IN PROGRESS

MIDIbox BLM 16x16+X PCB and case build guide

Introduction

In 2010, MIDIboxer TK. made huge waves with his BLM (button LED matrix) 16×16+X. Never before had we seen such a mangle of duo LEDs, verowire and shift registers. The monome had been known for several years prior, as had smaller matrices for the SEQ, but the 16×16+X was a step further with its colourful LEDs and dedicated column, row and shift button. Arguably these pioneering devices inspired widespread development in commercial products such as the Novation Launchpad and Ableton Push.

TK.'s prototype was only ever meant to be that. In his words it took 40 hours and he was never prepared to do the same work again. Although the unit still works some five years later, the point-to-point wiring is somewhat fragile and the cheap tactile buttons are unergonomic. There were a few attempts at full PCB solutions, but the scale of the project is fairly daunting and sadly none eventuated.

My interest in a fresh start was piqued upon hearing of adafruit's UNTZtrument, which uses their own 4*4 silicone button pads. Years back we had considered pads from Sparkfun and Livid, but adafruit's are significantly smaller and cheaper. Rubberised buttons also have the best tactile feeling and don't click when they're pressed. The one issue was the small internal space (only accepting a 3mm LED) so it was determined from the start to go for an SMT solution.

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