

Steven\_C started an english [MIDIboxLC](#) FAQ a while ago in the [forum](#)

# Updated and translated from the German version

By Digneural (aka Dan)

## Which modules do I need for Midibox LC?

- 1x [core module](#) with PIC18F452
- 1x graphic LCD (240×64 of pixels) or 2 characters LCDs (2×40 characters) or 2 GLCDS (2x 128×64)
- 4x DINX4 module for 96 switches
- 3x DOUTX4 module for LED rings and LEDs
- 1x LTC module
- 1x [MF module](#) if Motorfaders are to be used.

If not “in main.asm, you have to set “ENABLE\_MOTORDRIVER” to 0, this disables the motor control.” as per TK [here](#)

## How can I connect a second 2x40 LCD?

Simply the same pins also for the second LCD excluding the pin E of the second LCD, because that is connected with pin J10:RC (pin RC.4 of the PIC CONTROLLER) at the core module.

## Which Graphic LCDs is supported?

For the moment only KS0108 and HD61202 compatible displays like the 64240A LCD from Displaytech. Other controller types like the T6963C are supported likewise by MIOS, are however too slow, so that they can lead to MIDI Buffer overruns.

## How many Switches, LEDS, Encoder and Faders do I need?

- 96x switches
- 64x LEDS + 32x optional LEDS for the remaining switches.
- 9x Encoders (8 per channel and 1 for Jog Wheel)
- 8x Motorfader or Faders

## Do I have to build the PCBs by myself?

No. Look here [Premade PCBs & Kits](#)

## How do I configure the DINs and DOUTs for my Switches, Encoder and LEDS?

- Switches and LED in `lc_io_table.inc`,
- Encoders in `mios_tables.inc`

## Why does the value of the Encoder change automatically after few seconds, even when nothing is touched?

That can happen, if no Motorfader is attached. In `main.asm` set the `ENABLE_MOTORDRIVER` flag to the value set 0, afterwards this effect should disappear.

## Can I replace the Encoders with normal potentiometers to save money?

No, in the Logic/Mackie Encoder movements are defined as relative Events.

“What?”

This means that the midibox sends a signal for “+1” when you turn your encoder clockwise, and a slightly different signal for “-1” when you turn the encoder anti-clockwise. If you use a potentiometer, the MidiBox can only send the absolute value of the pot, and will only do so when it changes.

Check out [encoders](#) for specifications and where to order.

## I want to build a Mackie C4 type box, does the MBLC do this?

No.

That is, not yet.

There is nothing to prevent a Midibox LC/C4 box from working, but some research needs to be done.

When Mackie made the LC, and then the MCU, they made the protocol public. This was *probably* done to encourage software application support. Unfortunately, the Mackie C4 is not a public protocol.

While it is most likely based on a similar design to the MCU, the two are not interchangeable.

Short answer: Now is your time to step up and do this research. Make the C4 possible, and win the adoration of your peers!

## Your Turn

Ok, I know this isn't the entire German version but [Babelfish](#) doesn't provide pure translations. The Midibox LC has also gone through major improvements too. Post your updates, tips, tricks and designs here and help give back to a community that has given so much.

## How to build a display and meter unit for Tascam US2400 and Nuendo

Dietmar wrote an interesting HowTo for using MBLC as display and meter unit for Nuendo - the controllers (Motorfaders/Buttons/LEDs) are provided from a Tascam US2400 unit, so that the construction was easier than building a complete Midibox LC: [see his homepage](#)

From:

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Last update: **2011/09/17 17:04**

