Transmitter

1.1 The transmitter is a narrow band Fm transmitter for 900Mhz ISM band. A crystal oscillator is modulated with a varactor diode to generate a 14 MHz reference signal.
There is divider for phase locked loop. That is not used in this circuit.
Fo= output Frequency = crystal frequency X 64 .

Fc= Crystal frequency: Channel 1, 14.156203Mhz.
Channel 2, 14.166667Mhz.

1.2 FM modulation
TA-7137 is Amp with ALC (automatic level control). Circuit and it is control modulation Vco and varactor diode.

1.3 Antenna
Antenna is on PC board.

Receiver
2.1Local oscillation.
Receiving signal 14Mhz as reference phase locked loop .
2.2 Local frequency
divider X 64
Channel 1 : (14.323390Mhz X 64) 916.69696Mhz.
Channel 2 : (14.333781Mhz X 64) 917.36198Mhz.

RF= Local Frequency (F1, 2) – Intermediate Frequency (IF).

Channel 1 916.69696 MHz – 10.7Mhz = 905.997Mhz

Channel 2 917.36198Mhz - 10.7Mhz= 906.662Mhz.

2.3 receiving type

Superheterodyne receiver with Intermediate frequency control harmonic

2.4 RF amp.

Amp is 2 phases and filter is 3 phases

Antenna receiving signals (PC board antenna) and go through Band Pass filter. Between phase 1 and phase 2 there is Dielectric band pass filter.

2.5 Antenna

Antenna is fixed on PC board..