

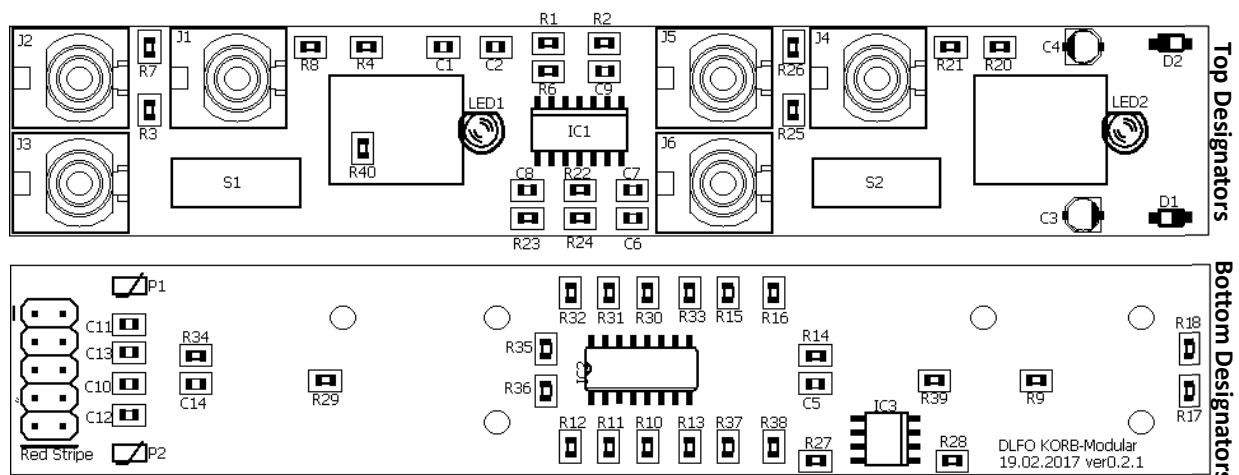
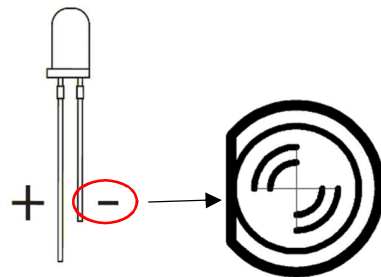
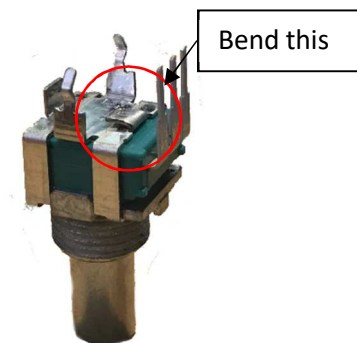
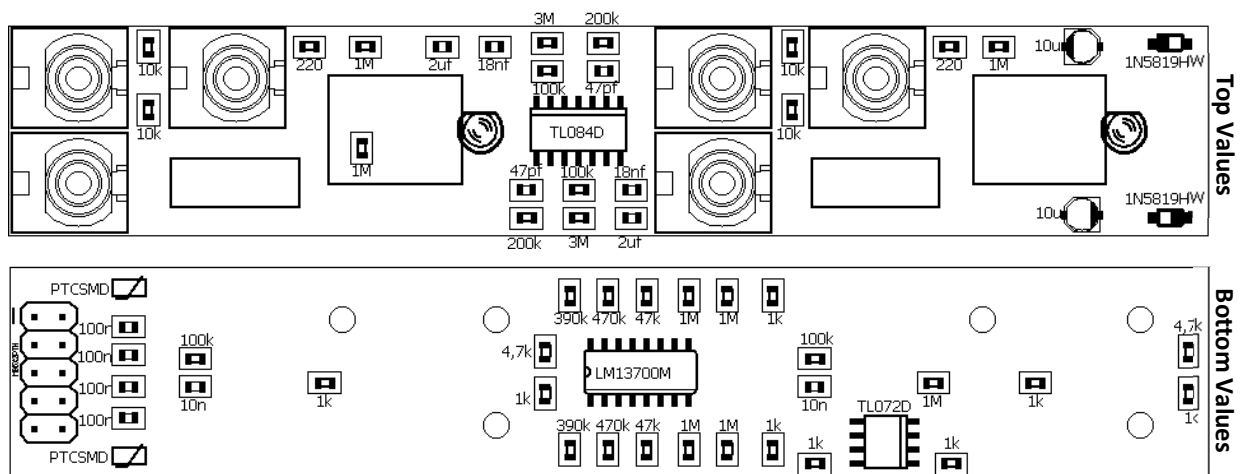


**Before you start:**

This is an beginner friendly SMT project. Nevertheless you should know how to handle electronic equipment like soldering tools, Multimeters or a scope.

