BOXER TOYS COMPANY LIMITED

Operation Description of 9140B (Subunit)

Condition of receiving: the contact of functional switch Sw_1 is located at "R".

The high-frequency signal in the space is received by the antenna, and then added, through L_0, SW_1A and L_1, to the superregenerative detecting circuit consisting of L_2 and Q_1 for the purpose of frequency selection and detection to detect the audio-frequency signal. The audio-frequency signal is added to the volume potentiometer VR_1A through C_{13} and R_7 to realize the control over volume, then sent, through R_8 and C_{14}, to audio-frequency amplification circuit consisting of Q_3, Q_4, Q_5 and T_1 for amplification, and finally they will be sent to the speaker (SP) through SW_1D for restoration of sound.

Condition of transmitting: the contact of functional switch Sw_1 is located at "T".

Now the sound is converted to audio-frequency electrical signal by the speaker which acts as the adapter, then sent, through C_8, to audio-frequency amplification circuit consisting of Q_2, Q_3, Q_4, and T_1 for amplification, and finally sent to the high-frequency oscillating circuit consisting of L_6, Q_2 and XTA_2 to modulate the high-frequency constant-amplitude signal generated by the circuit. The modulated high-frequency signal, after filtering by the high-frequency filter circuit consisting of L_5, C_7, L_4, C_6, L3, C_1 and L_0, transmitted into the space by the antenna.