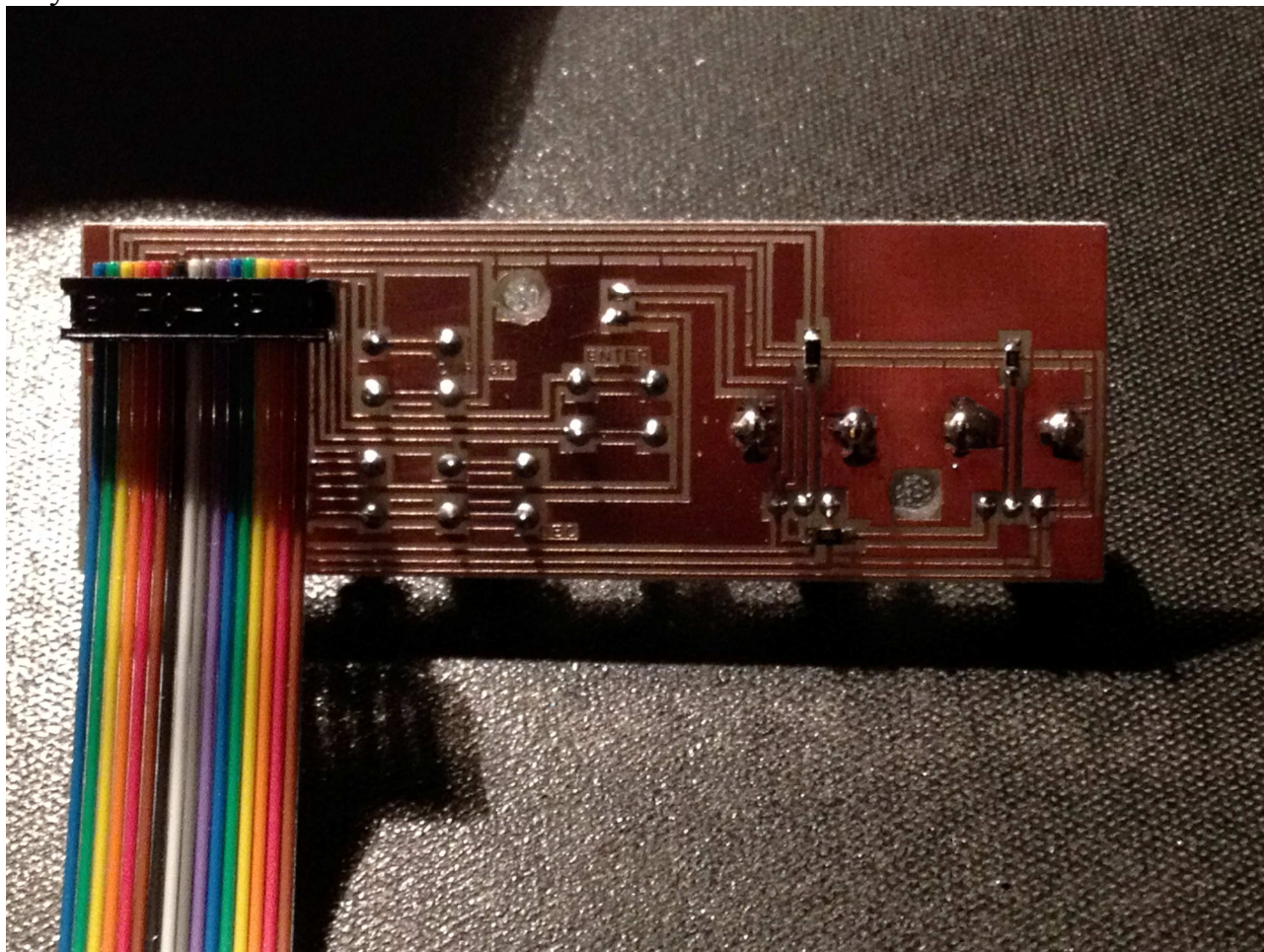
3. Connect the display to the mainboard.



Again, be careful to notice the position of the brown wire, indicating pin 1. It should be closest to the middle of the mainboard.

