

BILL OF MATERIALS

	Parts	Qty	Value	Description
Resistors	R1	1	1k	
	R2 (CLR)	1	2k2	*check with your LED for brightness first
	R3	1	2k2	
Capacitors	C2	1	100uF/6.3V	pol. electro (limited height and width)
	C3	1	100nF	MLCC
Diodes	D1	1	1N5817	
	LED	1	LED 3mm/5mm	color and type of your choice
Transistors	Q1	1	BC549	2N5088 turn 180deg
ICs	IC2	1	uController	
	REG	1	78L05	
Other	K1	1	Subminiature Relay	FTR-B3CA-4.5Z (Fujitsu)
	OC1	1	Optocoupler	CPC1017NTR
	Switch S1	1	Momentary SPST	normally open

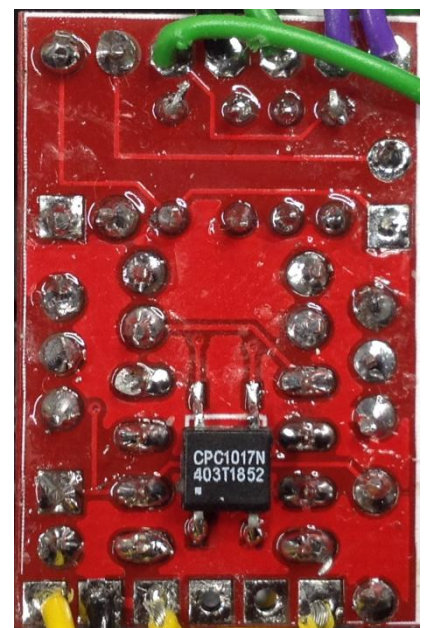
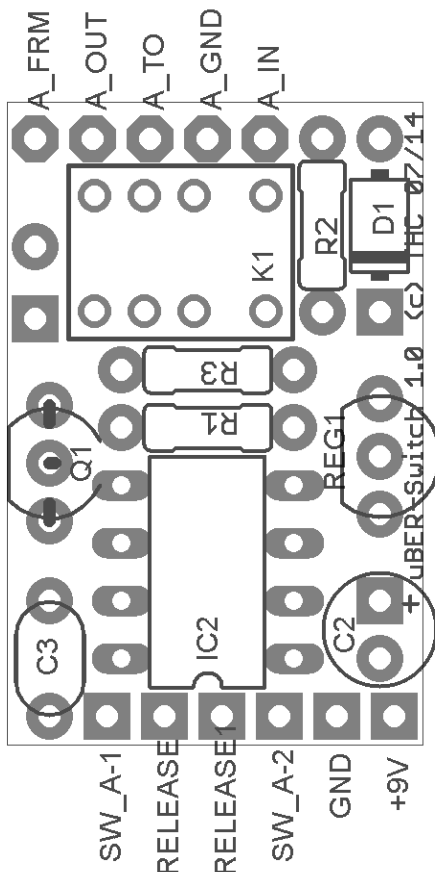
BUILDING

First of all solder the optocoupler to the backside of the PCB.

This is easy if you put solder on one of the pads first. There is a dot-marking on the IC and on the PCB which indicates pin1.

