TIMCO ENGINEERING INC[From: Bruno Clavier [bruno@timcoengr.com]
Sent: Tuesday, October 17, 2006 12:03 PM
To: EASTECH@fcc.gov
Cc: Joe Tegerdine; Rashmi. Doshi
Subject: TIMCO-TCB/ FCC Part 15.239 Application for Review - SIRIUS in vehicle testing data FCCIDs: NKRUPAST405, NKRPASV305, NKRUWASLV5

Importance: High

TIMCO ENGINEERING INC. TCB & FCB

849 NW State Road 45 FCC Approvals

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October 17, 2006

Federal Communications Commission

7435 Oakland Mill Road

Columbia, MD 21046

EASTECH@fcc.gov

SUBJECT: FCC Part 15.239 Application for Review – In vehicle testing

REFERENCE: Sirius – FCC ID: NKRUPAST405, NKRPASV305, NKRUWASLV5
Model number: ST3/4, SLV1, SV3

Dear Sir or Madam:

Per your request, the following question and answer information is being submitted for your review prior to TCB approval. You will find attached to this email the final test data for the above referencnd FCCIDs.

Please, contact me if you do require any additional information.

Sincerely,

Bruno Clavier

CC: Mr. Rashmi Doshi, rashmi.doshi@fcc.gov
Mr. Joseph Tegerdine; joe.tegerdine@w-nrweb.com

QUESTION and ANSWER INFORMATION FOLLOWS:

1) How does this device operate?

The SV3 and ST3/4 are satellite receivers that consist of the following individual pieces: 1. Satellite radio with internal FM modulator, 2. DC power adaptor, 3. Docking station with internal antenna and mounting hardware to hold the radio, 4. External remote radiating antenna, 5. Satellite Antenna

The SLV1 is a docking station and consists of the following individual pieces: 1. Docking station with an internal FM modulator, 2. DC power adaptor, 3. External remote radiating antenna, 4. Satellite Antenna. The SLV1 docking station is used in conjunction with handheld devices called the SL100 and the SL10, which consist of a satellite receiver, and an MP3 player. The SL100 also contains WiFi capabilities. The SL100 and SL10 are the subject of separate equipment authorizations.

2) Provide information on the device and its antenna.

These devices have an FM modulator, internal antenna and external remote antenna. In the SV3 and ST3/4 the modulator is contained in the receiver with the internal antenna mounted in the docking station. In the SLV1 the modulator and internal antenna are both contained within the docking station.

The satellite radio receives the satellite signal from the satellite antenna, decodes the audio signal to base band and couples it to the FM modulator contained in the receiver (SV3 and ST3/4) or in the docking station (SLV1).The output of the FM modulator is coupled to either the internal antenna or the external remote antenna depending on the users preference. If performance is satisfactory with the internal antenna, then it is expected that the customer would not install the external remote antenna. The internal antenna is a short vertical monopole arrangement. The external remote antenna is a length of coax cable with the last 15 inches having the shield braid removed. At the end point of the braid, a ferrite bead is added with the cable looped three times.

3) How is it installed?

The docking station is installed to hold the radio typically below the top of the dash in order to avoid blocking the view of the road by the driver. The internal antenna will normally be activated at this time and the customer will locate and tune the satellite radio to output its signal on an unused FM channel in his locale. After determining the appropriate channel, the user will tune his car radio to the same channel. If performance is not satisfactory the user is instructed to mount the external remote antenna adjacent to the window glass antenna if the vehicle has one or as close as possible to the vertical whip antenna or shark fin antenna whichever is applicable. After mounting the remote antenna it is plugged into the FM output port which automatically decouples any internal antenna.

4) What test procedure was used?

The system is bench tested according to the procedures in ANSI c63.4.
Cables are manipulated on the tabletop to maximize the FM band signal level. Cables are also bundled as per the instruction in ANSI C63.4 and are then moved around to maximize the FM band signal. Both internal antenna and external remote antenna configurations are tested.

5) If tested in a car, how was it configured/tested?

Threw cars with window glass antenna were selected for this test.
The external remote antenna was placed adjacent to the window glass antenna and along it's length and attached with the adhesive fixtures provided. Measurements were made at a distance of 3 meters from the auto on a minimum of 8 equally spaced radials around the vehicle. All measurements were made at a firm with a description of their facilities filed with the FCC pursuant to Section 2.948 of the FCC rules.

6) Was the tuning range properly verified?

According to the test reports, the tuning controls were manually adjusted to verify maximum tuning range.
All controls, manual and software were adjusted to determine the maximum tuning range capability of the unit. This range is specified in the measurement report and is 88.1 to 107.9 MHz.

7) Was the bandwidth properly tested with maximum audio input?

Maximum internal modulation was used since the radio does not have an external audio input. The modulator audio input level control was set to maximum to perform this test. All OBW measurements are made at maximum audio input levels.