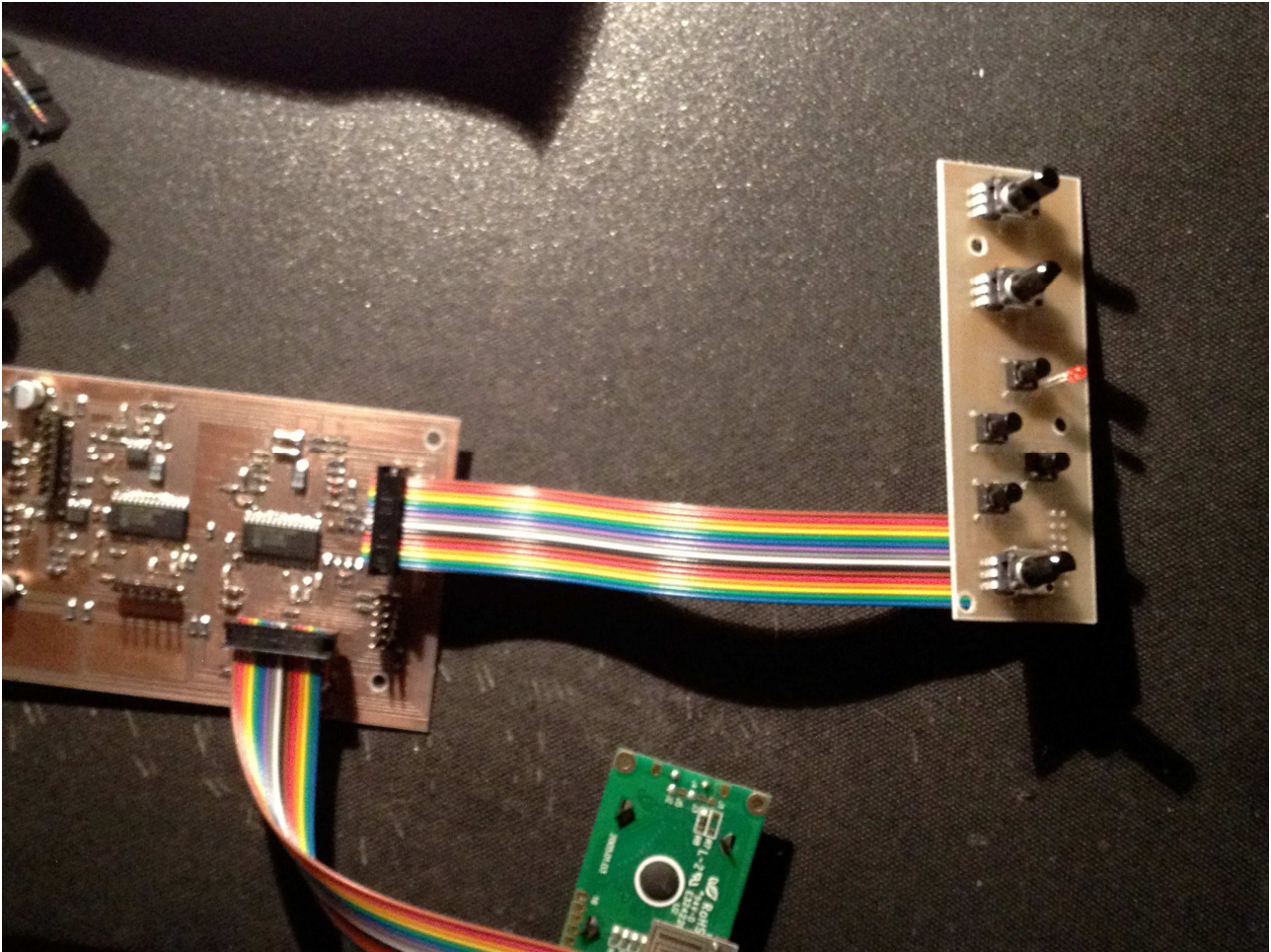
Also, be sure that the header covers all of the 16 pins.

