LICENCE No.: SL-0038PR-1-14



# SPECTRUM LICENCE

[ISSUED UNDER PART IV OF THE TELECOMMUNICATIONS ORDINANCE 2009]

ISSUED TO: SUN MEDIA GROUP LTD.

ISSUED ON: MARCH 27, 2014

CSB

Turks and Caicos Islands Telecommunications Commission

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This **Spectrum Licence** ("the Licence") dated **March 27, 2014** is issued by the **Turks and Caicos Islands Telecommunications Commission** ("the Commission") in accordance with Section 35 of the Telecommunications Ordinance 2009 to **Sun Media Group Ltd**. A company duly incorporated in the Turks and Caicos Islands ("the Licensee").

#### Interpretation

In this Licence unless the context requires otherwise:

"assigned radio spectrum" means the radio frequencies assigned in the Schedule;

"harmful interference" means interference that is or is likely to: (a) cause loss or damage to any person; (b) impair the normal operation of a licensed radiocommunication service or apparatus; (c) corrupt a message conveyed by any such service or apparatus (d) endanger the functioning of a radio navigation service or of other safety services;

"interference" means the prejudicing by emissions or reflections from the Licensee's radiocommunication station or apparatus of any of the forms of electromagnetic energy or the fulfillment of the purposes for which a terrestrial technical system is installed or maintained;

"international standards body" means the International Telecommunication Union (ITU), the International Organization for Standardization (ISO), the International Electrotechnical Committee (IEC), the American Standards Organizations, the European Standards Organization and any other body that may be specified by the Commission to be an international standards body;

"Licensed Service" means the services authorized to be provided under this Licence;

"Ordinance" means the Telecommunications Ordinance 2004 and includes the regulations made under it;

"radiocommunication station" means a site upon which radiocommunication apparatus is deployed, including any vehicle, ship or aircraft;

"Spectrum Plan" means the Turks and Caicos Islands Table of Frequency Allocations published by the Commission under the Ordinance;

"Technical Conditions" means the conditions relating to radiated power limits, technical standards, modulation techniques or other characteristics established by international standards bodies that apply to the use of the assigned radio spectrum.

- 2. Any word, phrase or expression used in this Licence shall, unless the context requires otherwise, have the same meaning that it has in the Ordinance.
- 3. Words importing the singular include the plural and vice versa. All references to legislation are deemed to refer to such legislation as amended or re-enacted from time to time.

#### Scope of the Licence

- 4. The Licensee is authorized to use the assigned radio spectrum in accordance with the Spectrum Plan; to install, operate and use the radiocommunications apparatus identified in "Schedule III" for the operation of its Licensed Service. The Licensee may not use the assigned radio spectrum for any other purpose.
- 5. The Licensee is authorized to use of the radio frequencies in its assigned radio spectrum for the period of validity mentioned in "Schedule II" for each of the radio frequencies.

6. This Licence replaces any spectrum licence that may have been granted to the Licensee by the Commission or any other person in the past.

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#### **Payment of Licence Fees**

7. The Licensee shall pay to the Commission in respect of the radio frequencies in its assigned radio spectrum the fees that are applicable to those frequencies under the Telecommunications Fee Structure Regulations.

