5.1InputSelection – mounting instructions

Thanks for buying this 5.1InputSelection kit! Now the fun of mounting starts. Make sure you read the complete instructions before you start mounting. Complete assembly can be done by an experienced hobbyist in about one hour. This circuit was designed to be used in a preamplifier project. More information can be found on the project page:

http://www.djuke.nl/en/projects/10-pre-amplifiers/34-preamplifierv2

List of components

The kit consists of the following components. If you bought the pcb, these components are suggested (but you can of course adapt it to your needs).

SMD components

Qty	Value	Device	Parts
6	Green	Led1206	LED1, LED2, LED3, LED4, LED5, LED6
6	BSS138	n-Fet	Q1, Q2, Q3, Q4, Q5, Q6
2	100k	R1206	R1, R12
6	1k5	R1206	R2, R3, R5, R6, R7, R8

Through-hole components

Qty	Value	Device	Parts
1	100uF/16V	Celec-2.5-7	C2
3	CINCH_4X	con-cinch	IN7CS_IN8F, IN7_FR, IN8_RCS
2	3-pin	con-kk	FRONT1, FRONT2
1	4-pin	con-kk	MULTI-CTRL
1	5-pin	con-kk	SURROUND
6	1N400x	diode	D1, D2, D3, D4, D5, D6
6	DC5V	relay	K1, K2, K3, K4, K5, K6

Tools

Required:

- ✔ Soldering iron, flux and solder
- ✔ Multi-meter (voltage and resistance)
- ✔ Side-cutting pliers, tweezers

Recommended:

- ✔ Adjustable power supply
- ✔ Oscilloscope

Mounting

Note that this kit contains (small) SMD components, for your convenience they have been pre-mounted. The easiest way of mounting the remaining through-hole components is by starting with the components with the lowest height and build up the PCB in steps, where components of the same height are fitted and soldered in each step. So, solder the components in this order: diodes, small connectors, electrolytic capacitor, relays, cinch connectors.

Always double check all components before you solder them (especially the ones that are polarity dependent, electrolytic capacitors, etc), as it is difficult to remove them after soldering, much more time consuming and may break components or PCB.

Hints:

- The pcb can directly be mounted to a panel using the cinch connectors
- The StereoInputSelection pcb has the same hole layout and can be stacked using M3 metallic spacers

Operating mode

The circuit is intended to be used in combination with the StereoInputSelection pcb, which is controlled from a SPI master, like a microcontroller. Please refer to the schematic and datasheets if you intend to use it in some other way.

Connecting and Testing

Double-check all soldering connections to make sure no shorts are present.

- Connect the MUTLI-CTRL connector to the StereoInputSelection pcb
- Check the voltage between pin1 and pin4 (should be 5V)
- Select an input from the SPI master, the LEDs provide visual feedback on the chosen input
- Connect one of the FRONT connectors to an OUT connector of the StereoInputSelection pcb
- Connect the FRONT connector to the FRONT-IN connector of the CS3318VolumeControl pcb

- Connect the SURROUND connector to the SURROUND-IN connector of the CS3318VolumeControl pcb

Schematic and top silkscreen