4. Make sure, that the ribbon cable attached to the control board, is attached the right way.



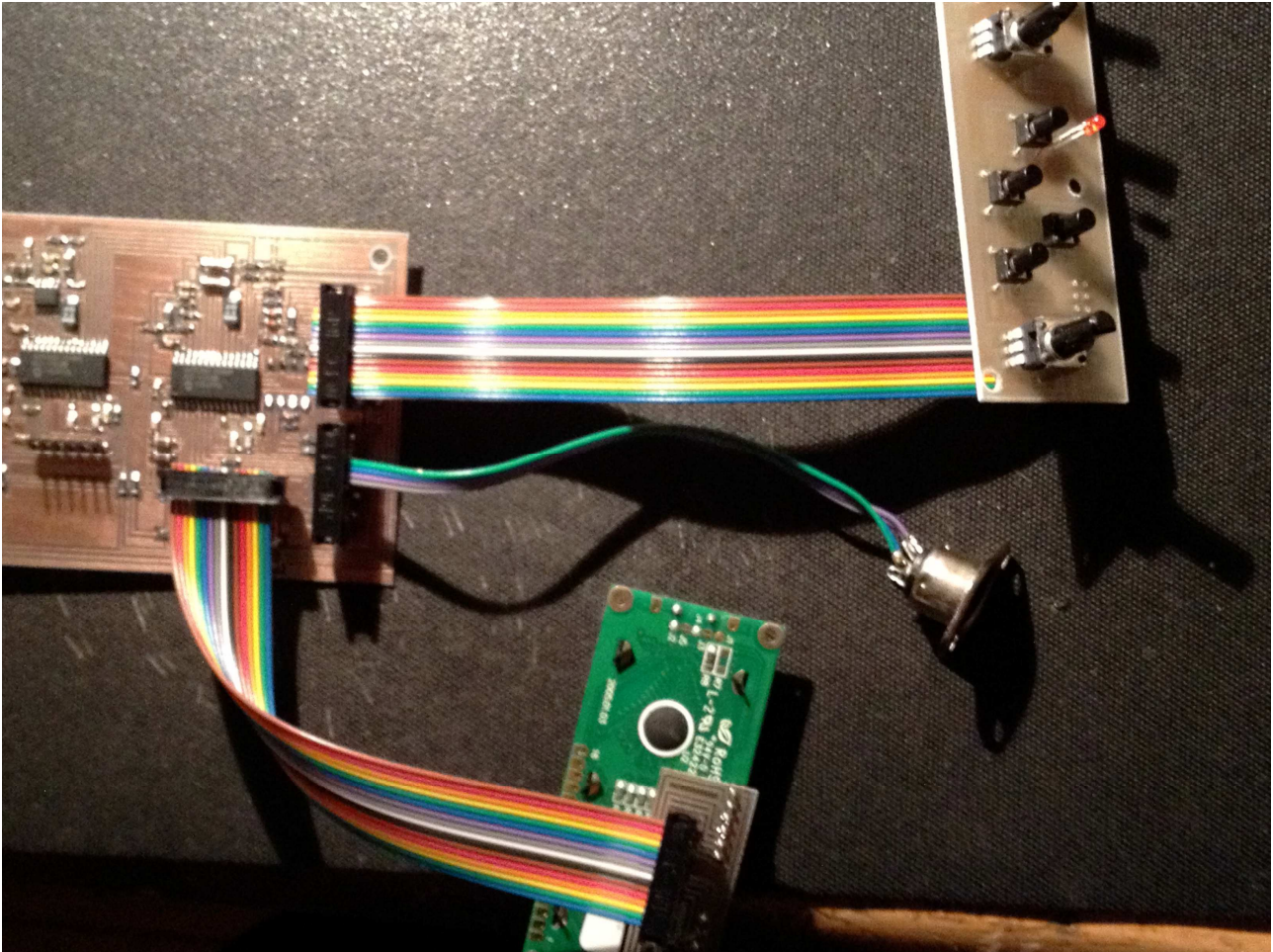
Again, the brown wire must point towards the middle of the board.

