



SPECTRUM LICENCE AND CONDITIONS

FOR

VHT RADIO TURKS AND CAICOS

Published August, 2009

GRANT

This Spectrum Licence is issued to VHT RADIO TURKS AND CAICOS *Blue Hills Providenciales, Turks and Caicos Islands* (the "Licensee"), pursuant to Section 34 (Grant of Spectrum) of the Telecommunications Ordinance, 2004 (the "ordinance").

The Licensee is hereby authorised, but subject to the conditions contained in this Licence, to comply with the technical specifications in Annex A, to use the radio frequencies identified in Annex B, to install, operate and use the radiocommunications apparatus identified in Annex C and to establish, operate and use the related radiocommunication service.

Signature:

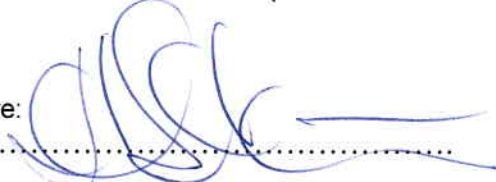

.....

Name: DONALD METELLUS
.....

Position: CEO
.....

For and on behalf of the Telecommunications Commission
Of Turks and Caicos Islands (the "Commission")

Signature:


.....

Name: HEATHER ALLEN
.....

Position: CHAIRMAN
.....

For and on behalf of the Licensee

Dated this 9th day of June, 2011



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Definitions and Interpretation

In this Licence and the Condition, the Expressions set out below have the meaning given to them below:

- a) **“Commencement Date”** means the date on which this License comes into force;
- b) **“Conditions”** means the conditions contained in this Licence, as supplemented or amended from time to time;
- c) **“Effective Date”** means the date set out on the first page of this Licence and referred to in Annex B, being the date upon which the Licence takes effect;
- d) **“Government”** means the Government of the Turks and Caicos Islands;
- e) **“Licensee”** means a person who has been granted a licence under the Ordinance;
- f) **“License”** means this License together with its Annexes;
- g) **“Licensed Area”** means the territory of the Turks and Caicos Islands, including its territorial waters and airspace;
- h) **“Minister”** means the member of Cabinet to whom responsibility for telecommunications is assigned;
- i) **“Ordinance”** means the Telecommunications Ordinance of 2004;
- j) **“Radiocommunication”** means any transmission, emission or reception of signs, signals, writing, sounds or intelligence of any nature by means of electromagnetic waves of frequencies lower than 3,000 GHz propagated in space without artificial guide;
- k) **“Radio Apparatus” or “Radiocommunication Apparatus”** means a device or combination of devices intended for, or capable of being used for, radiocommunication;
- l) **“Regulations”** means regulations issued pursuant to the Telecommunications Ordinance;
- m) **“Spectrum”** means the continuous range of electromagnetic wave frequency from zero to infinity;
- n) **“Spectrum License”** means the License to use the spectrum, as set out in Annex D;
- o) **“TCITC or Commission”** means the Turks and Caicos Island Telecommunications Commission established under the Telecommunication Ordinance 2004.
- p) **“Telecommunications”** mean any form of transmission, emission, or reception of signs, text, images and sounds or other intelligence of any nature by wire, radio, optical or other electron magnetic means;
- q) **“Telecommunications apparatus”** means apparatus designed or adapted for use in conveying, emitting, receiving, switching or transmitting messages over a telecommunication network;
- r) **“Term”** means the period for which this Licence shall remain in force as set out in General Condition C6 and further referred to in Annex B.



Section A – General Conditions Applicable to the Licence

Laws and Regulations

- C1. This Spectrum Licence is issued by the Commission to the Licensee in accordance with section 34 of the Ordinance, on terms and condition as recommended by the Commission. Nothing in this Licence shall be construed as limiting or excluding the application of any provision of the Ordinance.
- C2. The Licensee shall comply with the Ordinance, all regulations or other instruments made under the Ordinance, the conditions of this Licence and all relevant laws in force from time to time in the Turks and Caicos Island.
- C3. The Licensee shall, without delay, comply with any lawful direction made by the Government, the Minister, or by the Commission under the Ordinance.
- C4. The Licensee shall abide by any and all authorized spectrum relocation or diminution as required and regulated by the Commission.
- C5. The conditions contained in this Licence shall be construed and interpreted in accordance with the Laws of the Turks and Caicos Island.

Period of Licence

- C6. This Licence shall commence on the Effective Date and shall continue in effect for a period (the “term”) referred to in Annex B hereto.
- C7. This Licence may be renewed by the Commission upon application by the Licensee to the Commission, such application to be made no later than six (6) months before end of the term. The first renewal of this Licence shall be for the same period as the initial term of this Licence in accordance with the provisions of the Ordinance; any subsequent renewal shall be for such term as may be agreed to by the licensee in accordance with the provisions of the Ordinance.
- C8. The Commission shall, in assessment of any application for renewal of this Licence, be entitled to consider and have regard to the Licensee’s previous compliance with the conditions of this Licence, any material contravention of the Ordinance, or regulations made thereunder and/or whether the licensee failed to comply materially with any lawful direction of the Commission.

