Operating Manual

Barrett Desktop Console (BCA40020)

BCM40020/2

s/w v1.6.2

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Contents

INTRODUCTION 1 5

Terms and Abbreviations 6

Console Diagrams 7

Desktop Console (front) 7

Desktop Console (side) 7

Desktop Console (rear) 8

Basic Functionality 9

Switches 9

SET-UP SCENARIOS 2 11

Scenario 1 11

Connection Diagram 12

Enabling Remote Head Mode 13

Scenario 2 16

Connection Diagram 17

Disabling Remote Head Mode 18

SPECIFICATIONS 3 19

Connectors 19

Aux Control Head / BoB Connector 19

Dimensions 19

Limited 3 Year Warranty Statement 20

Contact Details 21

INTRODUCTION 1

The Barrett Desktop Console is designed to work in conjunction with a Barrett 4050 HF SDR Transceiver.

The Barrett Desktop console incorporates a 4050 Control head for full transceiver functionality, IP or direct connectivity to transceiver, external 24V power supply, desk microphone and USB interface. It has a built in speaker, detachable boom microphone and supports standard headsets and PTT (push to talk) foot switches.

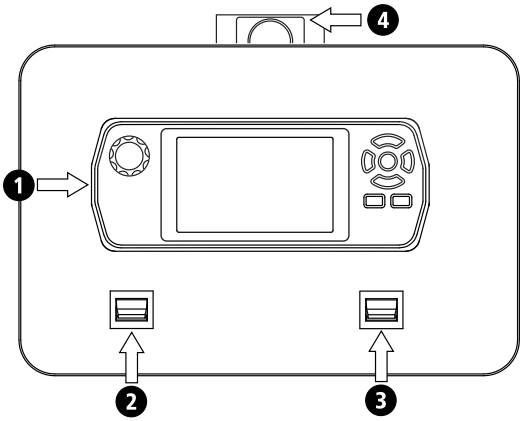
For more information on networking and operation, please consult the Barrett IP Connectivity Guide (P/N BCM40507) and/or Barrett 4050 HF SDR Operating Manual (BCM40500) respectively.

Terms and Abbreviations

Term	Definition
HF	High Frequency
IP	Internet Protocol
PTT	Push to Talk
SDR	Software Defined Radio
USB	Universal Serial Bus

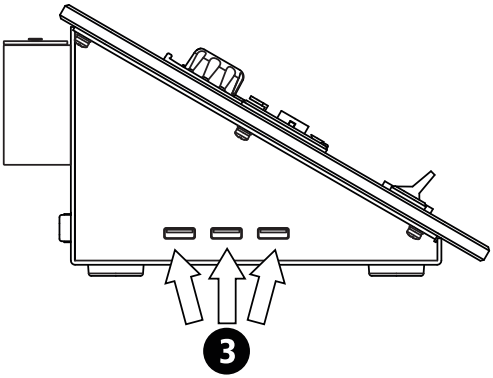
Console Diagrams

Desktop Console (front)



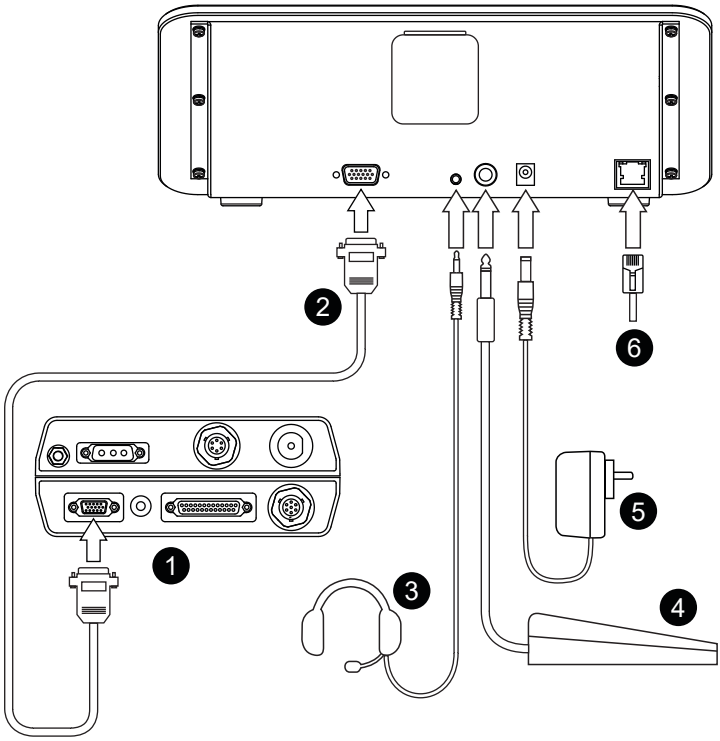
1	Barrett 4050 HF SDR Transceiver Control head (P/N BCS40005)
2	PTT switch - Momentary
3	PTT switch - Latched
4	Boom mic connection

