

2050 Wireless control HF transceiver



“The time and complexity to install HF transceivers into vehicles has been significantly reduced with the introduction of the Barrett 2050 Wireless control HF transceiver”.

- Wireless handset with LCD display
- Wireless speaker
- Optional GPS receiver incorporated within the 2019 automatic tuning mobile antenna



2050

wireless control

www.barrettcommunications.com.au

BCB205500/4

HF Radio Communications



Features

- Compact water-resistant wireless handset set with LCD display.
- No cabling required between the main RF unit, the control handset and the speaker.
- The handset cradle and wireless speaker only require a power supply between 10 and 18 VDC.
- Wireless handset operation and display identical to existing 2050 control heads.
- Wireless handset operates up to seven metres* from the vehicle.
- Multiple speakers supported.

Security

The protocol between the handset, speaker and the HF transceiver RF module is proprietary and not based on any current wireless protocols such as Bluetooth® and 802.11. This protocol and the spread spectrum frequency selection are specifically designed to operate in high RF environments from HF through to VHF and UHF.



Wireless control handset with security tethering cord

The handset can be removed from the vehicle by the authorised operator disabling the use of the HF transceiver when unattended. For fleet use a security tethering cord is supplied to avoid the unit being removed from the vehicle.

The handset has internal batteries (not user replaceable to preclude easy removal) and is charged by the mounting cradle that comes in two parts enabling mounting on a dash top or a dash vertical face.

Following installation and on initial power up the HF transceiver RF module automatically 'pairs' the speaker and handset to itself with a unique security code. This ensures that if vehicles are operated in close proximity their respective wireless links do not interfere with each other.

*Range depends on location of wireless adapter in the vehicle and conditions.

Should a handset or speaker need to be redeployed or replaced, a key sequence on the handset and a reset button on the speaker clears the current pairing information enabling automatic pairing on a new HF transceiver RF module.

No GPS antenna is visible on vehicle exterior when using the GPS receiver option fitted internally in the 2019 automatic tuning mobile antenna.

Logistics

All the options currently available for the Barrett 2050 transceiver are available with the Barrett 2050 Wireless control HF transceiver.

All major internal modules of the Barrett 2050 Wireless control HF transceiver are identical to the Barrett 2050 transceiver. The RJ-45 connector has been retained to enable use with conventional control heads simplifying support logistics

About the 2050 Wireless Control HF Transceiver

The Barrett 2050 Wireless Control HF transceiver, the centerpiece of the 2000 series of HF communications equipment, combines current technology with the intuitive "ease of use" that has become synonymous with Barrett Communications' equipment. Teaming the versatile 2050 transceiver with other 2000 series products provides email, fax, telephone and data connectivity within an HF network and onwards to both the international telephone network and the Internet.

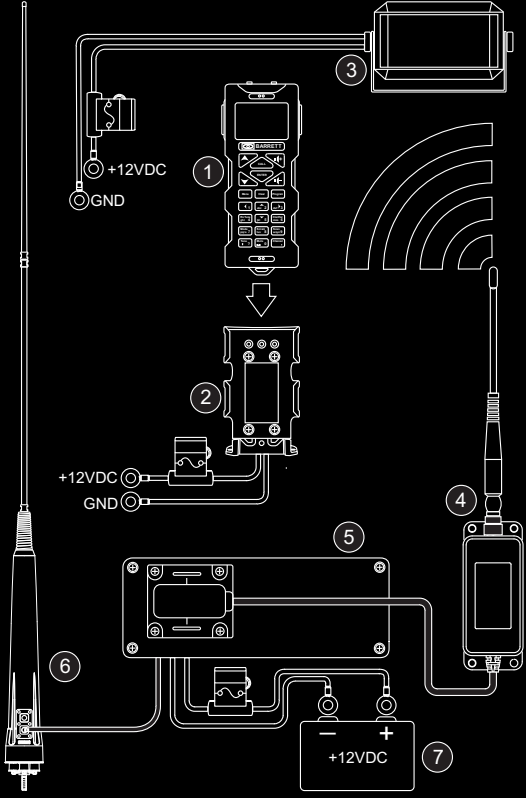
- Secure long range voice, email, telephone and tracking
- Rapid mobile or base station installation
- Independent of all other communications networks
- Reliable and easy to operate
- Free to air - no call costs

2019 automatic tuning mobile antenna with GPS receiver option fitted internally



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Typical 2050 Wireless control HF transceiver mobile configuration example



- ① Wireless control handset
P/N BC205500
- ② Wireless handset cradle
P/N BC205501
- ③ Wireless speaker
P/N BC205503
- ④ Wireless adaptor
P/N BC205502
- ⑤ 2050 HF transceiver RF module
P/N BC205000
- ⑥ Optional 2019 automatic tuning
mobile HF antenna
P/N BC201900
- ⑦ 12 Volt DC power source



The handset mounting cradle, which also charges the battery, separates to allow mounting on the top or the front of dashboards



