

Model : JVC HA-W1000F

Operation circuit description

Transmitter

Audio signal input from JK201 and JK204 or JK202, then input to IC200, IC200 is a preamplifier with automatic sound level control, L200 and L201 are low pass filter make audio frequency under 19Khz, then audio signal input to IC204, IC204 is a sound signal processor, SW202 is to control the sound quality –“trubass” or” wow” enable or not, then audio signal input to IC1, IC1 is a MPX encoder make left and right audio signal mix together and modulate, then input to Q2, Q2 is a VCO which generate 900Mhz RF signal, Q1 is a buffer make RF signal more strong, Q3 is a power amplifier which increase the RF power then pass a low pass filter transmit the RF signal through antenna.

VR1 and VR3 are for RF frequency range setting and select by S200, S200 is a channel switch select CH1 or CH2.

Q206 is preamplifier for MK200, MK200 is a condenser microphone, S201 is a press switch to select the transmit signal is voice or music.

Q203, Q208 and IC203 is an automatic power on off circuit, when no audio signal input over 90 seconds, the unit will auto off, when audio signal comes again, the unit will auto switch on, green led D202A will light on again, which is an operating index.

IC202, Q204 and Q207 are a battery charger circuit, which will automatic charge the battery when put the receiver on the unit and red led D202B blinking means the battery is fully charged.

Receiver

RF signal receive from antenna, X4 is a filter which reject most of un-want frequency, Q9 is a RF amplifier which increase RF signal go to the mixer – Q11 also Q1 and X1 is an oscillator which generate the fixed LO frequency to Q11 and mix with RF signal then go to IC2, IC2 is an inter – frequency stage include stereo MPX decoder, it demodulate the MPX signal return to original left and right audio signal, IC6 is a auto scan frequency circuit, it make IC2 at correct frequency to receive RF signal, the left and right audio signal go to IC3, which is a power amplifier, it makes enough power to drive the speaker LS1 and LS2, 2VR1 is a sound volume control.

Q10 and Q14 is a lock circuit to lock the correct channel.

Q201 is a mute circuit, when receiver does not in correct channel, the speaker will not come out any noise or sound.

Power supply and ground

Transmitter power is supplied by an external 7.5V 500mA AC/DC adaptor, no external connect is available for grounding, the printed circuit board traces are the only ground.

Receiver power is supplied by a built in NiMH 2.4V battery pack.