**WORK IN PROGRESS**

# Parts List

This parts list corresponds to the PCB labeling on the Wilba Control Surface PCB sold by ModularAddict.com

| Name | Part | Value | Quantity | Reichelt Order Code | Mouser |
|---|---|---|---|---|---|
| **Regular Parts** | | | | | |
| C1-C8 | Capacitor | 100nF | 8 | Z5U-2,5 100N | 594-A104K15X7RF5UAA |
| D1-58 | Diode | 1N4148 | 58 | 1N 4148 | 512-1N4148 |
| E1-17 | Encoder | | 17 | | 652-PEC16-4220FN0024 |
| 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 | 264-10K-RC | |
| SW1-58 | Tactile Switches 12×7.3MM 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 | | | 575-199316 |
| J1-2 | 10 pin IDC Socket | 10 pin | 2 | | 571-5103309-1 |
| | 10 Pin IDC Header | 10 pin | 2 | | 710-61201023021 |

* see details about different encoder options below

**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=sGAEpiMZZMsqIr59i2oRctAaD8wfjvPOMa0ZOJ%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=VZ9FDhhp7Sk4VC7kJdoJYg%3d%3d

58x 1N4148 (small signal diode): Mouser 512-1N4148
http://www.mouser.com/Search/ProductDetail.aspx?qs=i4Fj9T%2foRm8RMUhj5DeFQg%3d%3d

2x 2×5 dual row headers (for DIN/OUT connection to Core/ultracore and extension to optional button/LED matrix).

2x 2×8 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 (2×40/40×2) 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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