Desktop Console (side)



1	USB 2.0 Ports for WiFi Adaptor, data import/export or firmware upgrade.

Desktop Console (rear)



1	Barrett 4050 HF SDR Transceiver (P/N BC40500)
2	Control head control cable - 6 metres (P/N BCA40005)
3	Headphones (P/N BCA40013) or Headset with Boom mic (P/N BCA40040) connection
4	PTT Foot switch connection (P/N BCA207642)
5	12V DC Power input
6	Ethernet (RJ45)

Basic Functionality

The Barrett Desktop Console has the same functionality as a Barrett 4050 control head with the PTT switches on the front of the console acting as the microphone PTT connected to the standard 4050. These switches initiate transmit mode in the transceiver.

For further information regarding the operation of the Barrett 4050 HF SDR Transceiver, please refer to the Barrett 4050 HF SDR Transceiver Operating Manual (P/N BCM40500).

Switches

The right-hand switch is latched PTT.

Flick the switch downwards for continuous transmission. Transmit mode will be halted only when the switch is returned to the neutral position

The left-hand switch is momentary PTT.

Holding this switch up or down will initiate transmit mode on the transceiver. Releasing the switch will end transmission.

Note: If connected to a foot switch, the foot switch will act as momentary PTT when pressed. Functionality of the Desktop Console switches is retained.

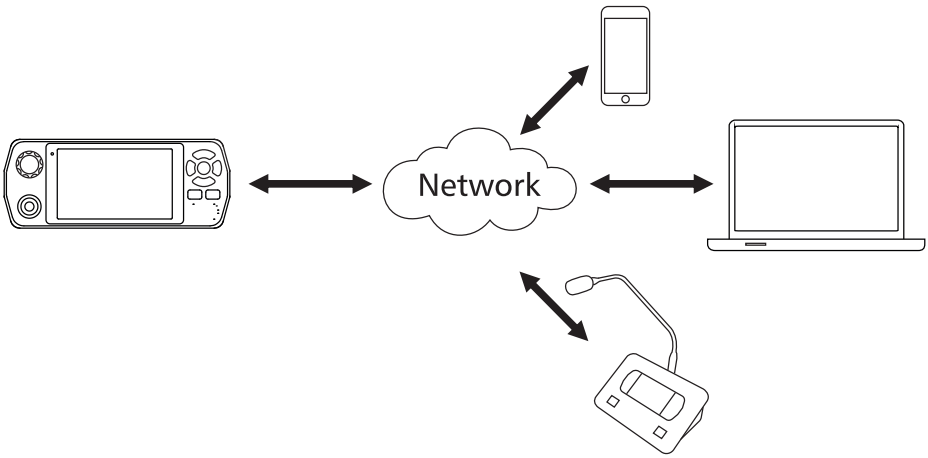
SET-UP SCENARIOS 2

Scenario 1

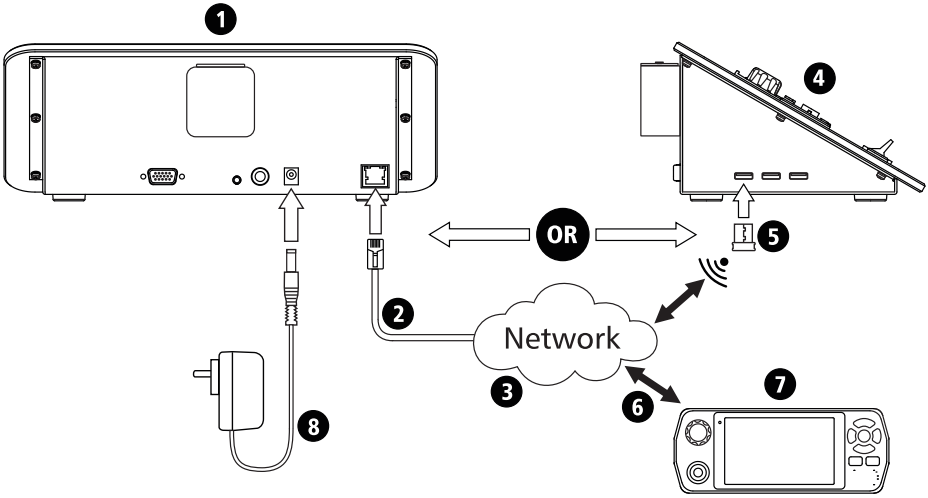
In this scenario, the desktop console and any other devices are connected to a Barrett 4050 HF SDR Transceiver via a network as shown in the digram below.

This set-up has particular applications for situations where an operator is stationed in a different room or location to the transceiver. Full functionality of the transceiver is retained.

