

Compliance

Barrett 4000 series Transceivers comply to the following communications standards:

Australian / New Zealand Standard

MF and HF Radio Communications.

Equipment in the land mobile service utilising single sideband suppressed carrier emission:

AS/NZS 4770:2000

FCC Part 90.

FCC Part 87.

Innovation, Science and Economic Development Canada (ISED) RSS-125 Iss: 3

Barrett 4000 series Transceivers comply to the following EMC standard:

EN301 489-1 V 1.4.1 (2002-08).

Barrett 4000 series Transceivers comply to the following electrical safety standard:

EN60950-1:2002.

ISED Non-interference Disclaimer

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s).

Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

FCC RF Exposure Compliance Statement

The Barrett 4000 Series Transceivers have been evaluated and comply with the Federal Communications Commission (FCC) and Innovation, Science and Economic Development Canada (ISED) RF exposure limits for the General Population/Uncontrolled exposure environment.

In addition, the Transceivers comply with the following standards and guidelines:

- FCC 96-326, Guidelines for Evaluating the Environmental Effects of Radio-Frequency Radiation
- FCC OET Bulletin 65 Edition 01-01 (2001) Supplement C, Evaluating Compliance with FCC
- Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields
- ANSI/IEEE C95.1-1992, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
- ANSI/IEEE C95.3-1992, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation. Please note that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure Warning

To ensure optimal Transceiver performance and to avoid exposure to excessive electromagnetic fields, the antenna system must be installed according to the instructions provided.

High voltages exist on the antenna during transmission and tuning. Do not touch the antenna during these activities. RF burns may result.

Install the grounding system or counterpoise as directed to prevent RF burns from any metal part of the Transceiver.

Safe working distance is based on continuous exposure to CW type transmissions, as set out in the ICNIRP Exposure Guidelines (1998) for occupational exposure. Safe working distance can be reduced with normal voice communication.



For ISED and FCC compliance, when the PRC-4090 HF SDR Transceiver is used at a power level of 150 watts PEP and a 13 dBi gain antenna, the antenna(s) used with this Transceiver should be located at least 14.4 metres from the operator and should not be co-located or operating in conjunction with any other antenna or transmitter.



For ISED and FCC compliance, when the PRC-4090 HF SDR Transceiver is used in a vehicular environment at a power level of 150 watts PEP with 1.5 dBi gain antenna, the antenna(s) used with this Transceiver should be located at least 3.9 metres from the operator and should not be co-located or operating in conjunction with any other antenna or transmitter.

RSS-Gen Transmit Antenna Statement

This radio transmitter [6468A-4090HF] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Le présent émetteur radio [identifier le dispositif par son numéro de certification d'ISDE] a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal. Les types d'antenne non inclus dans cette liste, et dont le gain est supérieur au gain maximal indiqué pour tout type figurant sur la liste, sont strictement interdits pour l'exploitation de l'émetteur.

Under Innovation, Science and Economic Development regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by ISED. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (E.I.R.P.) is not more than that necessary for successful communication.

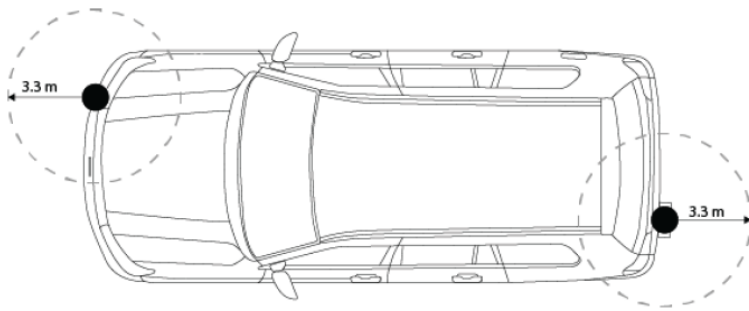
Typical antenna types and minimum separation distance:

Antenna type*	Gain (dBi)	PEP (W)	Minimum safe separation distance (m)	Typical environment
Automatic tuned and Whip	0	150	3.3	Vehicle
Magnetic Loop	1.5	150	3.9	Vehicle
Multi-wire Broadband	5	150	5.8	Fixed
Log-Periodic	13	150	14.4	Fixed
Automatic tuned and Whip	0	100	2.7	Vehicle
Magnetic Loop	1.5	100	3.2	Vehicle
Multi-wire Broadband	5	100	4.7	Fixed
Log-Periodic	13	100	11.8	Fixed
Automatic tuned and Whip	0	30	1.5	Manpack
Magnetic Loop	1.5	30	1.8	Vehicle
Multi-wire Broadband	5	30	2.6	Fixed
Log-Periodic	13	30	6.5	Fixed

* All antennas listed have an impedance of 50Ohms.

The above antennas are identified for reference only. It is important that the installer and operator maintain a minimum safe separation distance with the actual antenna used in the installation and to insure, in a vehicular environment, that the transmitter is only used when persons outside the vehicle are at least the recommended lateral distance away.

The image below shows an example of minimum recommended separation distance from antenna in a vehicular environment.



Note: References to Vehicular environments and minimum safe operating distances relate to persons outside the vehicle only and not to persons within the vehicle.