#### Use of Spectrum and Apparatus

- 8. The Licensee shall ensure that its use of the assigned radio spectrum or radiocommunication apparatus authorised by this Licence does not cause harmful interference to any other licensed radiocommunication service or radiocommunication apparatus.
- 9. 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.
- 10. The Licensee shall ensure that its radiocommunication apparatus are adequately protected from interference that may be caused by other radiocommunication stations and apparatus operating in the same geographical area or radio frequency band, or in adjacent geographical areas or frequency bands.
- 11. The Licensee shall ensure that its use of the assigned radio spectrum, radiocommunication station or radiocommunication apparatus authorised by this Licence does not cause any danger to the public.
- 12. The Licensee shall ensure that its radiocommunication service and apparatus complies with the Technical Conditions identified in "Schedule I" and other relevant Technical Conditions.
- 13. The Licensee shall assist the Commission in coordinating and managing the efficient use of radio frequencies with neighbouring countries.
- 14. The Licensee shall obtain all consents and approvals required under the Turks and Caicos Island laws before the commencement of any installation of its radiocommunication station or apparatus.
- 15. Where the Licensee's radiocommunication station or apparatus causes the emission of harmful interference or causes any other radiocommunication station or apparatus to emit harmful interference, the Licensee shall take such steps as the Commission may direct to remove the source of such harmful interference and furnish such information as the Commission may request concerning the interference. Before making a direction the Commission may consult the Licensee or any other person that it considers may be affected by the direction.
- 16. The Licensee shall investigate immediately upon being notified in writing by the Commission any complaint alleging that harmful interference has been, is being or is about to be emitted by its radiocommunication station or apparatus.
- 17. The Licensee shall ensure that all persons using its radiocommunication apparatus are made aware of the conditions of this Licence and comply with those conditions.
- 18. The Licensee shall keep accurate, up to date and detailed records of the operation of its radiocommunication apparatus and shall make this information available, promptly and without charge to the Commission.
- 19. The Licensee shall notify the Commission of any proposed material change to its radiocommunication station or apparatus and shall provide such information as the Commission may require for the purpose of assessing the effect of such change.

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- Upon receiving reasonable prior notice, the Licensee shall allow the Commission to 20. inspect its radiocommunication station or apparatus and shall provide such assistance as the Commission may require verifying that the radiocommunication station or apparatus are in compliance with the conditions of this Licence.
- The Licensee shall exhibit all notices and instructions given to it by the Commission at its radiocommunication station.

## Remedies for Non-Compliance

In the event of any failure by the Licensee to comply with the conditions of this Licence 22. the Commission may take such action as it deems appropriate, including suspension and revocation of the Licence, in accordance with the provisions of the Ordinance.

#### **Information Requirements**

- Not later than the end of the period of three months beginning with the day after the 23. end of each financial year, the Licensee shall furnish to the Commission a report of its activities during the past financial year.
- The Licensee shall furnish to the Commission in such manner and at such times as the 24. Commission may request in writing such information related to the activities of the Licensee under this Licence as the Commission may reasonably require in the performance of its functions.

# **SCHEDULE I**

# [Technical Conditions]

Parameter	Community Requirements			
1.1 Maximum Field Strength at 43 km from the Transmitter (E.g. Achieved at ERP = 1 kW, HAAT = 400 m)	70dBμV/m			
1.2 Maximum Field Strength at perimeter of Licensed Coverage Area	54dBμV/m			
1.3 Effective Radiated Power (ERP)	<= 1kW			
1.4 Channel Width	200 kHz			
1.5 Frequency Deviation	<= ± 75kHz			
1.6 Carrier Frequency Stability	± 5 kHz between 15 and 25°C at rated line power input voltage			
<ul> <li>1.7 Spurious Emissions</li> <li>Between 120 kHz and 240 kHz from the carrier</li> <li>Between 240 kHz and 400 kHz from the carrier</li> <li>More the 400 kHz from the carrier</li> </ul>	<= - 25dB <= - 45dB <= Min (-(43 + 10logP), -80 dB), where P is the transmitter power in Watts			
1.8 Pre-emphasis characteristic time constant	75 μsecs			
1.9 Audio Frequency Response	± 3 dB from 100 Hz to 10 kHz using standard 75 μsecs pre-emphasis			
1.10 Audio Frequency Harmonic Distortion	± 3 dB from 100 Hz to 10 kHz at a modulation deviation of ± 35 kHz			

