

Operational description of 9631-NANO TRIP

This Unit is a Wide-Band-FM modulator, with four selectable output frequencies (88.1MHz and 107.9MHz) which is selected by four-position dip switch and install in car for listening the music (such as iPod) or others via car's radio.

Operating process:

1. Connect audio signal (may be com from iPod) to the audio input port of 9631-NANO TRIP.
2. Select the desired frequency channel via dip switch. Power on the 9631-NANO TRIP.
3. 9631-NANO TRIP will radiate the RF signal (WFM modulated signal) to the air in selected frequency channel.
4. Tune the frequency of the car radio to the desired frequency. Car radio will receive the audio signal as the signal send to 9631-NANO TRIP if car's radio select the same frequency channel.

Power Requirement:

This unit is operated with DC 3V (2AAA UM-4 size battery). This 3V voltage is step up to 5V DC for the operation of main IC chip (ROHM BH1418FV).

Main Chip

1. This unit uses a ROHM BH1418FV (U6) with 7.6MHz crystal frequency simple configuration. The BH1418FV is a FM stereo transmitter IC that transmits stereo composite signals and a FM transmitter for broadcasting a FM signal on the air. The FM output frequency is controlled by 2 wire (pin 19 data and pin 18 clock) control by micro controller (P89LPC915FDH).

The FM output pin is pin 12. FM signal pass through a Filter to reduce the harmonic noise, then a class A amplifier to drive a internal antenna which is printed on P.C.B.

The stereo modulator generates a composite signal which consists of the MAIN, SUB, and pilot signal from a internal 38KHz oscillator.

The FM transmitter radiates FM wave on the air by modulating the carrier signal with a composite signal. The transmission frequency is stable because it has a PLL system FM transmitter circuit.

Frequency is set for North America.