ELRS Handset Filter Boards

The ELRS handset uses a daughter board for hardware filtering of the gimbal signals. This is accomplished by routing the gimbal signals through a capacitor / resistor network before sending the signal to the MCU. There are many combinations of capacitor and resistor values that will result in various filtering solutions. Listed below are the 3 combinations we use to start.

|  |  |  |
| --- | --- | --- |
| Filtering Value | Capacitor | Resistor |
| 322 Hz | 33nF | 15KΩ |
| 530 Hz | 33nF | 9.1KΩ |
| 946 Hz | 33nF | 5.1KΩ |

Each filtering board uses 8 capacitors (C1-C8) and 12 resistors (All R’s on U1 side of board)

The filtering board must fit underneath the battery shield with some clearance to ensure there are no inadvertent shorts. When soldering the round pins, make sure the longer pins are the ones soldered into the board so the shorter pins will mate with the sockets in the main board. Also make sure you clip off the extra pins above the board, so it doesn’t contact the battery shield.