



Compliance Testing, LLC

Previously Flom Test Lab

RF, EMC and Safety Testing Experts Since 1963

toll-free: (866) 311-3268

fax: (480) 926-3598

<http://www.ComplianceTesting.com>

info@ComplianceTesting.com

Date: July 21, 2010

Applicant: Vertu
Beacon Hill Road
Church Crookham, Hampshire GU52 8DY UK

Attention of: Mark Pope, Certification and Compliance Manager
+44 1252 611135; FAX: -611302
Mobile: +44 7774 8158594
mark.pope@vertu.com

Equipment: CONSTELLATION QUEST Type: RM-582V
FCC ID: P7QRM-582V
FCC Rules: 22 / 24

Enclosed please find your copy of the Engineering Test Report for which you are subject to the restrictions as listed on the attached summary.

Once a Telecommunication Certification Body (TCB) issues a Grant the Federal Communication Commission (FCC) has 30 days to review the application and request added information. It is your decision whether or not to market the equipment subject to a possible recall before the end of the 30 days.

If your equipment is still retained by us, it will be returned to you 30 days after approval is achieved. Our invoice for services has been directed to your Accounts Payable Department.

For any additional information please contact us.

Thank you.

Sincerely yours,

Greg Corbin



Summary of Restrictions

1. All submissions to the FCC are subject to **their** Examiner's interpretation.
2. Please allow from 60 to 90 days before hearing from the FCC with regard to any submission.
3. The FCC can set aside any action; modify or set aside any action, within 30 days. (Rule 1.108, 1.113)
4. Under Rule 2.803, if device is not type accepted/certificated then it must **not** be sold, leased, offered for sale, imported, shipped or distributed or advertised for sale.
5. FCC can revoke its certificates at any time if the equipment does not meet or **continue** to meet their Rules. (Rule Parts 2.927, 2.939)
6. FCC can request a sample at any time (2.936).



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Date: July 21, 2010

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Vertu
Equipment: CONSTELLATION QUEST Type: RM-582V
FCC ID: P7QRM-582V
FCC Rules: 22 / 24

On behalf of the Applicant, enclosed please find Application Form 731, Engineering Test Report and all pertinent documentation, the whole for approval of the referenced equipment as shown.

We trust the same is in order.
Should you need any further information, please feel free to contact our office.

Best regards,

Greg Corbin



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Test Report

for

Model: CONSTELLATION QUEST Type: RM-582V

to

Federal Communications Commission

Rule Part(s) 22 / 24

Date of report: July 21, 2010

On the Behalf of the Applicant: Vertu

At the Request of: Vertu
Beacon Hill Road
Church Crookham, Hampshire GU52 8DY UK

Attention of: Mark Pope, Certification and Compliance Manager
+44 1252 611135; FAX: -611302
Mobile: +44 7774 8158594
mark.pope@vertu.com

Reviewed by:

Greg Corbin



Test Report Revision History

Revision	Date	Revised By	Reason for revision
1.0	July 21, 2010	G. Corbin	Original Document
2.0	October 14, 2010	G. Corbin	Updated test procedure and test set-up for Field Strength of Spurious Radiation



List of Exhibits

(FCC **Certification** (Transmitters) - Revised 9/28/98)

Applicant: Vertu

FCC ID: P7QRM-582V

By Applicant:

1. Letter of Authorization
2. Confidentiality Request: 0.457 And 0.459
3. Identification Drawings, 2.1033(c)(11)
 - Label
 - Location of Label
 - Compliance Statement
 - Location of Compliance Statement
4. Photographs, 2.1033(c)(12)
5. Documentation: 2.1033(c)
 - (3) User Manual
 - (9) Tune Up Info
 - (10) Schematic Diagram
 - (10) Circuit Description
 - Block Diagram
 - Parts List
 - Active Devices
6. MPE/SAR Report

By Compliance Testing:

- A. Testimonial & Statement of Certification



The Applicant has been cautioned as to the following:

15.21 Information to the User

The user's manual or instruction manual for an intentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

15.27(a) Special Accessories

Equipment marketed to a consumer must be capable of complying with the necessary regulations in the configuration in which the equipment is marketed. Where special accessories, such as shielded cables and/or special connectors are required to enable an unintentional or intentional radiator to comply with the emission limits in this part, the equipment must be marketed with, i.e. shipped and sold with, those special accessories. However, in lieu of shipping or packaging the special accessories with the unintentional or intentional radiator, the responsible party may employ other methods of ensuring that the special accessories are provided to the consumer, without additional charge.