Payment of Licence Fees

- C9. The Licensee shall pay the licence or Spectrum fees applicable to the radiocommunication service or radiocommunication apparatus on terms and conditions establish under the Telecommunications Fee Structure Regulations 2007 (as may be amended) made there under.
- C10. The licence fees shall be paid annually at the offices of the Commission or otherwise as directed by the Commission in accordance with the Telecommunications Fee Structure Regulations 2007.
- C11. Interest shall be payable by the Licensee on any Licence fee that remains due after the due date at such rate in accordance with the Telecommunications Fee Structure Regulations 2007

Use of Spectrum and Apparatus

- C12. This licence may be revoked in the event that the Licensee does not commence, use or operate the radiocommunication service or radiocommunication apparatus authorized by this licence within nine (9) months of the effective date.
- C13. According to section 36 (c) of the TCITC ordinance 2004, the Licensee or the person who is in possession or control of a radiocommunications station or radiocommunication apparatus shall allow such person as may be authorised by the Commission upon receiving reasonable prior notice to inspect the Licensee’s radiocommunication station or apparatus used to provide the radiocommunication service and shall provide any related assistance to verify that the Licensee is in compliance with the terms and conditions of this Licence.
- C14. The Licensee shall take all necessary steps to ensure that its operation or use of the radiocommunication station or radiocommunication apparatus authorised by this Licence does not cause harmful interference to any other licensed radiocommunication service or radiocommunication apparatus unless and to the extent that same is expressly provided for in any

regulation, instrument or under the Ordinance.

- C15. The Licensee shall take all necessary steps to ensure that its operation or use of the radiocommunication station or radiocommunication apparatus authorised by this Licence does not cause any danger to the public.
- C16. The Licensee shall ensure that the radiocommunication service and the radiocommunication apparatus operated by it or on its behalf at all times strictly complies with all applicable emission standards and technical specifications or requirements as stated in the licence including those specified by the Commission from time to time.
- C17. The Licensee shall cooperate with the Commission for the purposes of assisting the Commission in coordinating and managing the efficient use of radio frequency spectrum as a public resource, including in relation to any neighboring country, and shall provide any assistance reasonably requested by the Commission for these purposes.
- C18. The Licensee shall, in accordance with the Ordinance, any regulation and any other relevant law, obtain all required consents, approvals and rights of access from all relevant Government ministries, Government departments, local authorities and statutory bodies before the commencement of any installation of its radiocommunication apparatus.
- C19. In accordance to section (47) an (48) of the Telecommunication Ordinance 2004, the Licensee shall keep accurate, up to date and detailed records of the operations of their radiocommunication apparatus used to provide their radiocommunication service. The Licensee shall make such information available, promptly and without charge to the Commission and shall provide copies of the information as required for the Commission purposes.
- C20. The Licensee shall notify the Commission of any proposed material changes to its radiocommunication station or radiocommunication apparatus, and shall provide to the Commission with such information as the Commission shall reasonably require for the purpose of assessing the effect of such changes.

Transfer of Licence

- C21. The Licensee shall not, without the prior written approval of the Commission, such approval not to be unreasonably withheld, transfer, assign or otherwise part with this Licence or any permission, right, obligation or benefit granted under this Licence.
- C22. The Licensee shall not, without the prior written approval of the Commission, such approval not to be unreasonably withheld, enter into any joint venture, management agreement, outsourcing agreement, association contract or other arrangement with a third party, the effect or purported effect of which would be to permit a person who is not authorised under this Licence or any other licence granted under the Ordinance to obtain rights or privileges under this Licence, or which would otherwise result in a breach of Condition C21.

Remedies for Non-Compliance

- C23. Without prejudice to the foregoing and in accordance with the Ordinance section 52(1) the Commission may take such action as it deems appropriate for any breach of any condition contained in this licence.
- C24. In the event of a material breach of the Ordinance, any regulation, instrument, or direction of the Commission made under the Ordinance, or any condition of this Licence, the Commission and/or the Minister may:
- a) suspend or revoke this Licence or the Licensee's right to use radio frequency spectrum under this Licence; or
 - b) take any other action it deems appropriate;
- in accordance with the relevant provisions of the Ordinance and any regulation made thereunder.

Requirement to Furnish Information to the Commission

- C25. The Licensee shall furnish to the Commission, in such manner and at such times as the Commission may request in writing, such information related to the activities of the Licensee under this Licence as the Commission may reasonably require in order to perform its functions.