For further detail on the types of networked configurations available, please refer to the Barrett 4000 Series IP Connectivity Guide (P/N BCM40507).



Connection Diagram



1	Desktop console (rear) (P/N BCA40020)
2	Ethernet (RJ45) cable
3	Local or Wide Area network
4	Desktop Console (side) (P/N BCA40020)
5	WiFi Adaptor (P/N BCO40508)
6	Wired or Wireless network connection
7	Barrett 4050 HF SDR Transceiver (P/N BCA40500)
8	12V DC Power Input

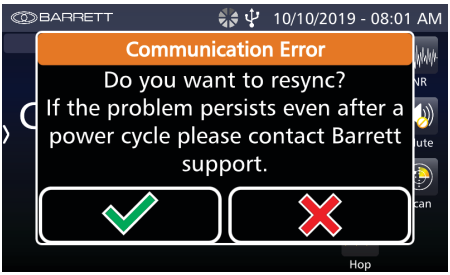
Enabling Remote Head Mode

The Desktop Console must be configured into 'Remote Head Mode' to function correctly via network. The following instructions lay out how to configure a desktop console to Remote Head Mode when connected via a network:

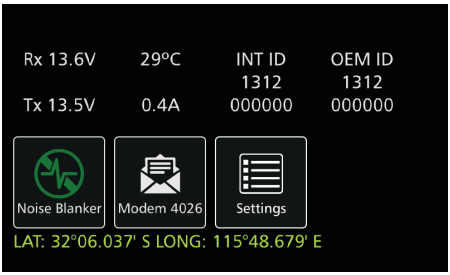
1. Ensure the desktop console is connected via a 12VDC power supply via the input on the rear of the console.

2. A communication error may occur as the console will attempt to connect to a transceiver. Acknowledge the dialogue box.

   (This will only appear if the Desktop Console was not previously in Remote Head Mode).

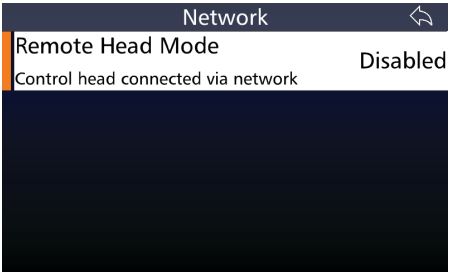


3. Swipe from the left edge of the screen and select Settings.

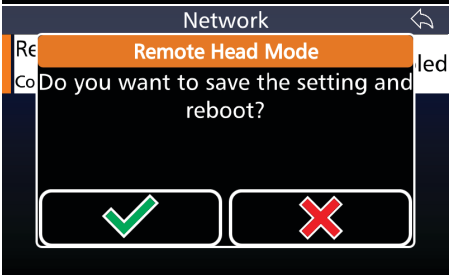


4. From Settings, **long press** the Network icon. This will unlock the 'Remote Head Mode' feature in the Network menu.

5. Select 'Remote Head Mode' and select 'Enabled'.



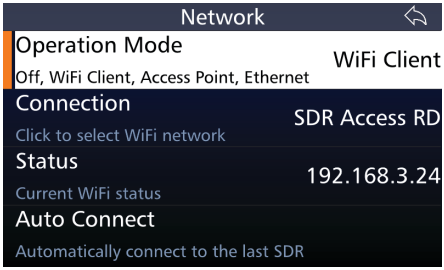
6. Select the green ticks when prompted. The head will restart.



After the reboot:

7. Insert a USB WiFi adaptor into a USB port on the side of the console or connect to the network via Ethernet cable.
8. Configure the network (as per IP Connectivity Guide)
9. Press the “Network” button on the left

