

**WORK IN PROGRESS****Parts List**

Name	Part	Value	Quantity	Reichelt Order Code	Mouser
<b>Regular Parts</b>					
C1-C8	Capacitor	100nF	8	Z5U-2,5 100N	594-A104K15X7RF5UAA
D1-58	Diode	1N4148	58	1N 4148	512-1N4148
E1-17	Encoder		17		
L1-16	Bicolor LEDs (red/green, 3mm round, diffused, common cathode)		16		859-LTL1BEKVJNN
L17-20, L31-34, L40-58	LED	green, 3mm round, diffused	27		859-LTL-4231
Tempo LED	5mm	1		604-WP483IDT	
R1-R8A	1/4W Resistor	220 ohms (match to your LEDs)	10		660-MF1/4DC2200F
RN1-12	6 Pin SIL resistor network	10k	12		
SW1-58	Tactile Switches 12x7.3MM 160GF		58		TL1100F160Q
Switch Caps Switch Cap Rectangle Black		58		611-PEBK	
U1-U6	74HC165 shift register		6		595-SN74HC165N
U7-8	74HC595 shift register		2		595-SN74HC595N
16 pin IC Socket	16 pin			575-199316	
J1-2	10 pin IDC Socket	10 pin	2		571-5103309-1
10 Pin IDC Header	10 pin	2		710-61201023021	

**REQUIRED AND WILL INCLUDE IN BULK ORDER**

17x Rotary Encoder: A "standard" 16mm, 24 detent, 24 pulse encoder, however the shaft length and bushing must match. They are the same ones as used on the MB-6582.

If you already have encoders from Voti: <http://www.voti.nl/winkel/catalog.html?SW-ROT> or from a bulk order for Soundwell, then these will work.

16x black Re'an P401 soft-touch knobs.

Identical to those distributed in nebula's bulk order:

<http://www.midibox.org/forum/index.php/topic,11050.0.html>

1x Datawheel Knob:

ALBS P/N 866003, Drehknopf DK38-144 A.6/4,5 schwarz gerillt mit Fingermuld, datasheet:

<http://www.albs.de/ecom/images/866003.pdf>

Note also the rotary encoder for the datawheel is “panel mounted” to the PCB, so you can adjust it's height down by maybe 5mm max. and also optionally mount it above the PCB. Also, you can adjust how much you push the knob onto the rotary encoder shaft, or shorten the shaft (it's a plastic shaft) to suit other kinds of datawheel knobs.

58x Switch: <http://www.digikey.com/scripts/DkSearch/dksus.dll?Detail?name=EG1821-ND>  
<http://www.mouser.com/search/ProductDetail.aspx?qs=7Bi7Dg8SEnw0f0sbwKIXZA%3d%3d>

\* switch is a “standard” 12x12mm tactile switch, but the rectangular switch cap specified below requires this exact switch.

Added Aug 2015:

The current PCB from SmashTV has footprints for alternate tact switches.

Namely: TL-1240 <http://www.mouser.com/ds/2/140/TL1240-346152.pdf> and Mec 3F series  
<http://www.mouser.com/ProductDetail/MEC-Switches/3FTH9/?qs=sGAEpiMZZMsqIr59i2oRcvYAxqB10yDKjM3xh7wCZYw%3d>

The TL-1240 are short (8.2mm) so they cannot be used with encoders installed but are wired correctly for the LEDs. The Mec parts are tall and have a variety of caps but the LEDs are NOT wired to anything despite having pads and will need to be wired by hand. The 3 pin LEDs cannot be used with these switches. Only the 3F Mec parts are suitable, the 5F and others may fit the footprint, but use a different scheme for the LEDs that wont work at all with this board

58x Switch cap (black):

<http://www.digikey.com/scripts/DkSearch/dksus.dll?Detail?name=401-1152-ND>  
<http://www.mouser.com/ProductDetail/CK-Components/PE-BK/?qs=sGAEpiMZZMsqIr59i2oRctAaD8wfjvPOMa0Z0J%252b2auk%3d>

\* switch cap requires the switch specified above.

16x Bicolor LEDs (red/green, 3mm round, diffused, common cathode): Mouser 859-LTL1BEKVJNN

<http://www.mouser.com/Search/ProductDetail.aspx?qs=RgVUBjWRgaCkUwHnXSBfYg%3d%3d>

8x Ceramic Cap 100nF=.1uF “104” (small axial to fit inside DIP-16 IC socket): Mouser 80-C412C104K5R

<http://www.mouser.com/Search/ProductDetail.aspx?qs=TOu4hTA4Gk%2fBW6gm%252bN6zDg%3d%3d>

12x 10k 6 Pin SIL resistor network: Mouser 264-10K-RC

<http://www.mouser.com/Search/ProductDetail.aspx?qs=%252bVbJVvxFI2tjO43guEitAw%3d%3d>

## **REQUIRED AND MAY NOT INCLUDE IN BULK ORDER**

1x LED (red, 5mm round, diffused)

27x (28x?) LEDs (green, 3mm round, diffused)

6x 74HC165: Mouser 511-M74HC165

<http://www.mouser.com/Search/ProductDetail.aspx?qs=Mu9A%252bxKg3hTmyJWEpt0thA%3d%3d>

2x 74HC595: Mouser 511-M74HC595

<http://www.mouser.com/Search/ProductDetail.aspx?qs=lgHKUCmDFtiUPdphCdakWQ%3d%3d>

8x 16-pin DIP IC socket: Mouser 571-1-390261-4

<http://www.mouser.com/Search/ProductDetail.aspx?qs=VZ9FDhph7Sk4VC7kjdojYg%3d%3d>

58x 1N4148 (small signal diode): Mouser 512-1N4148

<http://www.mouser.com/Search/ProductDetail.aspx?qs=i4Fj9T%2foRm8RMUjh5DeFQg%3d%3d>

2x 2x5 dual row headers (for DIN/OUT connection to Core/ultracore and extension to optional button/LED matrix).

2x 2x8 dual row headers (for LCDs)

IDC connectors to connect LCD and CS boards to Core/ultracore

ribbon cable

### **REQUIRED AND WILL NOT INCLUDE IN BULK ORDER**

2x 2 line 40 character (2x40/40x2) standard character LCD modules

### **MAY BE USED IN DOUG'S CASE, BUT STILL UNDECIDED**

MIDI socket: <http://search.digikey.com/scripts/DkSearch/dksus.dll?Detail?name=CP-1235-ND>

Power switch:

<http://www.mouser.com/Search/ProductDetail.aspx?qs=ewGlpqF2icnsBB85JMTsOw%3d%3d>

Power socket:

<http://www.mouser.com/Search/ProductDetail.aspx?qs=4bc6C%252bcluO4fnW%2f1OprFbw%3d%3d>

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