

# **ATTACHMENT H.**

## **- Operational Description**

## DESCRIPTION

The equipment is called NSB-101 , which is the FM transmitter of VHF at the frequency of 88.32MHz. It is used as follows.

It enables listening to the music from your audio system by connecting the terminal of MP3 player or cassette player to AUDIO IN terminal of NSB-101, and transmitting to NSB-002.

It also enables listening from audio system or car audio without using additional receiver by connecting the terminal of MP3 player or cassette player to AUDIO IN terminal of NSB-101.

It adopts 3.6VDC rechargeable batteries for power supply.

## CIRCUIT DESCRIPTION

In the circuit map, the sound signal is input through AUDIO IN JACK after inserting POWER SWITCH (J1), passed to L1, C1 and input into VC1 frequency modulator through R1, R2, R3 and R4.

Crystal X1 oscillated by Q1 and mixed with the sound signal.

It is amplified in 4 times through C3 by Q2, IFT2, C5 and C6 and gained the required transmitting frequency.

This signal is input into the Q3 terminal amplifier and amplified. It is output finally through C8 and RF signal is transmitted through antenna.

For the charging circuit, the DC voltage from DC adaptor (DC 6V 300mA) passes R9 and C12, and flows to U1 (5V REGULATOR). The rated voltage of 5V is output and passes D2, R6 and R7, and accepted at BATT1 (3.6V RECHARGEABLE BATTERY), which enables the charging.

Also, once the jack is inserted at J1, the battery voltage is accepted. The rated voltage of 3V is output at U2 (3V REGULATOR) and supplies the power to the transmitting circuit.