UHF-16 Circuit Description

A. TX Part

1. low freq   Amplify Part:

   MIC change tone signal through U9A amplify enter U9B lowpass amplify to 'VD2 be FM modulate.   U2, R39, C5 combine to be an automatic level control (ALC).

2. Select guide freq Part:

   From CPU transmit signal through U10B, U10C, U6A, U6B network change to U6D, then enter FM modulate.

3. VCO Part:

   'Q4, 'VD1, "VD2 become VCO, frequency change through PLL control transfiguration diode

   'VD2, VD1 change, Q5 represent MIC signal change,VCO signal transmit signal TX amplify, another signal through back U1 inspection from U1 10 PIN transmit tolerant voltage to give VD2, VD1 control VCO voltage to have a result of control the voltage.

4. Efficiency Amplify Part:

   'Q3 is amortize Amp, 'Q2 is drive Amp   'Q1 is power Amp, the signal through 'Q1 amplify through antenna transmit.

B. RX Part

1. RF Part:

   Antenna receive signal through 'C83, ';C84, D1, R33, L1, C39 combine to LPF network, 'Q3 amplify, enter BPF, after choose-frequency enter frequency conversion 'Q4.

2. VCO and frequency conversion Part:

   'Q4 is frequency conversion   VCO made by monofier of the machine , and frequency control by PLL, after   'CF2,   transmit   45.36 MHZ,

3. IF Part:

   'CF3 is 10.7 MHZ BPF'Q9 is the first intermediare freq Amplify, the second intermediare freq is 10.7 MHZ, U5 respond freq conversion, monfier of the machine, intetmediare freq Amp,denodulation,   MUTE control   etc.

4. MUTE Part:

   Through DU5 7 PIN transmit, RC LPF, U10 (LM339) U10A 4pin and U10B7 transmit compare, 14pin   transmit and Q11 C   transmit.

5. Lowfreq Amplify Part:

   U11 make HPF (don'tguide inter) circuit,   .

6. Tone Partl

Signal through U11A, Front b amplify enter U8 33179 power Amp, Q14, Q15 become MC33179 signal control trode

7. Guide Part:

   X6, X5 combine to be LPF (Don't tone inter) circuit, after transfer to U9B send to CPU decode

C. Other Part

   1. PLL Part:

      PLL from 'U1 (LMX1601) respond, 'X4 is timer crystal, 'Vc1 is adjust capacitor, make the monofier frequency stay on 12.8MHZ, 'U1 10pin transmit steady current control VCO monofier frequency; make decision from the internal procedure of CPU.

   2. LCD Part:

      LCD display is responded from HT-4631, the work under the adjust format, frequency is 32.768KHZ and 4 MHZ, the display content is make decision from the internal procedure of CPU.

   3. CPU Part:

      RX W742E81A is 4-bit and TX PIC16C6C621A   PC is the core part of the full circuit, the function would operate from each function key.