Information detailing any alternative method used to supply the special accessories for a grant of equipment authorization or retained in the verification records, as appropriate. The party responsible for the equipment, as detailed in § 2.909 of this chapter, shall ensure that these special accessories are provided with the equipment. The instruction manual for such devices shall include appropriate instructions on the first page of text concerned with the installation of the device that these special accessories must be used with the device. It is the responsibility of the user to use the needed special accessories supplied with the equipment.



Testimonial and Statement of Certification

This is to Certify:

1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.
2. **That** the technical data supplied with the application was taken under my direction and supervision.
3. **That** the data was obtained on representative units, randomly selected.
4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data is true and correct.

A handwritten signature in black ink that reads "Greg Corbin".

Certifying Engineer:

Greg Corbin



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Required information per ISO 17025-2005, paragraph 5.10.2:

a) **Test Report**

- b) Laboratory: Compliance Testing
(FCC: 933597) 3356 N. San Marcos Place, Suite 107
(Canada: 2044A-1) Chandler, AZ 85225
- c) Report Number: d1070015
- d) Client: Vertu
Beacon Hill Road
Church Crookham, Hampshire GU52 8DY UK
- e) Identification: CONSTELLATION QUEST Type: RM-582V
S/N:004401/10/859472/8
FCC ID: P7QRM-582V
EUT Description: PCS Licensed Transmitter Held to the ear
GSM 850/900/1800/1900/WCDMA with BT and WLAN
- f) EUT Condition: Not required unless specified in individual tests.
- g) Report Date: July 21, 2010
- h, j, k): As indicated in individual tests.
- i) Sampling method: No sampling procedure used.
- l) Measurement Uncertainty: In accordance with Compliance Testing internal quality manual.
- m) Reviewed by:

Greg Corbin

- n) Results: The results presented in this report relate only to the item tested.
- o) Reproduction: This report must not be reproduced, except in full, without written permission from this laboratory.

Accessories used during testing:

Type	Quantity	Manufacturer	Model	Serial No.
Battery	1	Vertu	BP-4LV	N/A
Headset, mono	1	Vertu	WH-2V	N/A
Headset, stereo	1	Vertu	WH-1V	N/A
Video Cable	1	Vertu	CA=75UV	N/A



Sub-part

2.1033(c)(14):

Test and Measurement Data

All tests and measurement data shown were performed in accordance with FCC Rules and Regulations, Volume II; Part 2, Sub-part J, Sections 2.947, 2.1033(c), 2.1041, 2.1046, 2.1047, 2.1079, 2.1051, 2.1053, 2.1055, 2.1057 and the following individual Parts: 22 / 24.



Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI/C63.4-2009, and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Measurement results, unless otherwise noted, are worst-case measurements.

A2LA

"A2LA has accredited Compliance Testing in Chandler, AZ for technical competence in the field of Electrical testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO 17025:2005 'General Requirements for the Competence of Testing and Calibration Laboratories' and any additional program requirements in the identified field of testing."

Please refer to www.a2la.org for current scope of accreditation.

Certificate number: 2152.01



FCC OATS Reg. #933597

IC Reg. # 2044A-1



List of General Information Required for Certification

In Accordance with FCC Rules and Regulations,
Volume II, Part 2 and to Part 90

Sub-part 2.1033

(c)(1):

Name and Address of Applicant: Vertu
Beacon Hill Road
Church Crookham, Hampshire GU52 8DY UK

Manufacturer: Vertu
Beacon Hill Road
Church Crookham, Hampshire GU52 8DY UK

(c)(2): **FCC ID:** P7QRM-582V

Model Number: CONSTELLATION QUEST Type: RM-582V

(c)(3): **Instruction Manual(s):**

Please see attached exhibits

(c)(4): **Type of Emission:** 824.2 - 848.8 GSM 242KGXW
824.2 - 848.8 EGPRS 244KG7W
826.4 - 846.6 WCDMA 4M15F9W
1850.2 - 1909.8 GSM 244KGXW
1850.2 - 1909.8 EGPRS 244KG7W
1852.4 - 1907.6 WCDMA 4M15F9W

