demodulate in the 9th pin of the IC1. For this purpose, the noise filter is using the OP. Amplifier inside the IC1.

De-Emphasis

The audio signal which has been FM demodulate in the IC1 supplies to R18, C53 which function as the De-emphasis.

Audio Power Amplifier (IC6)

The received audio signal which has been adjusted to RV100,101, 102, 103 is supplied to the IC6 and amplified approximately by 20dB. Then, it turns up the speaker with the maximum output of 0.5Watts.
The 2th pin of the IC6 is the VDD.

FRS Transmitter

The transmission part of the FR558WB is designed to amplify the RF signal oscillated and modulated by the synthesizer to approximated below 500mW(ERP) by the power transistor of Q3,4, 6, 11.

Pre-emphasis (IC5)

The voice signal input from the microphone is pre-emphasized at the IC5. The signal which comes out of the IC5 is limited to a certain amplitude for the voice signal not to exceed the allowable band width assigned for transmission.

TX Power(Q3,4,6,11)

The transmitted signal amplified to 0.5Watts here passes the TX LPF of the 2nd characteristic of the L41,12 and the L13, and RX / TX switching takes place by the D2.

Frequency Synthesizer

FRS Voltage Control Oscillator(VCO)

The VCO of oscillates 462.5625MHz/2 under the transmission condition and 473.2625MHz/2 under the reception condition. The VCO consists of the colpit oscillator of the Q2, and contains the oscillator frequency of approximately 10.7MHz during the transmission / reception conversion. That is since the VCO should oscillate relatively high frequency during reception compared to transmission.
Therefore as a result, the C58 is added in parallel to the resonance circuit of the VCO to oscillate a low frequency. During transmission, a relatively low frequency should be oscillated compared to reception.
The VCO is controlled by the IC3 PLL IC in order to oscillate the accurate frequency. The output frequency of the VCO is supplied to the IC3 PLL IC immediately. At the IC3, 10.250MHz by the X2 is compared to the output frequency of the VCO. The VCO is controlled through the loop filter consisted of he R24, R12 and the C15 in order to oscillate the stable frequency wanted for the radio.
The VCO controlled voltage which has passed the loop filter supplies to the D4 variator diode, and the VCO and oscillate the PLL programmed frequency by the capacity variation in the D4.