5. Connect the control board to the mainboard.



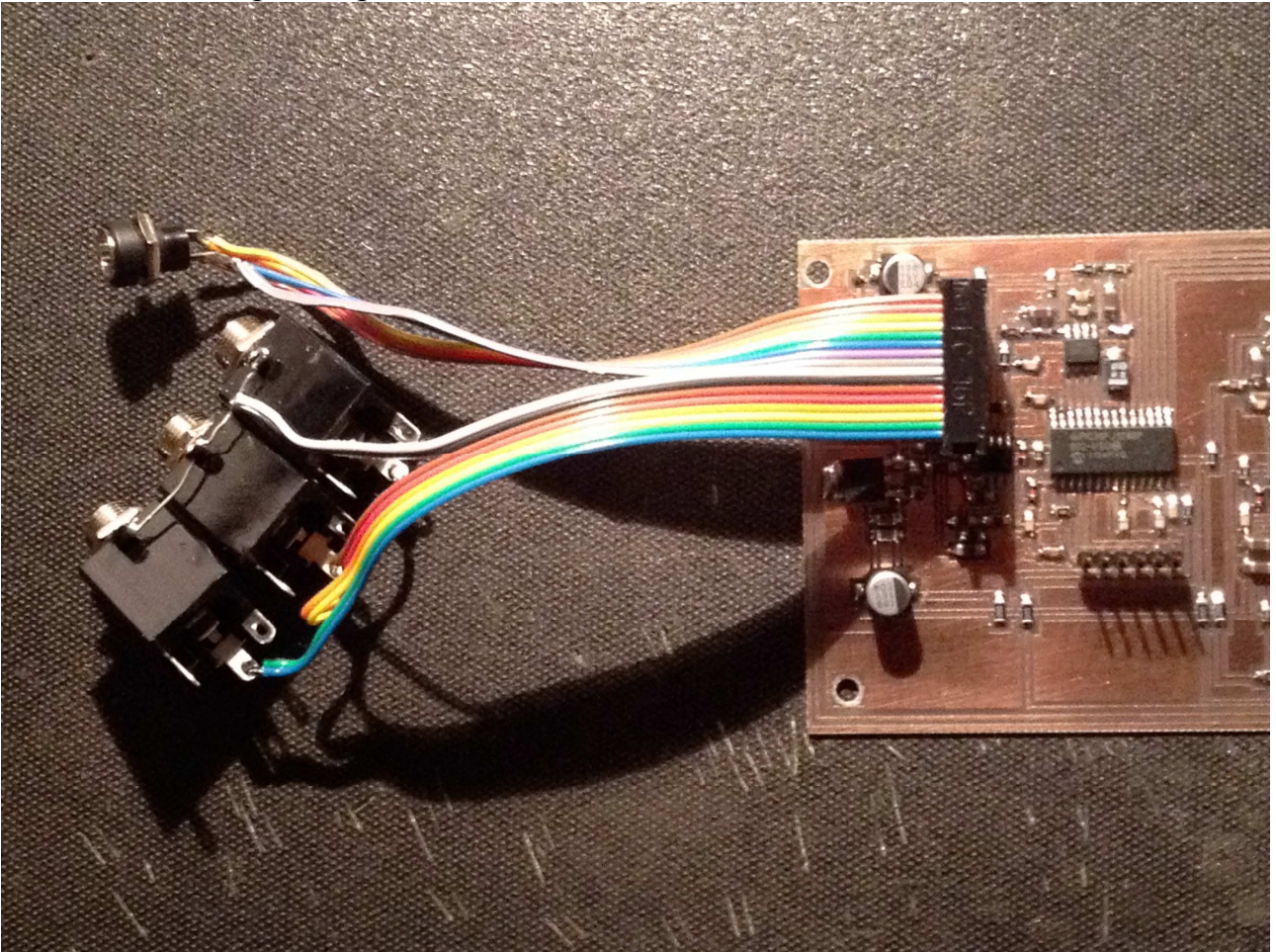
Notice the position of the brown wire carefully, and make sure that the header covers all of the 16 pins.

6. Connect the MIDI socket to the mainboard.



Please notice the location of the coloured wires, and make sure that all 10 pins are covered.

7. Connect the input/output cable.



Again, please notice the location of the coloured wires, and make sure, that all 16 pins are covered.