(c)(5): **Frequency Range, MHz:** 824.2 - 848.8 GSM
824.2 - 848.8 EGPRS
826.4 - 846.6 WCDMA
1850.2 - 1909.8 GSM
1850.2 - 1909.8 EGPRS
1852.4 - 1907.6 WCDMA

(c)(6): **Power Rating, Watts:** 824.2 – 849 MHz, 0.859 W
1850.2 – 1907.6 MHz, 0.873 W

_____ Switchable

_____ Variable

 X N/A

(c)(7): **Maximum Allowable Power, Watts:** 824.2 – 849 MHz, 7 W
1850.2 – 1907.6 MHz, 2 W

DUT Results: Passes X Fails _____

Note: The Information in (c)(4) thru (c)(7) above was recorded from the test reports submitted by Nokia.



Subpart 2.1033 (continued)

(c)(8): Voltages & currents in all elements in final RF stage, including final transistor or solid-state device:

Collector Current, A	=	1
Collector Voltage, Vdc	=	3.7
Supply Voltage, Vdc	=	3.7

(c)(9): **Tune-Up Procedure:**

Please see attached exhibits

(c)(10): **Circuit Diagram/Circuit Description:**

Including description of circuitry & devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation and limiting power.

Please see attached exhibits

(c)(11): **Label Information:**

Please see attached exhibits

(c)(12): **Photographs:**

Please see attached exhibits

(c)(13): **Digital Modulation Description:**

☐ Attached Exhibits
☒ N/A

(c)(14): **Test and Measurement Data:**

Follows



Test Results Summary

Specification	Test Name	Pass, Fail, N/A	Comments
2.1053	Field Strength of Spurious Radiation	Pass	



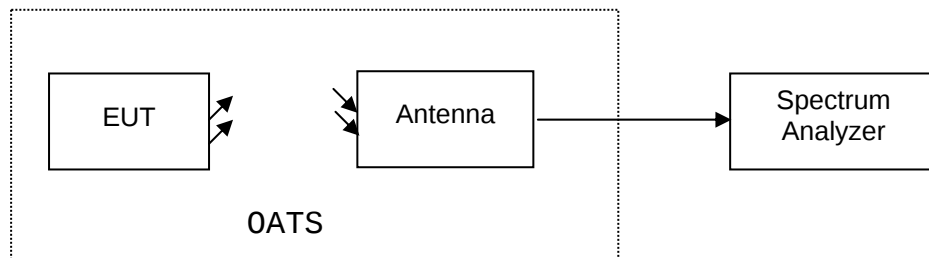
Name of Test: Field Strength of Spurious Radiation
Specification: 2.1053
Test Equipment Utilized: 00049, i00103, i00177, i00364

Engineer: G. Corbin
Test Date: 7/21/2010

Test Procedure

The EUT was tested in an Open Area Test Site (OATS) set 3m from the receiving antenna. A spectrum analyzer was used to verify that the EUT met the requirements for Radiated Emissions. The EUT was tested by rotating it 360° with the antennas in both the vertical and horizontal orientation and raised from 1 to 4 meters to ensure the TX signal levels were maximized.

Test Setup



Settings

RBW = 1 MHz
VBW = 3 MHz
Detector – Peak

Sample Calculations

Corrected Value = Measured Value + Correction factor
Correction factor = Antenna CF + Cable loss

**824.2 GSM Test Results**

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
1648.4	-64.1	29.8	-34.3	-13	Pass
2472.6	-64.9	33.5	-31.4	-13	Pass
3296.8	-66.9	36.1	-30.8	-13	Pass

836.6 GSM Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
1673.2	-63.2	29.9	-33.3	-13	Pass
2509.8	-66.1	33.6	-32.5	-13	Pass
3346.4	-67.4	36.2	-31.2	-13	Pass

848.8 GSM Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
1697.6	-64.1	30.1	-34.0	-13	Pass
2546.4	-65.8	33.8	-32.0	-13	Pass
3395.2	-67.4	36.3	-31.1	-13	Pass

