

The circuit description for the model 3809

TX Unit and charge base

1. Tx match filter is a filtering and matching circuit, which includes the capacitors C1, C4, C5 and filter of FL1.
2. RF Amp is achieved by using a transistor Q1 for amplification only. The signal will be sent to the antenna via TX match filter.
3. The local oscillator and modulator is a combination of circuit components of Q2, VD1 and L1 which are constructed to form a modulator circuit.
4. OSC. & phase lock loop are formed by U1 & X1.
5. Audio Amp is achieved by U2 to provide amplified audio signal to the modulator circuit. The AGC is controlled by Q3, Q4 for automatic level control.
6. CPU (U4) provides a system control on several parts, like providing the channel A & B selector setting, providing the PLL (phase lock loop) control.
7. Low battery detection are formed by U6-A, Q7, Q8, Q15, Q16 and LED1.
8. Regulator circuit includes the U3 and C48, C50.
9. Charge circuit is controlled by CPU, when CPU is detected the batteries voltage rise $0 \Delta v$, $-0.25\% \Delta v$ or safety time, fast charge finished and trickle charge starts. Charging: red led on; Full charge: green led on and red led off.