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General Transceiver Specifications

(For full 2050 transceiver specifications please see Barrett 2050 HF transceiver brochure Part No: BCB2050)

Standards	Exceeds/complies with Australian/ New Zealand standard AS/NZS 4770:2000 and AS/NZS 4582:1999 Exceeds/complies with EMC and vibration standard IEC 945 Complies with MIL-STD 810F for drop, dust, temperature, shock and vibration
Transmit frequency range	1.6 MHz to 30 MHz (continuous)
Receive frequency range	250 kHz to 30 MHz (continuous)*
Channel capacity	Up to 500 programmable channels (simplex or semi-duplex)
Operating modes	J3E (USB, LSB) - H3E (AM) - J2A (CW) - J2B (AFSK) Optional J2B (AFSK) with narrow filter
Operating temperature	-30°C to +70°C humidity 95% relative, non-condensing
Frequency hopping	25 or 5 hops per second with external synchronisation unit (ESU) supplied when the option is fitted
Supply voltage	2050 -13.8 VDC +20% / -10% (negative ground) polarity protected. Over voltage protected
Current consumption	470 mA standby (muted, back lighting off)
Selcall system	Based on CCIR 493-4, four and six digit systems. Protocol available for free distribution. Fully compatible with other major HF manufacturers' four and six digit systems including encrypted systems
RF output power	125 W PEP voice ± 1.5 dB or 30 W PEP voice ± 1.5 dB or 10 W PEP voice ± 1.5 dB
Duty cycle	100% two tone input signal with fan option
Current consumption	Voice average less than 9 Amps typical Two tone less than 12 Amps typical

Wireless link specifications

- Digital frequency hopping, TDMA radio, 260 channels 2.4 GHz ISM Band
- Output power max 1 mW
- High resistance to multipath interference
- High RF field immunity
- Digital audio transceiver with high speed digital control channel
- Automatic sense of standard Barrett 2050 front panel via RJ-45 connector
- Multiple speakers supported from one HF transceiver RF module

Wireless handset specifications

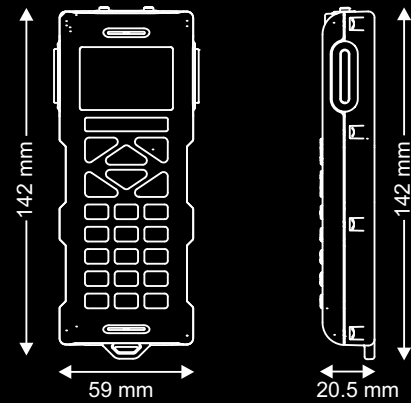
Standby current	25 mA
Operational current	50 mA
Battery Life	6 hours (approx)
LCD Status display	"Auto Off" if no HF transceiver RF module located
Input voltage	To handset cradle 10-18 volts DC (to supply charge controller in handset when docked)

Wireless speaker specifications

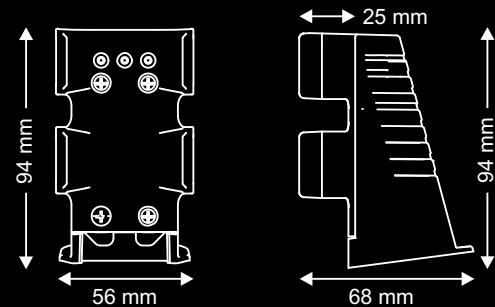
Standby current	<10 mA linked to HF transceiver RF module
Operational current	50 mA + speaker volume setting (max 10 W drive)
Input voltage	10-18 volts DC

* reduced sensitivity 250 kHz to 500 kHz

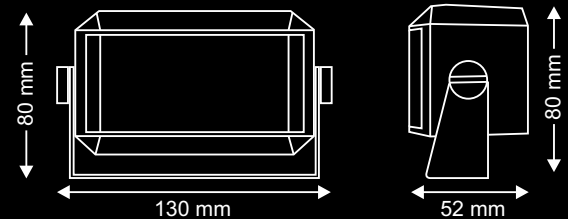
2050 wireless handset dimensions



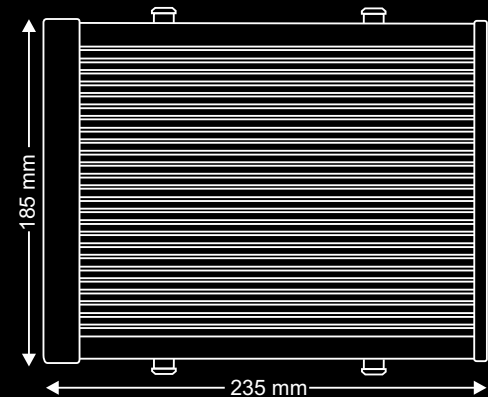
2050 wireless handset cradle dimensions



2050 wireless speaker dimensions



2050 main transceiver unit Weight 2.36 kg



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