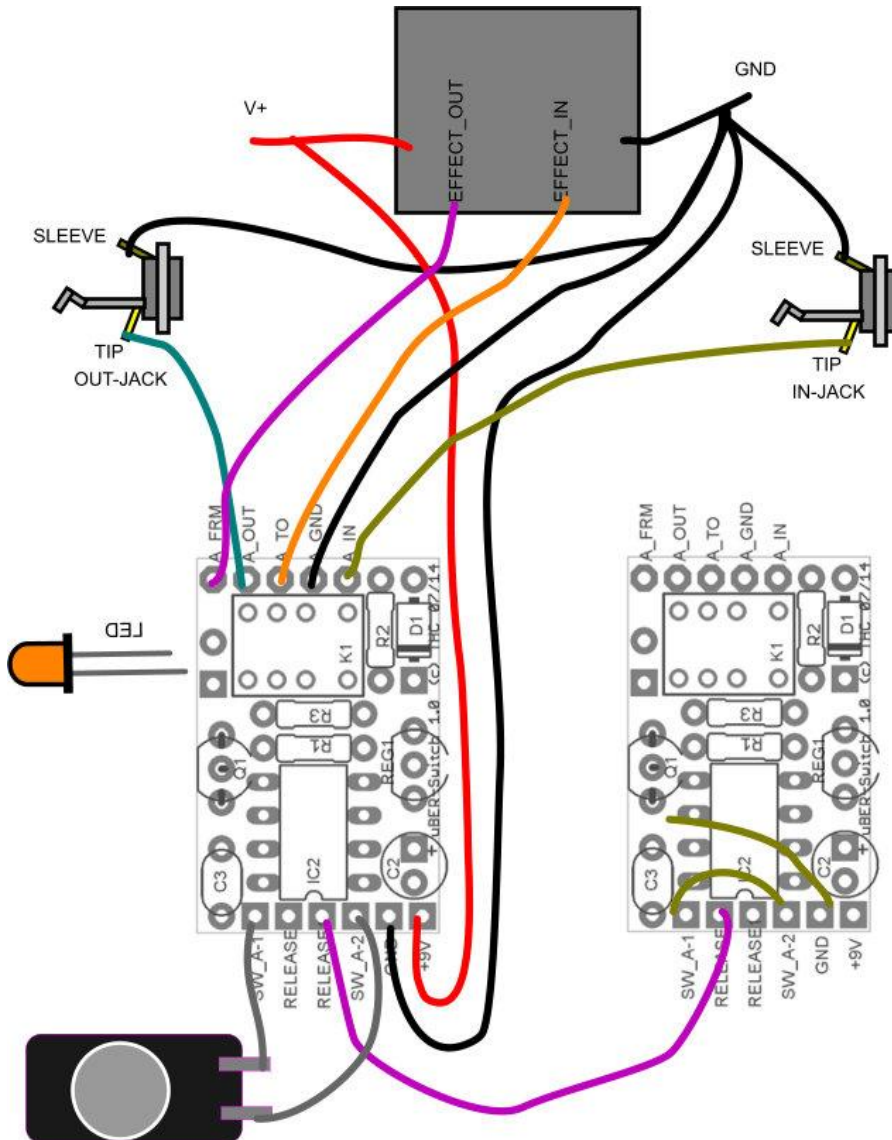
Then place the package into the middle and check if all pins have contact to the pads. Apply some pressure to the package, so it cannot move and apply heat to the pre-soldered pad and pin. This will fix the component to the board and allow for easy soldering of the other pins.

Then populate resistors and diodes. Next IC and relay. Then transistor and voltage regulator. Last put in MLCC and electrolytic caps.



The board is small enough to fit onto the momentary switch using double sided tape.

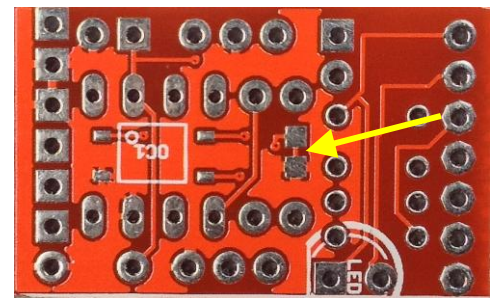
WIRING



Daisy-Chaining the RELEASE pads between boards will activate the radiobutton-feature.

With Revision 1.1. of the board the connection between A_GND and GND is already made on the board. You don't need to wire A_GND.

To break it look at the backside of the PCB and cut the trace where indicated: (it can be fixed again with a blob of solder on the pads)



FINALLY

This will make your effect absolutely quiet when switching it on or off.

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