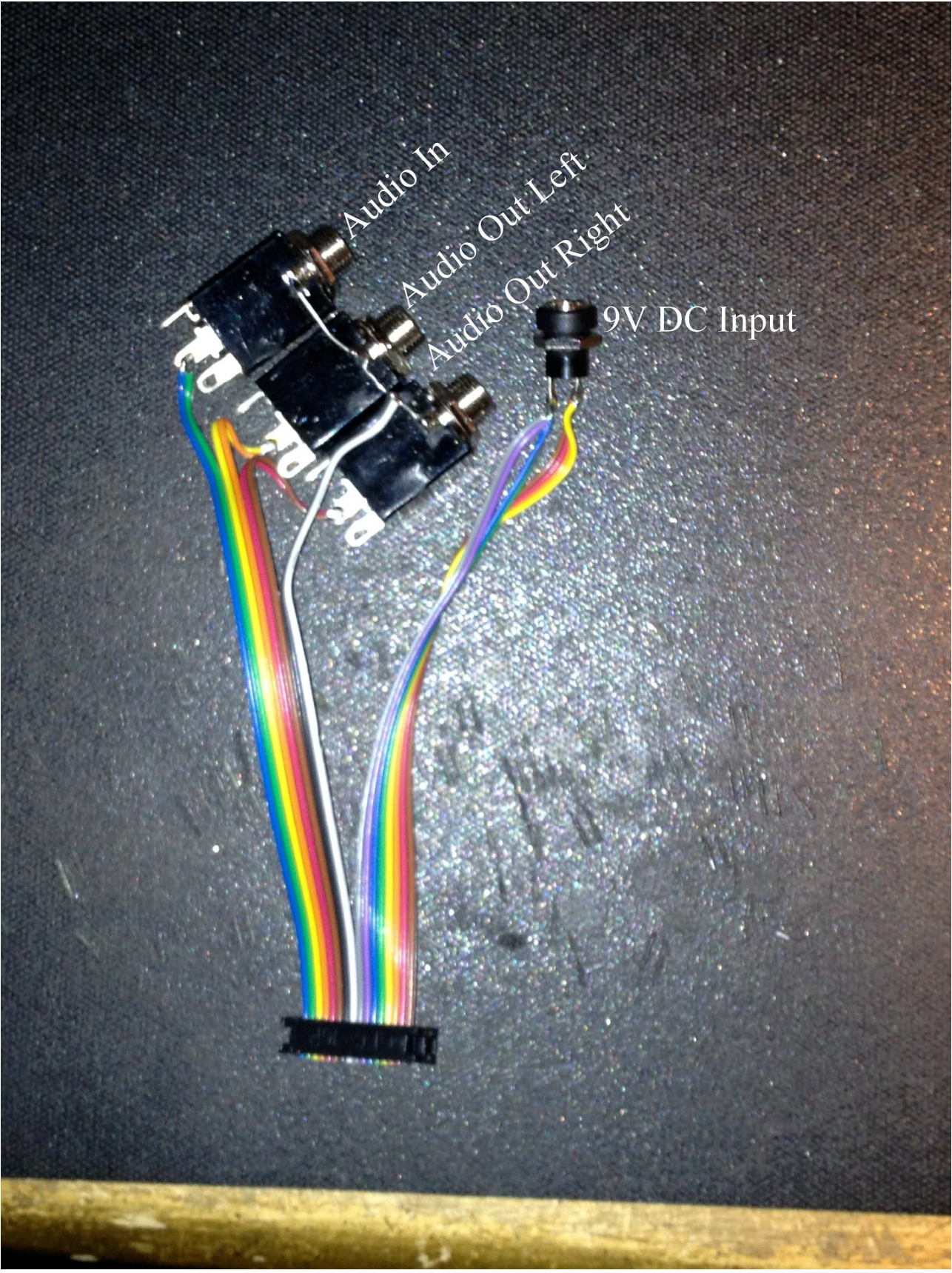
8. So, now you are finished, and ready to test your new deMOON. Hope it wasn't too hard work. Of course, you might want to build it into a box, but that will be discussed later in this manual. First, let's test!

9. Connect the output of a MIDI transmitting device (a keyboard would probably be most preferred), to the 5-pole DIN MIDI input socket.

10. Connect the stereo output jacks to an amplifier or mixer – See picture on the next page for connections.

11. Connect a power supply. You can find the deMOON powersupply specs later in this manual. See picture on the next page for connection.

12. Play and have fun.



Audio In

Audio Out Left

Audio Out Right

9V DC Input

Assembling deMOON from mainboard only

Please notice: This should only be done by persons with some electronic skills!

You will need:

- The DIY deMOON mainboard.
- A 2x16 alphanumeric display.
- 4 momentary pushbuttons.
- 3 potmeters 10K LIN.
- 1 LED.
- 3 jack sockets.
- 1 5-pole DIN socket.
- 1 DC socket.
- An on/off switch if you like.
- Cable – Preferred would be 16-wire multi-coloured ribbon cable plus header connectors.
- A powersupply. Powersupply specs can be found later in this manual.
- A box, if you like.

