

## Circuit Description.

The LYNXREN-4 is the latest version of the LYNXREN. Like the CFS8DLLYNXREN-1, 2, and 3 it is constructed on a pair of PCBs interconnected via a ribbon cable. The main difference is a change to the battery charger and a interfacing circuit the RF copper and RF circuit are identical, but the PC Board went through a re-layout. The main PCB contains the RF transmitter and receiver circuitry as well as all control, display, keypad and annunciation circuitry. The transmitter is a SAW resonator Colpitts oscillator, Q26, YL5, etc. The transmitter is on-off keyed (AM) modulated by a control signal from the micro controller U18 which turns PA Q30 on or off via Q28/Q29, thus modulating the output signal. The RF output signal is connected to two PCB mounted antennas via FL1 & diodes CR32/CR33. The receiver is a 'superhet' with a single intermediate frequency at 10.7MHz. Q31 etc. is the low noise amplifier which is connected to the PCB mounted antennas. Diodes CR32/CR33 under the control of a micro controller are periodically switched to provide system antenna diversity. The IC U22 includes a balanced mixer, & phase locked L.O. (YL1 @ 10.446875 Mhz X 34 = 355.7 Mhz) which converts the incoming signal down from 345MHz to 10.7MHz. This IC also includes the required IF gain and detected output. FL3 is a ceramic IF filter. IC U19 performs baseband filtering and processing and provides a data signal.