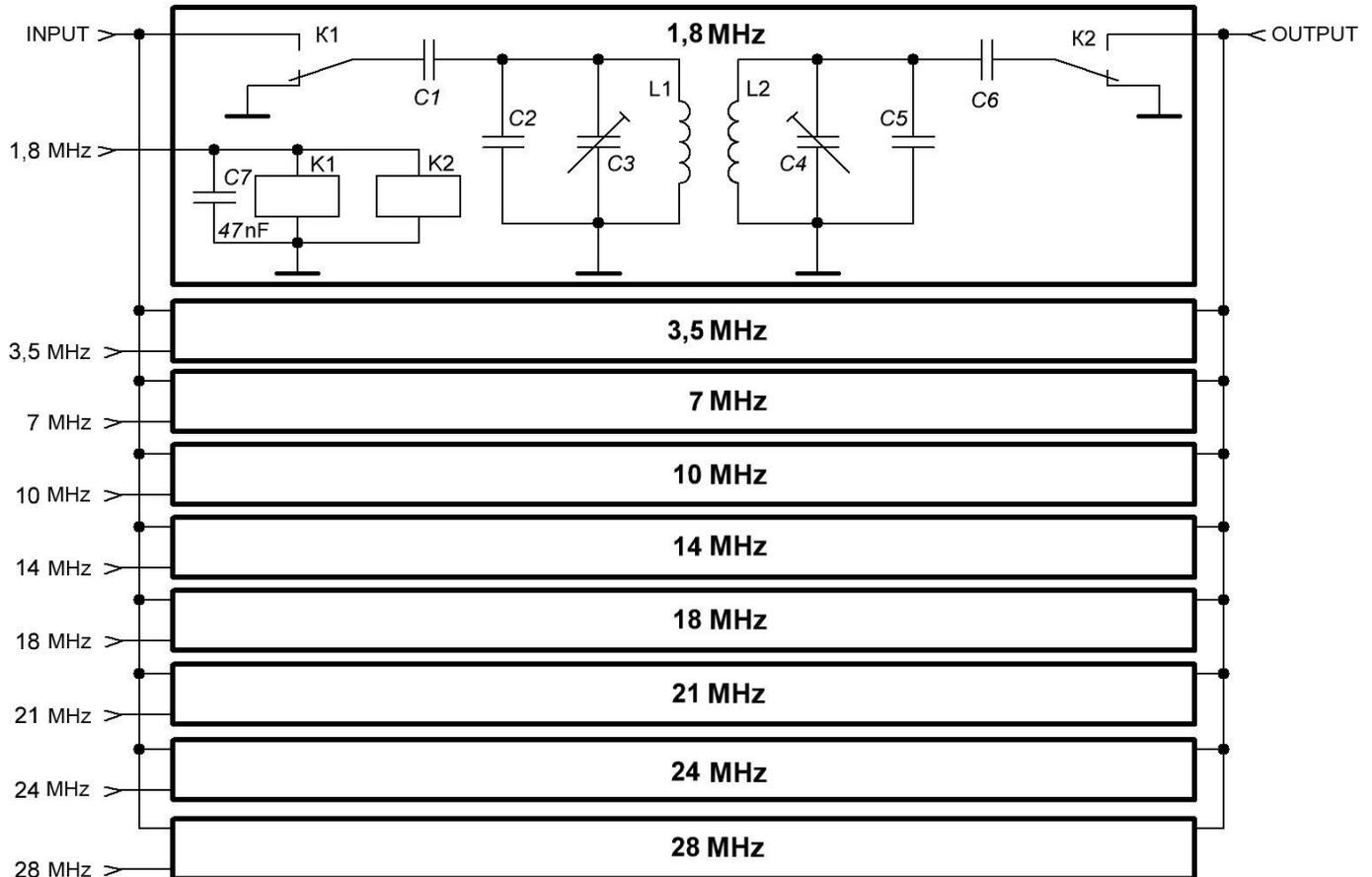


# Bandpass filters of transceiver “KLOPIK”

The bandpass filters of “Klopik” are without the secondary coil, i.e. dual. It is easy to assembly and adjust them. That is quite enough in our simple device.

*Diagram*

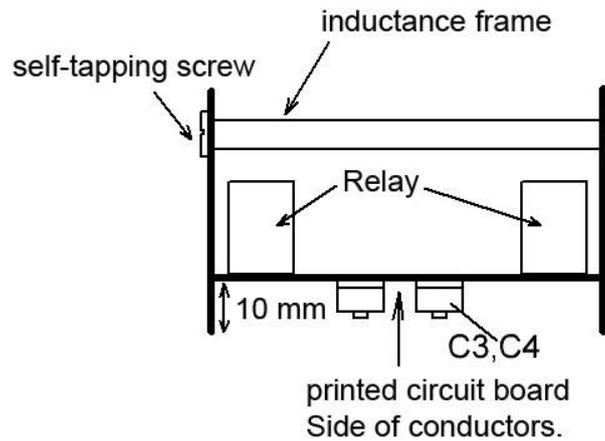


## Data of inductance and capacitors:

Range	Turns of L1,L2	Wire, mm	Inductivity of L1,L2	C1, C6 Capacity	C2, C5 Capacity	C3, C4 Capacity
1,9 MHz	3x27	0,16	35 $\mu$ H	150 pF	100 pF	8/30 pF
3,5 MHz	3x20	0,16	12 $\mu$ H	100 pF	47 pF	8/30 pF
7 MHz	30	0,28	3,5 $\mu$ H	51 pF	75 pF	8/30 pF
10 MHz	25	0,28	2,5 $\mu$ H	36 pF	51 pF	8/30 pF
14 MHz	25	0,35	2,2 $\mu$ H	20 pF	33 pF	8/30 pF
18 MHz	20	0,35	1,5 $\mu$ H	15 pF	33 pF	8/30 pF
21 MHz	20	0,45	1,35 $\mu$ H	15 pF	20 pF	8/30 pF
24 MHz	15	0,55	1 $\mu$ H	15 pF	20 pF	8/30 pF
28 MHz	15	0,6	0,8 $\mu$ H	15 pF	15 pF	8/30 pF

The PCB should be cracked by scribing lines into three parts – printed circuit Board and two side walls (left and right). The side walls soldered to the PCB at a height of 10 mm, maintaining the 90 degree angle (pic.2) The bands (1.9 – 28 Mhz) specified on the walls and on the PCB must match.

**Picture 2**



Coils for bands 1,8 MHz & 3,5 MHz are wound on three-section tube. To make a coil just split the  $\frac{1}{2}$  of current tube (diameter 6mm, long 50mm) to three same sizes and isolate them by sheet of paper or carton (see the photo below). The remaining coils are wound on the same tubes, but not necessarily in paper liners for easy setup – it will allow to easy move over the tube. Coils fasten short screws through holes of sidewalls.

The most important during the assembly of coils - to make correct inductivity of coils! The quantity of turns and diameter of a wire can vary in any direction (reasonably), but most importantly - inductance. If inductivity of L1, L2 coils are correct, then adjustment would be very easy; just tuning the capacitors and change the distance between coils.

Pins P1, 9 – P28 goes to band control Relays via wires (MGTF 0.07mm) in a bundle in the center of PCB. There are two holes for fixing of a bundle. There are holes on sidewalls for mounting of the Input and output cable, and power cable of relays. The diagram is symmetric and where there will be an Input and output, depends on layout of the unit in the casing of the transceiver.