PLEASE BE ADVISED THAT THE ABOVE SCHEDULE IS SUBJECT TO CHANGE

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# **SCHEDULE II**

# [Assigned Radio Spectrum]

License Services	Assigned Frequency (MHz)	Bandwidth	Type of Service	Coverage Area	Emission Power Level (Watts)	Period of Validity	
						From	То
FM Broadcasting	91.1000 MHz	200 KHz	FM Radio	Country	750	March 27, 2014	March 27, 2029
Link Station	235.2500 MHz	10 KHz	STL Link	Provo	15	March 27, 2014	March 27, 2029

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#### **SCHEDULE III**

### [Station Information]

Station Index

1

Station Location:

Lime Tower, Five Cays

Station Coverage Zone:

Country

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:

N/A

Location Latitude hemisphere

N

Location Longitude hemisphere W

Location Latitude

N 21°45'56.61"

Location Longitude

W 072°15'34.62"

Natural Modulation

Voice

**Operation Type** 

FM Radio (Commercial)

Number of Mobiles

N/A

Maximum Transmit Power

750 Watts

**Emission Designator** 

F3EGF

Bandwidth

200 KHz

RX Antenna Parameters

TX Antenna Parameters

Pattern:

Bi

Bi

Polarization:

Horizontal or vertical

selectable

Horizontal or vertical

selectable

Manufacturer:

Norwalk

Norwalk

Model No:

NE34

NE34

Azimuth Beam width:

N/A

N/A

Vertical Beam Width:

N/A

N/A

Gain:

6 dB

6 dB

Above Sea Level:

N/A

N/A

Elevation angle:

22 ft

22 ft

Above Ground Height:

30 ft

30 ft

Azimuth Angle:

N/A

N/A

RX Radio Type

TX Radio Type

Manufacturer:

Powercast

Powercast

Model Number:

PC700T

PC700T

Minimum Frequency:

Maximum Frequency:

88.700000 MHz 108.000000 MHz 88.700000 MHz 108.000000 MHz

Power Output:

750 Watts

750 Watts

Certification:

N/A

N/A

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#### **SCHEDULE III**

#### [Station Information]

Station Index

2

Station Location:

Sun Media Group Studio

Airport Road, Providenciales

Station Coverage Zone:

Providenciales

Station Administration:

TCI

Sub-Type

Link Station

Station Operation Time: From

00:00

To

24:00

Station Identical licenses:

1

Multi-Station Type:

None

Tolerance:

N/A

Coverage Radius:

N/A

Location Latitude hemisphere

Location Longitude hemisphere

N

Location Latitude

V 21°46'33.65"

Location Longitude

7 072°15'54.23"

Natural Modulation

Voice

Operation Type

STL Link

Number of Mobiles

N/A

Maximum Transmit Power

15 Watts

**Emission Designator** 

F3EGF

Bandwidth

10 KHz

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RX Antenna Parameters

TX Antenna Parameters

Pattern:

Uni

Uni

Polarization:

Horizontal or vertical

selectable

Horizontal or vertical

selectable

Manufacturer:

Samco

Samco

Model No:

SAM-260

SAM-260

Azimuth Beam width:

40

40

Vertical Beam Width:

N/A

N/A

Gain:

9.5 dB

9.5 dB

Above Sea Level:

N/A

N/A

Elevation angle:

40 ft

40 ft

Above Ground Height:

30 ft

30 ft

Azimuth Angle:

N/A

N/A

RX Radio Type

TX Radio Type

Manufacturer:

Sielco

Sielco

Model Number:

EXC-RTX18B

EXC-RTX18B

Minimum Frequency:

220.000000 MHz

220.000000 MHz

Maximum Frequency:

2.500000000 GHz

2.500000000 GHz

Power Output: Certification:

N/A

15 Watts

N/A

15 Watts

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# ATTESTATION CLAUSES

CLASTON. S. BEEN

Position:

CHAZRMAN

Signature:

For and on behalf of the

Turks and Caicos Islands Telecommunications Commission

Name: HAYDEN ROYCE - Lillian E. BOYCE
Position: PRESEDENT - Director Secretar Position: PRESTDENT

Signature

For and on behalf of Sun Media Group Ltd.

and Caicos Islands Telecommunications Commission