

# VRFM9 Circuit Description

The circuit of VRFM9 FM Modulator is made up of three parts: Power parts, Control parts and Transmission parts.

Circuit is made up of 78 series power supply module (U10, C2, C3), can supply stable DC 5V Voltage, then transformed into IC's working voltage of 3V, 1.8V through two voltage transforming module (U402, U403, BC404, BC402).

Control parts is make up of Control IC (U1), SD audio source input, 2.5" audio plug input and output, track adjustment, playing button circuit (S401, S402, S403, R36, R404, R39). The stable frequency 12MHz (Y101, C109, C108) that supplied by crystal oscillator circuit, can help Control IC work normally. And memory chips (U001) realize FM frequency memory function.

Transmission part is made up of transmission control chips HY1417 and circuit. It can supply 13 FM channels (Lower FM channels: 88.1~89.1, higher FM channels: 106.7~107.9), which is realized by channel adjustment circuit (S1, S2, R20, R19). The main function of Transmission part is transmit the audio signal that control part supplied to Car Stereo Audio receiving equipments, and realize high quality stereo sound.