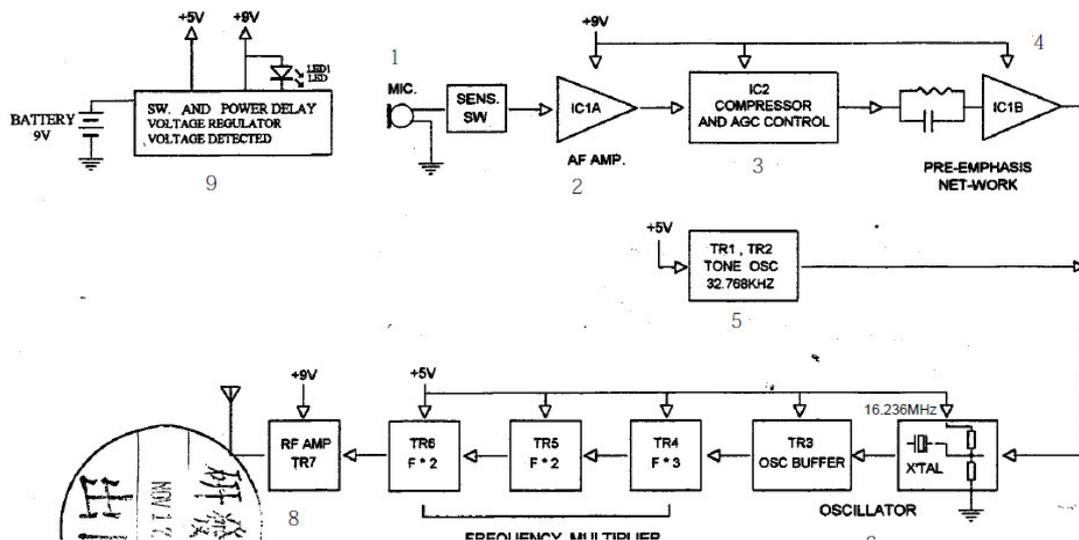


## Circuit Description:

How each operations of each section based on the block diagram.



1. MICROPHONE (Block diagram No.1)
 

An external microphone is of unidirectional, electret condenser type.  
 Impedance:680 ohm  
 Sensitivity:-45dB(1kHz, 0dB=1V/1pa)
2. MICROPHONE AMPLIFIER(2)
 

The microphone amplifier uses an OP amp (IC1A) and amplifies the signal from the microphone capsule to the level necessary for the compressor circuit.
3. COMPRESSOR (3)
 

The compander IC is (IC2A) and has a compressor circuitry and a OP amp. The compression ratio is 1/2 (logarithmic compression)
4. PRE-EMPHASSIS(4)
 

Pre-emphasis is carried out to improve the system's S/N ratio. Amplifier (IC1B) is used as an OP amp. A time constant is 50 usec.
5. TONE OSC (5)
 

Consists of a quartz oscillator XT1 and an inverter (TR1) and oscillates a signal is for tone squelch (tone signal). The oscillation frequency is 32.768KHz, and the output signal is taken out through a buffer (TR2)

6. OSCILLATOR (6)

Starting oscillate frequency is made up of XT2, TR3, C29, C28 and C30.

Transmitter frequency is depended on the frequency of XT2

Frequency deviation selection:

Frequency deviation is achieved by adjusting inductor T1.

7. FREQUENCY MULTIPLIER (7)

TR4, TR5 and TR6 make up the frequency multiplication and select circuit .The last level outputs the frequency assigned by the microphone

RF output frequency is changed by adjusting T2, T3 and VC1.

8. RF AMP (8)

RF signal together with TR7 and resistors and capacitors around make up to RF AMP.

The RF pass-band is consist of VC1, VC2 and VC3, the output RF power can changed via adjusting VC1, VC2 and VC3.

9. SW CONT (9)

Setting up the power switch to ON or OFF.