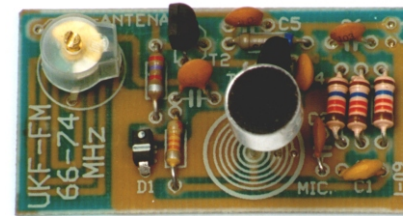


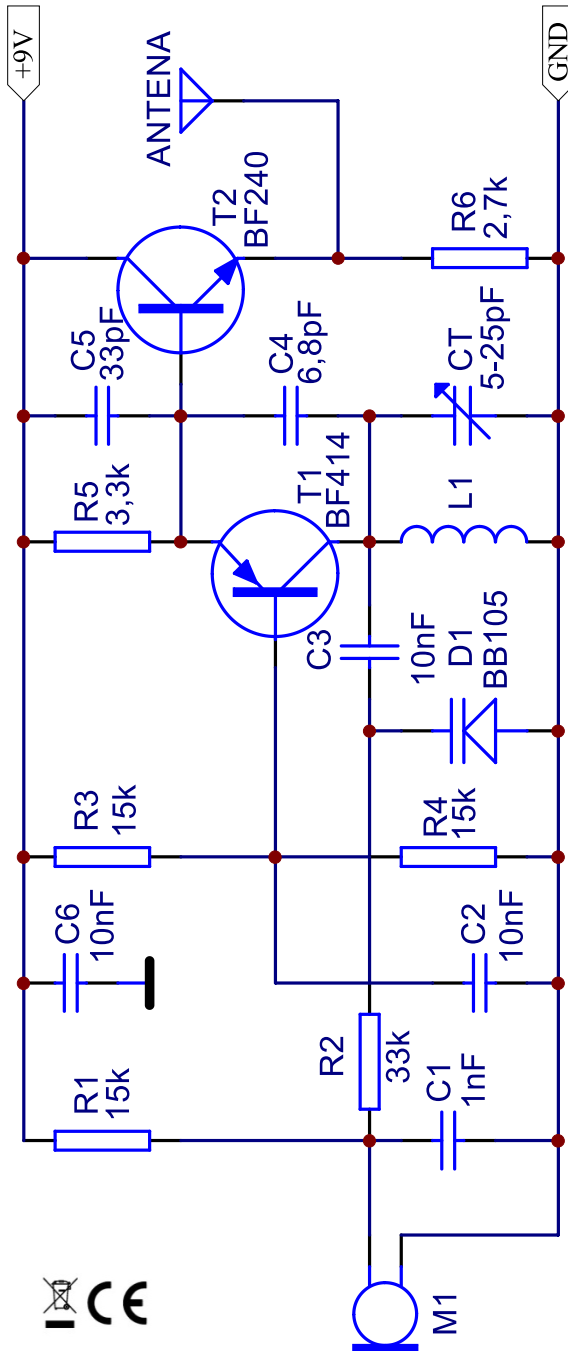


J-009 Wireless microphone UKF (micro-spy)

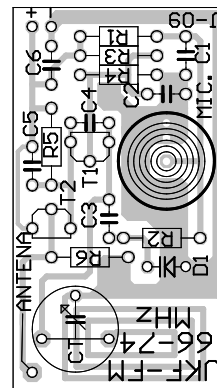


The components of this set make possible the building of a miniature frequency modulation (FM) UHF transmitter that may be used for various purposes ranging from play to providing facility security. In spite of its simplicity, the circuit has good parameters, especially high sensitivity. Reception of transmitted signals is possible by using any UHF 6773 MHz band receiver. The transmitter range is from 10 to 100 m, depending on supply voltage and terrain.

Power supply from the mains is troublesome due to difficulties connected with complete interference elimination and the filtering of supply voltage. The "heart" of this device is the high frequency generator with capacity coupling (Colpitts circuit) with a T1 transistor and the L1, CT, and D1 LC circuit. The D1 capacitor diode is controlled by a signal from the M1 electret microphone, which guarantees a large range of frequency variation with low sound intensity. The transmitter's primary frequency (carrier wave) is set by the CT trimmer during microphone activation and tuning. The CT trimmer is the only adjustable component, where the L1 inductor has no core and is in the form of a printed circuit. The role of an antenna is played by an approximately 30 cm insulated wire. Thanks to the use of the T2 transistor, antenna capacitance has only minimal effect on transmitter operation. Circuit activation is conducted with the help of a powered on radio receiver tuned to the required frequency. CT trimmer settings should be adjusted slowly (using a plastic screwdriver), tuning the transmitter to the receiver, which will generate strong acoustic feedback. Distancing the transmitter from the receiver will allow sounds caught by the microphone to be heard on the latter. Minor adjustment in the tuning may prove necessary as the battery is depleted, which may be carried out on the receiver this time. **Important! The use of the microphone for illegal eavesdropping is prohibited and subject to legal action. In line with elementary etiquette, care should be taken not to interfere with radio and television reception.**



Schematic diagram



Assembly diagram

LIST OF COMPONENTS IN THE SET:

T1.....	BF414,440,441	C2,C3,C6.....	10nF
T2.....	BF199,240,241	C4.....	6,8-8,2pF
R1,R3,R4.....	10-15kΩ	C5.....	22-33pF
R2.....	22-47kΩ	CT.....	Trymer 5-25pF
R5.....	3,3-4,7kΩ	ELECTRET MICROPHONE	
R6.....	1,5-3,3kΩ	D1.....	BB105
C1.....	1nF	PCB	
102.....	1nF	103.....	10nF
		6p8.....	6,8pF