Confidentiality

- C26. Subject to Condition C27, the Commission shall keep confidential any information furnished to it by the Licensee, which the concessionaire has specifically expressed to be confidential at the time of submission to the Commission, and which is of a confidential nature. The Licensee shall label such confidential information at the time of disclosure orally and in writing with a prominently placed label marking stating that such information is "CORPORATE PROPRIETARY AND CONFIDENTIAL". The Commission shall exercise reasonable care and take all reasonable steps in protecting such confidential information, and in particular shall take reasonable precautions to procure that such confidential information is only disseminated to those employees of the Commission that need to know and use such information in the performance of the Commission's functions.
- C27. In accordance with section 3(2) of the Telecommunications and Frequency Licensing Regulations 2005, the Commission shall be entitled to disclose any information received by it where:
- a) the Commission considers that disclosure is necessary in the discharge of the Commission's functions;
 - b) the information is or becomes public knowledge other than through disclosure by the Commission;
 - c) the information was known to the Commission before receipt from the Licensee, without any obligation of confidence;
 - d) the information lawfully becomes available to the Commission from a source other than the Licensee; or,
 - e) the Licensee agrees to the disclosure of the information.

- C28. Prior to any disclosure of information under section C27 above, the Commission shall afford the entity requesting the information and the Licensee that owns the information, an adequate opportunity to make representations regarding the disclosure. Without prejudice to the generality of the foregoing, the Commission shall:
- a) give no less than fourteen (14) days prior written notice of disclosure to the Licensee whose information the Commission proposes to disclose;
 - b) give reasonable considerations to any representations made under part a. above; and,
 - c) where appropriate, consider such reasonable proposals made by the Licensee to protect the confidentiality of the information, where such proposals do not prejudice the Commission's objective in seeking to disclose the information.

National Security

- C29. The Licensee shall, as required pursuant to any applicable law, direction or order, cooperate with the relevant Government, statutory body or official agency in all ways in matters of law enforcement, public emergency or national security.
- C30. Pursuant to section C29 the Licensee shall make available its radiocommunication service and radiocommunication apparatus to the Government.

Amendment

C31. This Licence may be amended pursuant to the provisions of the Ordinance.

Surrender

C32. The Licensee may at any time during the duration of this licence, upon the giving of thirty (30) days notice in writing to the Commission, surrender its licence. Such surrender shall take effect subject to the approval of the Commission, such approval not to be unreasonably withheld. Surrender of this licence shall be without prejudice to the rights and obligations hereunder arising prior to the effective date of surrender.

Revocation and Suspension

C33. The Commission may revoke or suspend this licence on written notice pursuant to the provisions of section 52 of the Ordinance where:

- a) the Licensee has failed to comply materially with any of the provisions of the Ordinance, regulations made thereunder or the terms and conditions of this licence; or
- b) the Licensee has failed to comply materially with any lawful direction of the Commission.

Disputes

C34. Any dispute on matters relating to the requirements of this Licence or the Ordinance shall be referred to the Commission for determination in accordance with Section 24 of the Ordinance. The Licensee expressly agrees and acknowledges that it shall, as provided for within the provisions of such dispute resolution process, be bound by any decision or award made in such process.



Section B – Specific Conditions Applicable to the Licence

- (1) The Licensee shall keep an up-to-date record of the assignment of frequency/frequencies including but not limited to:
 - (a) All the radiocommunications apparatus, including the antennas, operated under the licence and the apparatus specifications;
 - (b) The coverage area;
 - (c) The effective radiated power of the transmitter;
 - (d) The transmitter location and height; and
 - (e) The International Telecommunications Union (ITU) emission designation.
- (2) The record referred to in the aforementioned section shall be submitted to the Commission at such intervals as the Commission may, from time to time, require within fourteen (14) days of the request being made.
- (3) When an applicant is granted a Spectrum licence, prior to transmission, they must inform the Commission in writing, of the exact date that they intend to commence operation, at least fourteen (14) days prior to the expected date.
- (4) Subject to (3) above a licensee shall notify the Commission, in writing if they do not begin operating on the intended date within seven (7) days of the intended date.
- (5) A licensee shall inform the Commission if they intend to cease their operation for a period of time as indicated by the Commission.
- (6) Subject to (5) above the Commission may revoke the said licence, after giving the licensee a reasonable period of time in which the operation should be re-started.
- (7) The licensee shall provide the Commission with a site map of their transmitters, the effective radiated power, the radiated pattern and any other information as determined by the Commission.
- (8) The licensee shall keep an up-to-date record of the information stipulated in (7) above and shall make the record available to the Commission on paper or any other form as the Commission may determine, from time to time as the Commission may require.
- (9) The Licensees shall install devices to allow measurements of radiated frequency and power like “inline couplers” and devices to minimize interference like a “band pass cavities”.
- (10) The licensee shall not significantly change the location or any technical parameters of any transmitter without prior approval of the commission.