824.2 EGPRS Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
1648.4	-66.1	29.8	-36.3	-13	Pass
2472.6	-65.3	33.5	-31.8	-13	Pass
3296.8	-67.8	36.1	-31.7	-13	Pass

836.6 EGPRS Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
1673.2	-64.6	29.9	-34.7	-13	Pass
2509.8	-66.1	33.6	-32.5	-13	Pass
3346.4	-65.4	36.2	-29.2	-13	Pass

848.8 EGPRS Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
1697.6	-61.7	30.1	-31.6	-13	Pass
2546.4	-64.1	33.8	-30.3	-13	Pass
3395.2	-63.2	36.3	-26.9	-13	Pass

**826.4 WCDMA Test Results**

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
1648.4	-62.4	29.8	-32.6	-13	Pass
2472.6	-61.9	33.5	-28.4	-13	Pass
3296.8	-62.4	36.1	-26.3	-13	Pass

836.6 WCDMA Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
1673.2	-65.1	29.9	-35.2	-13	Pass
2509.8	-65.2	33.6	-31.6	-13	Pass
3346.4	-65	36.2	-28.8	-13	Pass

846.6 WCDMA Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
1697.6	-66.6	30.0	-36.8	-13	Pass
2546.4	-67.4	33.7	-33.7	-13	Pass
3395.2	-68.4	36.3	-32.1	-13	Pass

1850.2 GSM Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
3700.4	-67.5	36.7	-30.8	-13	Pass
5550.6	-67.1	40.4	-26.7	-13	Pass
7400.8	-62	44.2	-17.8	-13	Pass

1880 GSM Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
3760	-67.7	36.8	-30.9	-13	Pass
5640	-67.5	40.5	-27.0	-13	Pass
7520	-61	44.5	-16.5	-13	Pass

1909.8 GSM Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
3819.6	-68.2	36.8	-31.4	-13	Pass
5729.4	-67.5	40.6	-26.9	-13	Pass
7639.2	-62.6	44.7	-17.5	-13	Pass

**1850.2 EGPRS Test Results**

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
3700.4	-67.7	36.7	-31.0	-13	Pass
5550.6	-68	40.4	-27.6	-13	Pass
7400.8	-61.8	44.2	-17.6	-13	Pass

1880 EGPRS Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
3760	-68.2	36.8	-31.4	-13	Pass
5640	-65.5	40.5	-25.0	-13	Pass
7520	-62	44.5	-17.5	-13	Pass

1909.8 EGPRS Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
3819.6	-66.2	36.8	-29.4	-13	Pass
5729.4	-66	40.6	-25.4	-13	Pass
7639.2	-62.5	44.7	-17.8	-13	Pass

1852.4 WCDMA Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
3704.8	-65	36.7	-28.3	-13	Pass
5557.2	-64.6	40.5	-24.1	-13	Pass
7409.6	-61.3	44.2	-17.1	-13	Pass

1880 WCDMA Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
3760	-65.5	36.8	-28.7	-13	Pass
5640	-63.4	40.5	-22.9	-13	Pass
7520	-61.4	44.5	-16.9	-13	Pass

1907.6 WCDMA Test Results

Emission Frequency (MHz)	Measured Level (dBm)	Correction Factor (dB)	Corrected Value (dBm)	Limit ERP/EIRP (dBm)	Result
3815.2	-65.1	36.8	-28.3	-13	Pass
5722.8	-66.2	40.5	-25.7	-13	Pass
7630.4	-61.1	44.7	-16.4	-13	Pass

No other emissions were detected. All emissions were greater than -13 dBm.



Test Equipment Utilized

Description	MFG	Model Number	CT Asset Number	Last Cal Date	Cal Due Date
Spectrum Analyzer	HP	8566B	i00049	10/9/2009	10/9/2010
Horn Antenna	EMCO	3115	i00103	11/25/2008	11/25/2010
High-pass Filter	Trilithic	4HX3400-3-KK	i00177	NCR	NCR
Tunable Notch Filter	Eagle	TNF240MFMF	i00364	NCR	NCR

** A 30 day calibration extension is in place for this equipment.

In addition to the above listed equipment standard RF connectors and cables were utilized in the testing of the described equipment. Prior to testing these components were tested to verify proper operation.

END OF TEST REPORT