RF EXPOSURE REPORT

Applicant	SOUTH NAVIGATION LIMITED
Address	2/F，No.52-54 Jian Zhong Rd，Ke Yun Rd Software Park Guangzhou，China 510665（HQ）

Manufacturer or Supplier	SOUTH NAVIGATION LIMITED
Address:	2/F，No.52-54 Jian Zhong Rd，Ke Yun Rd Software Park Guangzhou，China 510665（HQ）
Product	GPS RTK
Brand Name	SOUTH
Model	S86
Additional Model & Model Difference	S86T, S86C, See Section 3.1
Date of tests	Oct. 28, 2012 ~May 07, 2013

☒ **FCC Part 2 (Section 2.1091)**

☒ **FCC OET Bulletin 65, Supplement C (01-01)**

☒ **IEEE C95.1**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Reviewed by Glyn He Supervisor / EMC Department	Approved by Sam Tung Manager / EMC Department
	 Date: May 07, 2013

Table of Contents

RELEASE CONTROL RECORD 3

1. CERTIFICATION 4
2. RF EXPOSURE LIMIT 5
3. MPE CALCULATION FORMULA 5
4. CLASSIFICATION 5
5. ANTENNA GAIN 5
6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER 6

RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FS121022N025	Original release	May 07, 2013

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1. CERTIFICATION

PRODUCT:	GPS RTK
BRAND NAME:	SOUTH
MODEL NO.:	S86
TEST SAMPLE:	ENGINEERING SAMPLE
APPLICANT:	SOUTH NAVIGATION LIMITED
TESTED DATE:	May 07, 2013
STANDARDS:	FCC Part 2 (Section 2.1091)
	FCC OET Bulletin 65, Supplement C (01-01)
	IEEE C95.1

2. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm^2)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

3. MPE CALCULATION FORMULA

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Peak Gain (dBi)	Antenna Type
Chain 0	4.0	External Antenna

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
463.125MHz ~ 466.625MHz	158.13	4.0	20	0.07902	0.31

DEVICE	MAX EIRP (mW)	MAX EIRP (dBm)	DISTANCE (cm)	POWER DENSITY (mW/ cm^2)	LIMIT (mW/cm^2)
BT	125	20.97	20	0.06247	1.0

This product can operate within BT Module which has maximum of 125mW output power.

CONCLUSION:

Both of the FM and BT can transmit simultaneously, the formula of calculated the MPE is:

$CPD_1 / LPD_1 + CPD_2 / LPD_2$ + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

Therefore, the worst-case situation is 0.07902 / 0.31 + 0.06247 / 1.0= 0.317, which is less than “1”. This confirmed that the device comply with FCC 1.1310 MPE limit.

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