

**WIRELESS TELEGRAPHY ACT 2006
NOTICE OF VARIATION OF A SHIP RADIO LICENCE FOR THE PURPOSE OF
THE INSTALLATION AND USE OF A PUBLIC CELLULAR BASE STATION ON
BOARD A VESSEL (MOBILE COMMUNICATION SERVICES ON BOARD VESSELS)**

Ofcom, in exercise of the power conferred by Schedule 1, paragraph 6 of the Wireless Telegraphy Act 2006 (as amended) ("the Act"), in accordance with Schedule 1, paragraph 7 of the Act, hereby varies the Ship Radio Licence (the "Licence") granted to:

Name of Licensee or Organisation

on:

Date of issue of Licence in respect of the vessel identified below:

Vessel	
Licence №	
Call Sign	
MMSI №	
Date of issue of this Notice of Variation:	

- 1 Terms and expressions defined in the Licence shall have the same meaning herein except where the context requires otherwise or where otherwise stated.
- 2 This Notice of Variation replaces any notice of variation of the Licence for the purpose of the installation and use of a public cellular base station on board a vessel.
- 3 As and from the Date of Issue of this Notice of Variation, the Licence shall be varied so that the following radio equipment, may, in addition to that already set out in the Licence, be established, installed and used on the Vessel subject to the terms set out in the Licence as varied by paragraphs 5 to 7 below:
 - (a) a Vessel Base Transceiver Station (Vessel B-S) used for supporting GSM services in the 900 MHz and/or 1 800 MHz bands.
- 4 The radio equipment described in paragraph 3(a) above shall be read as an integral part of the Licence and the following additional terms shall apply in respect of the establishment, installation and use of this radio equipment.
 - (a) A Vessel B-S shall be operated on a 'non-interference non-protected' basis. That is, that no harmful interference may be caused to any radio communication service and that no claim may be made for protection of these services against harmful interference originating from other radio communication services;
 - (b) A Vessel B-S shall not be used closer than two nautical miles from the baseline;
 - (c) Only indoor Vessel-BS antenna(s) shall be used between two and twelve nautical miles from the baseline.
 - (d) The following limits apply to any use of the Vessel B-S :

<i>Parameter</i>	<i>Description</i>
Transmit Power / Power Density	For base stations on board vessels, the maximum power density measured in external areas of the vessel, with reference to a 0dBi measurement antenna gain: -80 dBm/kHz
Channel access and occupation rules	Techniques to mitigate interference that provide at least equivalent performance to the following mitigation factors based on GSM standards shall be used: <ul style="list-style-type: none"> — between 2 and 3 nautical miles from the baseline, the receiver sensitivity and the disconnection threshold (ACCMIN¹ and min RXLEV²) level) of the mobile terminal used on board vessel shall be equal to or higher than -70 dBm/200 kHz and between 3 and 12 nautical miles from the baseline equal to or higher than -75 dBm/200 kHz, — discontinuous transmission³ shall be activated in the mobile communication services on board vessels system uplink direction, — the timing advance⁴ value of the vessel base transceiver station shall be set to the minimum.

- (e) A Vessel-BS must at all times comply with the technical and operational criteria contained within the UK Interface Requirement 2082 for Mobile Communication Service on board vessels, as varied from time to time.

5 In this Notice of Variation to the Licence:

- (a) “baseline” is to be understood in the meaning meaning of the United Nations Convention on the Law of the Sea ;
- (b) “the Commission Decision” means Decision 2010/166/EU of the European Commission of 19 March 2010 on harmonised conditions of use of radio spectrum for mobile communication services on board vessels in the European Union⁵;
- (c) “MHz” means megahertz;
- (d) “GSM system” means an electronic communications network, that complies with the GSM standards, as published by European Telecommunications Standards Institute;
- (e) “Mobile Communication Services on Board Vessels (MCV Services)” means electronic communication services, as defined in Article 2(c) of Directive

¹ ACCMIN (RX_LEV_ACCESS_MIN); as described in GSM standard ETSI TS 144 018

² RXLEV (RXLEV-FULL-SERVING-CELL); as described in GSM standard ETSI TS 148 008

³ Discontinuous transmission, or DTX; as described in GSM standard ETSI TS 148 008

⁴ Timing advance; as described in GSM standard ETSI TS 144 018

⁵ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:072:0038:0041:EN:PDF>

2002/21/EC of the European Parliament and of the Council⁶, provided by an undertaking to enable persons on board a vessel to communicate via public communication networks using a GSM system without establishing direct connections with land-based mobile networks;

- (f) “Radio Regulations” means the 2008 edition of the Radio Regulations made under Article 13 of the Constitution of the International Telecommunication Union as amended from time to time;
- (g) “Vessel Base Transceiver Station” or “Vessel-BS” means a mobile pico-cell located on a vessel and supporting GSM services in the 900 MHz and/or 1 800 MHz bands;
- (h) “the 900 MHz band” means the 880-915 MHz band for uplink (terminal transmit, base station receive) and 925- 960 MHz band for downlink (base station transmit, terminal receive);
- (i) “the 1 800 MHz band” means the 1 710-1 785 MHz band for uplink (terminal transmit, base station receive) and 1 805-1 880 MHz band for downlink (base station transmit, terminal receive); and
- (j) all technical terms, unless the contrary intention appears, shall have the meaning assigned to them in the Radio Regulations.

6 This Notice of Variation forms part of the Licence and must be attached to the Licence.

7 This Notice of Variation shall take immediate effect.

Issued by Ofcom

⁶ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:108:0033:0050:EN:PDF>

Notes for Licensees:

1. This Notice of Variation does not affect the requirement, where necessary, to obtain licences or authorisations under other legislation or from other countries prior to the installation or operation of a Vessel Base Transceiver Station, in particular outside UK territorial waters. The Licensee is encouraged to seek its own independent professional advice in this respect.
2. This NoV implements the Commission Decision insofar as it relates to authorising the Vessel Base Transceiver Station.
3. Further guidance and information can be obtained from:

Ofcom Licensing Centre
Riverside House
2a Southwark Bridge Road
London, SE1 9HA

Tel. +44 (0)300 123 1000 or +44 (0)20 7981 3131

Fax. +44 (0)20 7981 3333

<http://www.ofcom.org.uk>

and, in respect of any ship survey and certification requirements:

The Maritime and Coastguard Agency
Survey and Certification
Spring Place
105 Commercial Road,
Southampton SO15 1EG.

Tel: +44 (0) 2380 329100

Fax: +44 (0) 2380 329466

<http://www.mcga.gov.uk>