# The circuit description for the model 3809

RX Unit

1. RF match & RF-amp. Are achieved by using the matching capacitor of C18 and C24, which are used to match the front end to antenna for better reception .Q12 and Q1 perform the RF-AMP for amplifying the weak signal.
2. OSC ,Phase lock loop & local oscillator circuit are provide by the parts of X1 ,U3 and Q8 to generate the local oscillator frequency for mixing purpose. The output of the oscillator signal is used and injected into the mixer circuit for creating IF signal .The phase lock loop is controlled by CPU (U7) control signal.
3. IF circuit is constructed by a combination of parts, like Q5,U6,FL1 and VC1 in order to provide the IF demodulated signal , audio amplifier (u4),mute control (Q18,Q11)and LED indication control circuit (U2 and LED 1-5).
4. Low batt detector uses CPU (U7) and Q7,Q9 to detect the VCC voltage for low battery indication.
5. CPU (U7) provides a system control on several parts, like detecting the RSSI signal, low batt voltage, sensing the channel A & B selector setting, providing the PLL (phase lock loop ) control, out of range sound and low batt indication etc.
6. Regulator (U5) and Batteries are used provide constant voltage for the circuit.
7. Power supply ON/OFF is controlled by switch SW2.