- A soldering iron.
- Soldering wire.

Follow the mainboard connections schematics found earlier in this manual.

You can, of course, solder all the cables to the connectors, but I personally feel that this is hard work, so you might consider using multi coloured 16-wire ribbon cable with header connectors instead.

If you do so, here's an explanation of the ribbon cable connections:

Display connector:

1 brown and 2 red: DB4

3 orange and 4 yellow: DB5

5 green and 6 blue: DB6

7 purple and 8 grey: DB7

9 white and 10 black: E

11 brown: Vo

12 red : RS

13 orange and 14 yellow: GROUND –RW must also be connected to this.

15 green and 16 blue: +5V DC

Knobs connector:

1 brown: Play/Enter pushbutton

2 red: Dec pushbutton

3 orange: Play/Enter pushbutton

4 yellow: Inc Pushbutton

5 green: Cursor/Value pushbutton

6 blue: Enter LED minus

7 purple and 8 grey: Cursor/Value pushbutton

9 white and 10 black: + 3.3 V DC – Must be connected to: Enter LED plus, inc and dec pushbuttons and potmeters.

11 brown and 12 red: GROUND – Must be connected to potmeters.

13 orange and 14 yellow: Volume pot center.

15 green: Edit 2 pot center.

16 blue: Edit 1 pot center.

MIDI connector (only 10 pins):

5 green and 6 blue: DIN pin 4.

7 purple and 8 grey: DIN pin 5.

In/Out connector:

1 brown, 2 red, 3 orange, 4 yellow: + 9V DC powersupply input

5 green, 6 blue, 7 purple, 8 grey: Powersupply input GROUND

9 white and 10 black: GROUND for jacks.

11 brown and 12 red: Audio jack out right

13 orange and 14 yellow: Audio jack out left

15 green and 16 blue: Audio input jack

Mounting the DIY deMOON in a box

Now it's time for you to be creative. Here is just a little bit of advice:

-Make sure, that the box you choose is big enough.

-For drilling of holes for the control board, go to the Gotharman's DIY deMOON website, and print out the "deMOON_DIY_frontholes" PDF. Make sure to print it out without any scaling, and for best results, print it out on thick carton paper.

-For making holes for the display, measurements are supplied later in this manual, for the display included in the full kit.

The best way of making a squared hole for a display, is using punch tools, but that is also rather expensive.

Drilling a lot of small holes, and planing afterwards is really hard work, but that is probably the cheapest way.

Maybe you can find a local metal-worker, who can do this for you.

-When mounting some of the connectors, you might need to un-solder the cables, and solder them back again after mounting. A good trick here, is to cut the cables, instead of un-soldering, and leave just enough of the cable on the connector, so you can see what colour was connected here. In that way, things does not mess up that easy.

Troubleshooting

DeMOON does not power up

- Make sure that the powersupply is connected properly.
- Make sure that you are using the correct powersupply. See specs later in this manual.
- Contact GotharMusic for advice.

Display is malfunctioning

- Make sure that you have made the right connections.
- Check out your connections one more time.
- Contact GotharMusic for advice.

Knobs are malfunctioning

- Make sure that you have made the right connections.
- Check out your connections one more time.
- Contact GotharMusic for advice.

No audio is output from deMOON

- Make sure that the volume knob is not turned fully down.
- Is your MIDI device connected properly, and set up to the right MIDI channel? Try to start deMOON's internal sequencer, by pushing the Play/Enter pushbutton, and see if any sound then comes out. If it does, you should have a look at your MIDI connections/setup.
- Make sure that you have made the right connections.
- Check out your connections one more time.
- Contact GotharMusic for advice.

DeMoon is holding notes, and acting weird, when controlled from Ableton Live.

- Ableton Live is not usable for hardware control, since it does not transmit MIDI note-off messages.
- Computers are not meant for making music. MUSICAL INSTRUMENTS ARE!!!!
- Skip that crap, and buy some real hardware!

deMOON power supply requirements

- 9-12V DC
- 500 mA
- 2.1 mm DC plug with positive voltage on the middle pin (For the full DIY kit)

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