

ShuffleBox Construction Manual V1.0

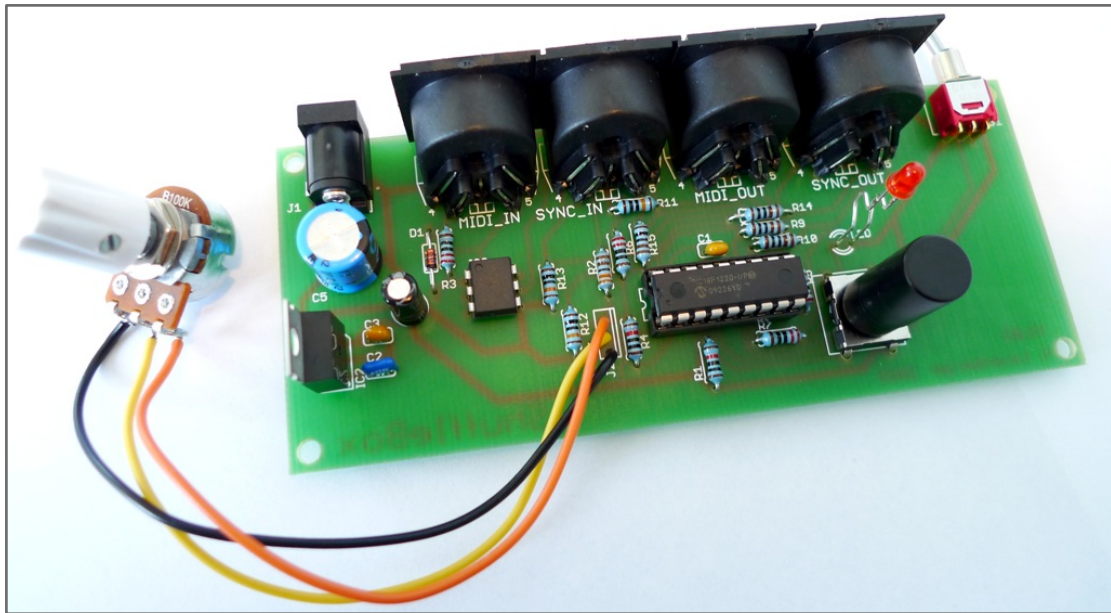


Figure 1: Mounted kit, use this as reference.

Components

C1, C3	100n
C2	220n - 470n
C4	10u
C5	470u
D1	1N4148
IC1	PIC18F1220 (Microprocessor)
IC2	LM7805 (Voltage regulator)
IC3	CNY17-2 (Optocoupler)
J1	DC Jack
J2	Wires to potentiometer
LED	Red LED
MIDI_IN, MIDI_OUT, SYNC_IN, SYNC_OUT	DIN-Connector
R1, R4, R16	10kΩ (brown, black, black, red)
R2 (was 3.3kΩ in older kits)	1.2kΩ (brown, red, black, brown)
R3, R5, R6, R7	220Ω (red, red, black, black)
R9, R10, R14, R15	1kΩ (brown, black, black, brown)
R11, R12, R13	100kΩ (brown, black, black, orange)
S1	Input Selector Switch
S2	Push-Button (+ extension)

(R8 does not exist)

