Operational Description

The product, model N-S106, is capable of transmitting audio signals from the earphone jack on it to FM receiver. The transmitting frequency can be tuned at one of three channels of 88.3 MHz, 88.7, and 88.9 MHz by selecting the slide switch.

The DC voltage of 12V or 24V battery on a vehicle is supplied to the product. The output of the regulator of the product is supplied to the FM transmitter module, decreasing DC voltage into 3.3V.

All tuning and verification are performed by the manufacture and there are no adjustments required by the user. No external ground is required or used with this transmitter.

How does the device operate?

- Connect the device to the earphone jack of a portable audio device.
- Turn the switch ON position.
- Tune the FM transmitting frequency by switching the channel selection.
- The audio signals from a typical audio player will be transmitted at the tuned FM frequency.

Provide information on the device and its antenna.

Product	FM transmitter (mobile station)
Transmitting frequency	88.9 / 88.7 / 88.3 MHz (3 channels)
Power Source	12 V / 24 V battery on a vehicle
Audio input rating	1.0 Vpp
Antenna	Integral (permanently fixed cable, 0.7 meters fully stretched out)

The product uses the antenna as a stereo audio cable and the length of the antenna is extensible from about 0.2 m up to maximum 0.6 m.

How is it installed?

Connecting the device to the earphone jack of a portable audio device.
Power source is either DC 12 V or DC 24 V via cigarette adaptor.

What test procedure was used?

ANSI C63.4:2003 was used as the test procedure.
To find the worst radiated emissions, for the three operating frequencies, the length of the EUT antenna was varied from 0.2 m to maximum 0.6 m with the vertical/horizontal polarization.

If tested in a car, how was it configured?

N/A

Was the tuning range properly verified?

YES. To verify the maximum tuning range, the tuning controls were manually adjusted.

Was the bandwidth properly tested with the maximum audio input?

YES. The occupied bandwidth measurements were made using a typical audio file from a typical MP3 player with maximum volume setting.

Does the device operate in a vehicle?

The product is usually operated in a vehicle, however it does not be tested in a car because the device is designed to use an integral antenna (stereo cable) that does not affect open-field radiated emission such as a vehicle's wiring.