

HALLOA ENTERPRISE CO., LTD.

Fl. 9, No. 111-33, Sec. 4, San Ho Road, San Chung City, Taipei Hsien 241, Taiwan, R. O. C

HN-1304 Specific for FM transmitter

1. How is the device installed and operated?

ANS:

1. Insert the Transmitter into the Cigar Lighter of the motor vehicle and then the LED will be lighted up.
2. Pull out the adjustable plug to fit into the voice output of MP3 (CD, MD and IPOD).
3. Choose one of the frequency from channel 88.1, 88.5, 88.9 of the transmitter, and tune the FM receiver to the same frequency, then you'll enjoy the music from the MP3 (CD, MD, and IPOD).

2. Information on the device and its antenna

ANS:

It is read MP3 file of USB storage device to play music. And the music conversion to FM signals. Control the transmitter frequency to the radio receives and broadcast.

(1) POWER SUPPORT

The transmitter is fed by 12v car power supply. Use SE5819&78D05&Steady voltage circuit to supply MP3 、FM TRANSMITTER 、MCU

(2) MP3 PLAYER

Use ET5104 (USB HOST IC) read mp3 data of USB storage device than pass to VS-1003(Mp3 decode IC) decode. Finally the data become analog signals

(3) MCU

Use Bjp508 to detect input signal that analog signal of VS-1003.If continue 55s is no signals than Bjp508 will stop support voltage to FM TRANSMITTER.

(4) FM TRANSMITTER

Use F80110ne encode analog signal of VS-1003 become FM code. And use 7.6M crystal oscillator 、inductance device generate transmitter frequency . Use 9018 to amplify the FM signals to antenna.

(5) Antenna

Use the 75Ω whip antenna.

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3. Describe the test procedure used:

ANS:

1. System Test Configuration

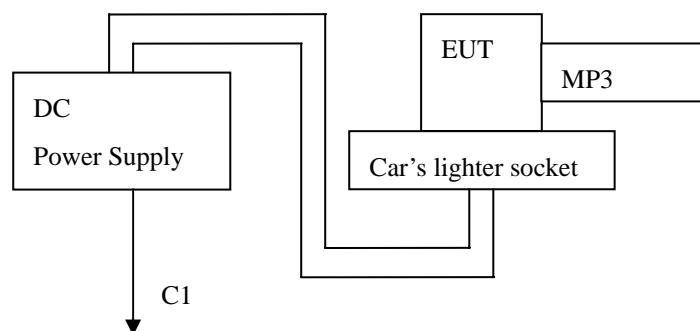
1.1 Supported Ancillary Equipment

Item	Name of Equipment	Manufacturer	Model Number	FCC ID	Note
1	MP3 Player	A-DATA	My-Flash	N/A	N/A
2	DC Power Supply	ABM	9306D	N/A	N/A
3	Car's light socket	N/A	N/A	N/A	N/A

1.2 The relevant cables of Supported Ancillary Equipment

Item	Name of Cables	Shielded Used	Ferrite Used	Length	Note
C1	Power Cord	Non-Shielded	Non-Ferrite	1.0m	Detachable

1.3 Setup Configuration



1.4 Description of Test Mode

The system was configured for testing in a typical arrangement as the manufacturer's declaration. There was no special software to be exercised during the test.

There are three channels on EUT, and the operating frequency range of EUT is from 88.1 MHz to 88.9 MHz. We choose the middle channel (88.5 MHz) for main final test, except choosing the lowest channel (88.1 MHz) for Band Edge testing.

4. Was the tuning range properly verified ?

ANS:

The lowest channel is 88.1 MHz and the highest channel is 88.9 MHz. The tuning control was manually adjusted to verify maximum tuning range.

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5. Was the bandwidth properly tested with maximum audio input?

ANS:

The system was configured for testing in a typical arrangement as the manufacturer's declaration. During the test, the MP3 player played music and set the volume to the maximum level.