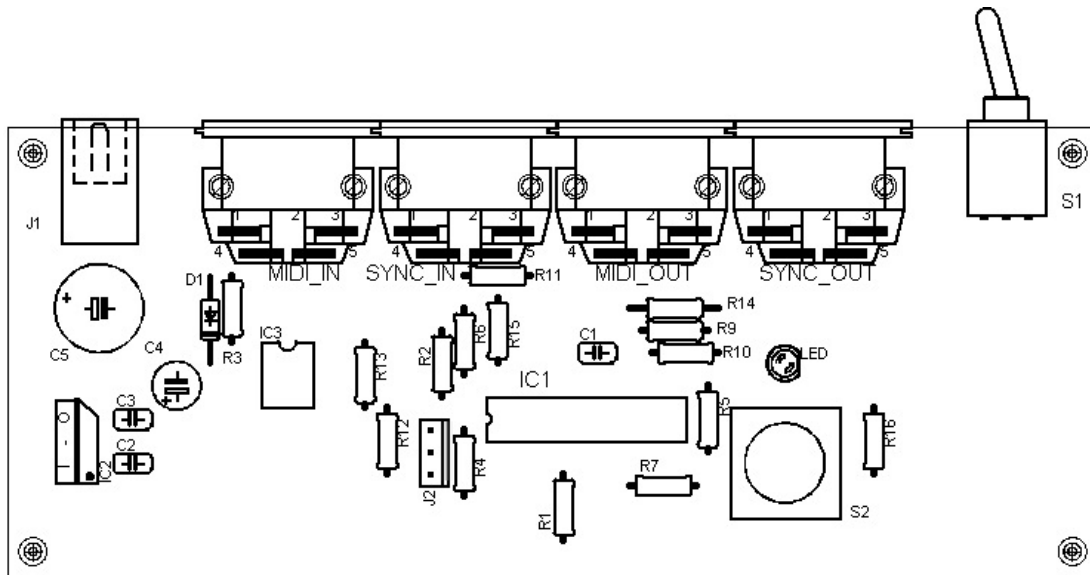


Figure 2: PCB layout

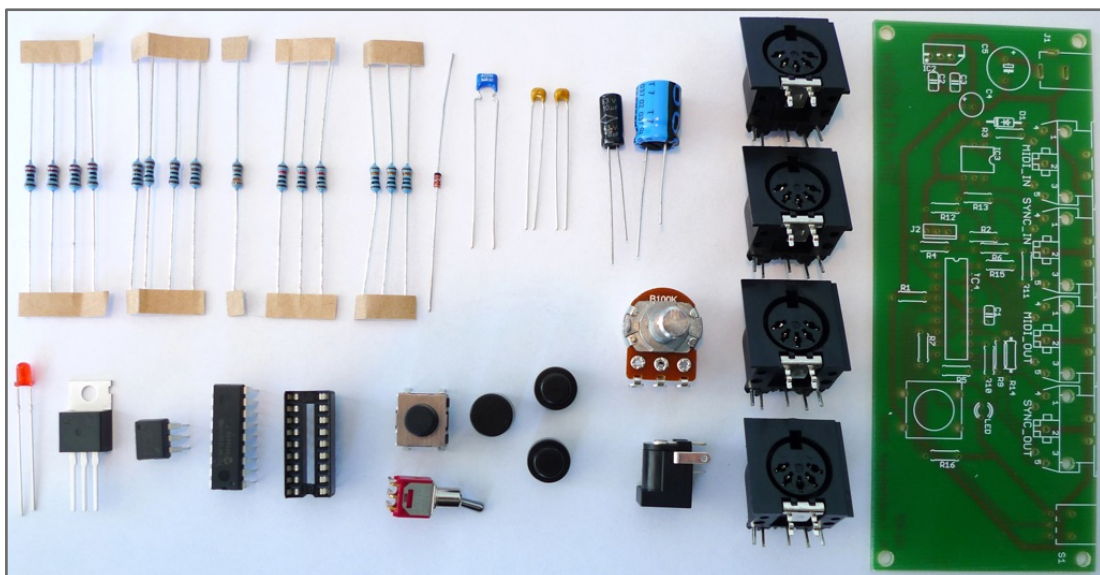


Figure 3: Entire kit for the ShuffleBox

Recommended order for soldering

- 1) Mount the diode D1 (direction: the black ring is next to C4).
- 2) Mount the resistors R1-R16 (R8 does not exist).
- 3) Mount the capacitors C1, C2, C3
- 4) Mount the socket for IC1 (proper direction!)
- 5) Mount IC3 (direction!)
- 6) Mount S1 and S2.
- 7) Mount the DC connector J1.
- 8) Mount C4 & C5 (direction: the longer pin goes in the hole marked with a „+“).
- 9) Mount IC2 (direction!).
- 10) Mount the 4 DIN connectors.

- 11) Mount the LED: bend the pins as shown in the picture so you can easily adapt the height to match your housing. (Direction: the longer pin of the LED points to R10)

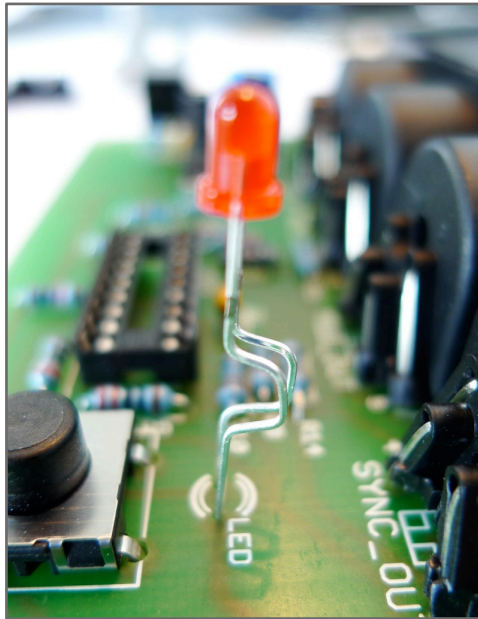


Figure 4: Bent pins of the LED. One can easily adapt the height without de-soldering.

- 12) Connect the potentiometer with J2 using three short wires (about 10cm each).

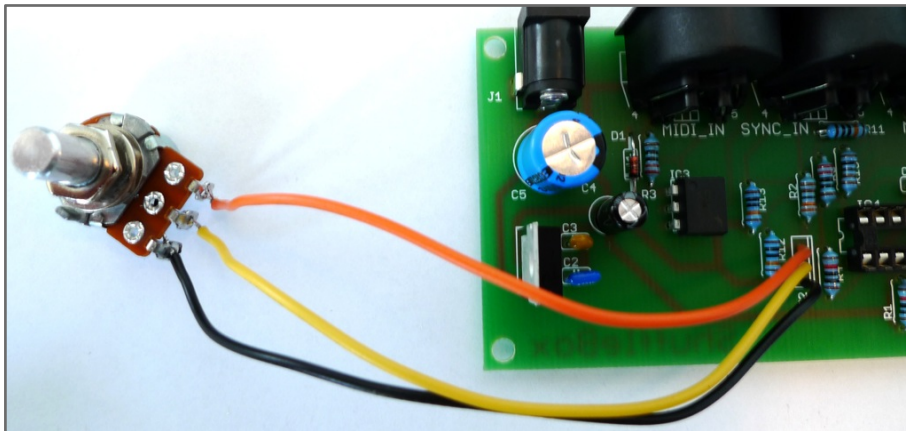


Figure 5: connecting the potentiometer.

- 13) Place the Microprocessor (PIC18F1220) in the socket IC1 (direction!).