

# 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



[www.barrettcommunications.com.au](http://www.barrettcommunications.com.au)

BCB205500/6



## 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.

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 adaptor in the vehicle and conditions



**Wireless control handset with security tethering cord**

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.

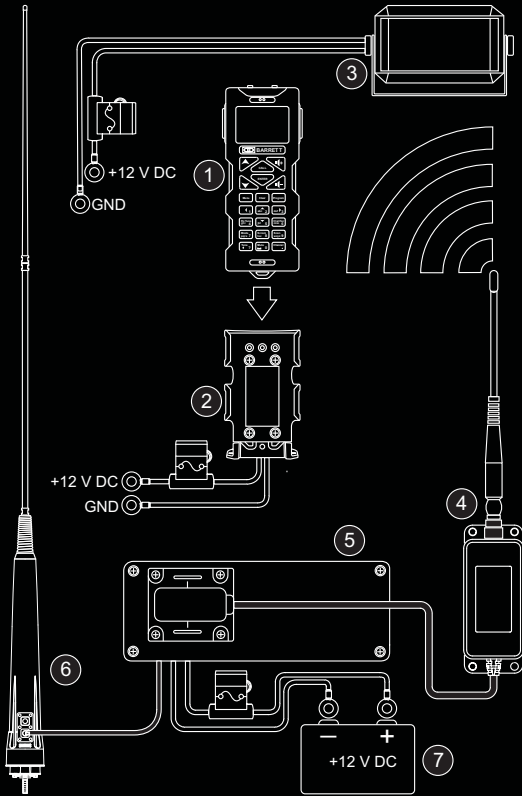
- Secure long range voice, email, telephone and tracking
- Rapid mobile or base station installation
- Independent of all other communications networks
- Reliable and easy to operate
- Free to air - no call costs

**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 V DC power source



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



# 2050

wireless control



## HF Radio Communications

### 2050 Wireless control HF transceiver

#### General transceiver specifications

(For full 2050 transceiver specifications please see Barrett 2050 HF transceiver brochure Part No: BCB205001)

<b>Standards</b>	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 810G for drop, dust, temperature, shock and vibration
<b>Transmit frequency range</b>	1.6 MHz to 30 MHz (continuous)
<b>Receive frequency range</b>	250 kHz to 30 MHz (continuous)*
<b>Channel capacity</b>	Up to 500 programmable channels (simplex or semi-duplex)
<b>Operating modes</b>	J3E (USB, LSB) - H3E (AM) - J2A (CW) - J2B (AFSK) Optional J2B (AFSK) with narrow filter
<b>Operating temperature</b>	-30°C to +70°C humidity 95% relative, non-condensing
<b>Frequency hopping</b>	25 or 5 hops per second with external synchronisation unit (ESU) supplied when the option is fitted
<b>Supply voltage</b>	2050 -13.8 V DC +20% / -10% (negative ground) polarity protected. Over voltage protected
<b>Current consumption</b>	470 mA standby (muted, back lighting off)
<b>Selcall system</b>	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
<b>RF output power</b>	125 W PEP voice ±1.5 dB or 30 W PEP voice ±1.5 dB or 10 W PEP voice ±1.5 dB
<b>Duty cycle</b>	100% two tone input signal with fan option
<b>Current consumption</b>	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

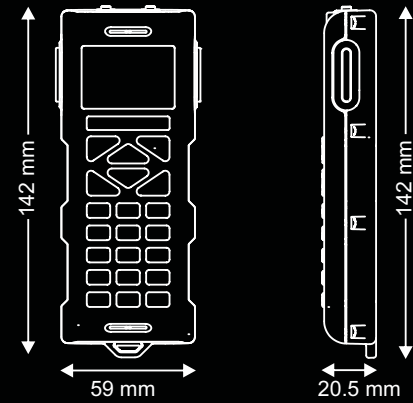
<b>Standby current</b>	25 mA
<b>Operational current</b>	50 mA
<b>Battery life</b>	6 hours (approx)
<b>LCD status display</b>	"Auto Off" if no HF transceiver RF module located
<b>Input voltage</b>	To handset cradle 10 to 18 V DC (to supply charge controller in handset when docked)

#### Wireless speaker specifications

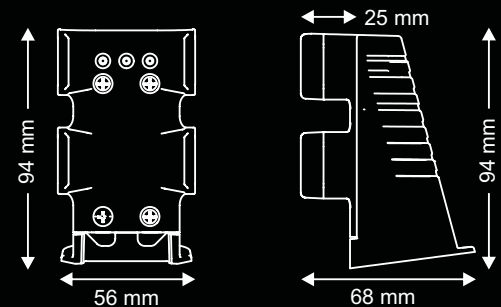
<b>Standby current</b>	<10 mA linked to HF transceiver RF module
<b>Operational current</b>	50 mA + speaker volume setting (max 10 W drive)
<b>Input voltage</b>	10 to 18 V DC

\* reduced sensitivity 250 kHz to 500 kHz

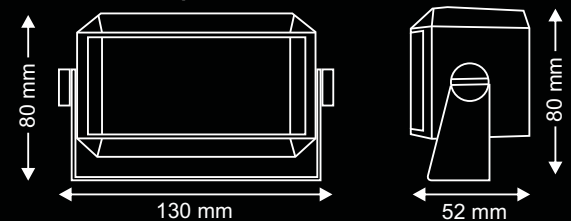
2050 wireless handset dimensions



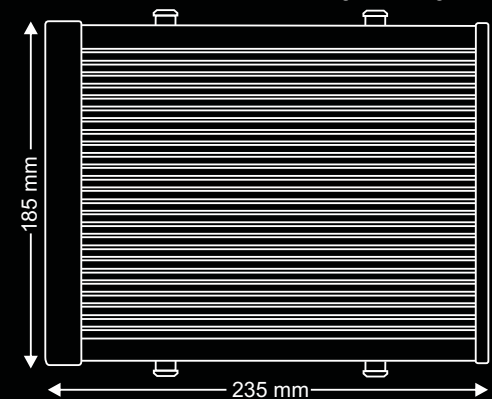
2050 wireless handset cradle dimensions



2050 wireless speaker dimensions



2050 main transceiver unit Weight 2.36 kg



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