

## Circuit Description.

The 5800RL-2 is constructed on a single PCB, which contains the RF transmitter and receiver circuitry as well as control circuits. The transmitter is a SAW resonator Colpitts oscillator, Q18, YL5 etc. The transmitter is on-off keyed (AM) modulated by a control signal from the microcontroller U6 which turns PA Q19 on or off via Q20/Q21, thus modulating the output signal. The RF output signal is connected to a PCB mounted antenna via L1,C38,R47,C82,C87. The receiver is a superhet with a single intermediate frequency at 10.7MHz. Q4 etc. is the low noise amplifier which is connected to the PCB mounted antenna. The IC U1 includes a balanced mixer which converts the incoming signal down from 345MHz to 10.7MHz. This IC also includes the required IF gain and detected output. YL1 and YL2 are IF filters. IC U2 and U3 perform video filtering and processing to provide a data signal to the microcontroller U6. The local oscillator is part of the receiver IC U1 SAW device YL3 is the frequency-determining component. 343.3 MHz is fed into the mixer.