Annex A Technical Specifications

The Licensee shall conform to all relevant international standards for the operation of the radiocommunication apparatus used in the provision of the radiocommunication service.

Parameter	Community Requirements
1.1 Maximum Field Strength at 43 km from the Transmitter (E.g. Achieved at ERP = 1 kW, HAAT = 400 m)	70dB μ V/m
1.2 Maximum Field Strength at perimeter of Licensed Coverage Area	54dB μ V/m
1.3 Effective Radiated Power (ERP)	≤ 1 kW
1.4 Channel Width	200 kHz
1.5 Frequency Deviation	$\leq \pm 75$ kHz
1.6 Carrier Frequency Stability	± 5 kHz between 15 and 25°C at rated line power input voltage
1.7 Spurious Emissions <ul style="list-style-type: none"> Between 120 kHz and 240 kHz from the carrier Between 240 kHz and 400 kHz from the carrier More the 400 kHz from the carrier 	≤ -25 dB ≤ -45 dB $\leq \text{Min} (-(43 + 10\log P), -80 \text{ dB})$, where P is the transmitter power in Watts
1.8 Pre-emphasis characteristic time constant	75 μ secs
1.9 Audio Frequency Response	± 3 dB from 100 Hz to 10 kHz using standard 75 μ secs pre-emphasis
1.10 Audio Frequency Harmonic Distortion	± 3 dB from 100 Hz to 10 kHz at a modulation deviation of ± 35 kHz

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Annex B
Specific Radio Frequency Assigned

Lic# SL-0020PR-1-04

Spectrum (VHT Radio Turks and Caicos) License, 2011

Whereas VHT Radio Turks and Caicos is eligible for the grant of spectrum license.

The COMMISSION HERBY GRANTS the following Spectrum License.

Period of Validity: From **5/31/2011** to **5/31/2026**

The Licensee is hereby licensed to use portions of the electromagnetic spectrum as set forth in the following schedule for the term of this license and subject to the terms and conditions attached hereto.

SCHEDULE

			TRANSMITTER				ANTENNA	
Item	Type & Location of Station	Call Sign	Assigned Frequency MHz	Frequency Tolerance Parts 10 ⁶	Emission Designation	Mean Power Watts	Polarization & Gain	Directivity
	1	2	3	4	5	6	7	8
1	<u>Base Station</u>							
1.1	Providenciales	VHT	91.5000	N/A	F3EGF	500	H ,6dB	Omni

ADVISED THAT THE ABOVE SCHEDULE IS SUBJECT TO CHANGE



Annex C

Station Information

Station Index	1
Station Location:	Blue Hills, Providenciales
Station Coverage Zone:	Turks & Caicos Islands
Station Administration:	TCI
Sub-Type	Base Station
Station Operation Time: From	00:00
To	24:00
Station Identical licenses:	1
Multi-Station Type:	None
Tolerance:	N/A
Coverage Radius:	Providenciales
Location Latitude hemisphere	N
Location Longitude hemisphere	W
Location Latitude	N 214811
Location Longitude	W 0721619
Natural Modulation	Voice
Operation Type	Single frequency simplex
Number of Mobiles	N/A
Maximum Transmit Power	500 Watts
Mobile Maximum Transmit Power	N/A
Emission Designator	F3EGF
Bandwidth	25 kHz

	<i>RX Antenna Parameters</i>	<i>TX Antenna Parameters</i>
Pattern:	Omni	Omni
Polarization:	Horizontal	Horizontal
Manufacturer:	Norwalk Electronics	Norwalk Electronics
Model No:	NWE-34	NWE-34
Azimuth Beam width:	N/A	N/A
Vertical Beam Width:	N/A	N/
Gain:	6 dB	6 dB



<i>Above Sea Level:</i>	N/A	N/A
<i>Elevation angle:</i>	185 ft	185 ft
<i>Above Ground Height:</i>	120 ft	120 ft
<i>Azimuth Angle:</i>	N/A	N/A

	<i>RX Radio Type</i>	<i>TX Radio Type</i>
<i>Manufacturer:</i>	RVR ELECTRONICA	RVR ELECTRONICA
<i>Model Number:</i>	TEX500	TEX500
<i>Minimum Frequency:</i>	87.500000 MHz	87.500000 MHz
<i>Maximum Frequency:</i>	108.000000 MHz	108.000000 MHz
<i>Power Output:</i>	500 Watts	500 Watts
<i>Certification:</i>	N/A	N/A

<i>Frequency List</i>	
Transmitting	Receiving
Frequencies (MHz)	Frequencies (MHz)
91.500000 MHz	91.500000 MHz

<i>Frequency Link</i>	
RX Link	TX Link
Lic No / Account No	Lic No / Account No

DT