I recommend a hot air gun for the SMT Parts. But for sure it, will also work with an soldering iron.

Build time is appox. 1-2 hours



| Qty            | Value      | Parts                                 | Description                     | MOUSER   |
|----------------|------------|---------------------------------------|---------------------------------|--|
| Resistor       |            |                                       |                                 |  |
| 2              | 220        | R8, R21                               | RESISTOR                        | 667-ERJ-3EKF2200V  |
| 8              | 1k         | R9, R16, R17, R27, R28, R29, R36, R38 | RESISTOR                        | 667-ERJ-3EKF1001V  |
| 2              | 4,7k       | R18, R35                              | RESISTOR                        | 667-ERJ-3EKF4701V  |
| 4              | 10k        | R3, R7, R25, R26                      | RESISTOR                        | 667-ERJ-3EKF1002V  |
| 2              | 47k        | R10, R30                              | RESISTOR                        | 667-ERJ-3EKF4702V  |
| 4              | 100k       | R6, R14, R22, R34                     | RESISTOR                        | 667-ERJ-3EKF1003V  |
| 2              | 200k       | R2, R23                               | RESISTOR                        | 667-ERJ-3EKF2003V  |
| 2              | 390k       | R12, R32                              | RESISTOR                        | 667-ERJ-3EKF3903V  |
| 2              | 470k       | R11, R31                              | RESISTOR                        | 667-ERJ-3EKF4703V  |
| 8              | 1M         | R4, R13, R15, R20, R33, R37, R39, R40 | RESISTOR                        | 667-ERJ-3EKF1004V  |
| 2              | 3M         | R1, R24                               | RESISTOR                        | 667-ERJ-3GEYJ305V  |
| 2              | 50kb       | R5, R19                               | Potentiometer                   | 688-RK09L1140A5P<br>please check your front panels first or be ready to drill their holes bigger |
| Capacitors     |            |                                       |                                 |  |
| 2              | 47p        | C8, C9                                | CAPACITOR                       | 81-GRM39C470J50  |
| 2              | 10n        | C5, C14                               | CAPACITOR                       | 81-GRM18R71H103JA01D   |
| 2              | 18n        | C2, C7                                | CAPACITOR                       | 81-GRM18R71H183JA01D   |
| 4              | 100n       | C10, C11, C12, C13                    | CAPACITOR                       | 81-GRM188R71E104JA1J   |
| 2              | 2,2u       | C1, C6                                | CAPACITOR                       | 581-0603ZC225KAT2A   |
| 2              | 10u        | C3, C4                                | POLARIZED CAPACITOR             | 647-UWX1C100MCL2   |
| Semiconductors |            |                                       |                                 |  |
| 2              | 1N5819HW   | D1, D2                                | DIODE                           | 621-1N5819HW-F   |
| 1              | LM13700M   | IC2                                   | National Dual OTA with buffers. | 926-LM13700MX/NOPB   |
| 1              | TL084D     | IC1                                   | OP AMP                          | 511-TL084BCDT  |
| 1              | TL072D     | IC3                                   | OP AMP                          | 511-TL072BCDT  |
| Misc           |            |                                       |                                 |  |
| 2              |            | LED1, LED2                            | RED/GREEN DIFFUSED 2-LEAD       | 604-WP937EGW   |
| 2              | PTCSMD     | P1, P2                                | Resettable Fuse PTC             | 504-PTS120616V025  |
| 1              | DLFO PCB   |                                       |                                 | <a href="http://www.korb-modular.com">www.korb-modular.com</a>                                   |
| 1              | DLFO Panel |                                       |                                 | <a href="http://www.korb-modular.com">www.korb-modular.com</a>                                   |
| Mechanical     |            |                                       |                                 |  |
| 1              | M05X2PTH   | JP2                                   | Header 5x2                      |  |
| 6              |            | J1, J2, J3, J4, J5, J6                |                                 | Thonk  |
| 2              |            | S1, S2                                | SPDT Switch                     | 108-0051-EVX   |