10. Configure the network
11. Return to main screen

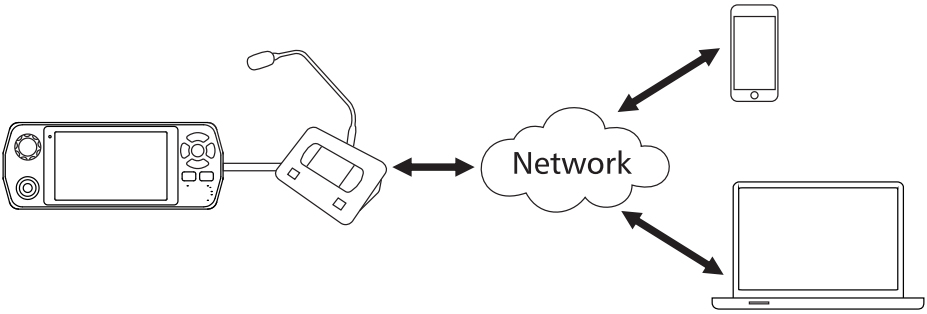


12. Select one of the listed SDRs or enter the IP address / host name into the top field

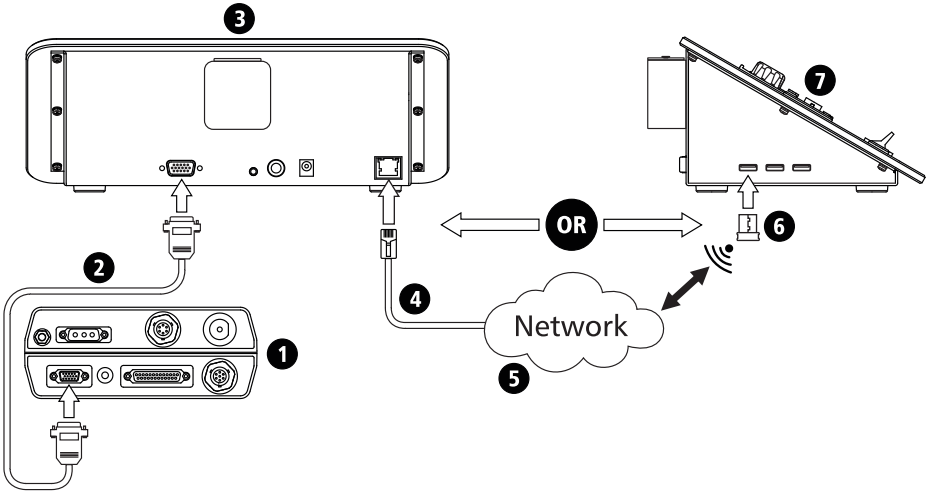
Scenario 2

In this scenario, the desktop console is directly connected to the Barrett 4050 HF SDR Transceiver by a 15-way cable. All other devices connect to the desktop console via a network as shown in the diagram below.

Here, the desktop console acts a as a secondary control head and has applications primarily for situations needing the added security of a direct connection. This includes situations when multiple personnel wish to monitor the same transceiver but are still located in the same room.



Connection Diagram



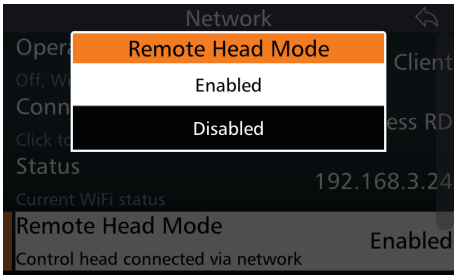
1	4050 HF SDR Transceiver
2	Control Head control cable
3	Desktop Console (rear)
4	Ethernet (RJ45) cable
5	Network
6	Barrett WiFi Adaptor
7	Desktop Console (side)

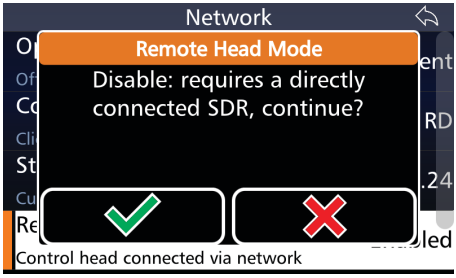
Disabling Remote Head Mode

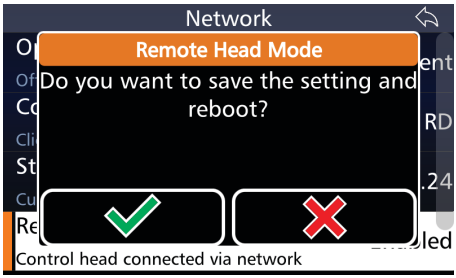
Remote Head Mode will need to be disabled when moving a desktop console from a networked configuration to a directly connected one. The following instructions outline this procedure.

In all other case, set up as directed in Scenario 1.

1. If already connected to a SDR, go to "Settings", long press on "Network" icon. If not connected to any SDR, long press the “Network” icon on the left of the “Connect to SDR” screen.
2. Select "Remote Head Mode", then select "disabled"
3. Answer the questions with the green tick ("yes"). The transceiver will reboot and the Desktop Console can be disconnected.







SPECIFICATIONS 3

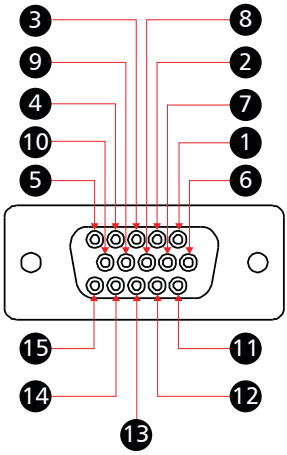
For specifications regarding the operation of the Barrett 4050 HF SDR Transceiver Control head, please refer to the Barrett 4050 HF SDR Transceiver Operating Manual (P/N BCM40500).

Connectors

Standard Connectors:	12V DC Power Supply
	boom mic socket (female XLR)
	Ethernet (RJ45)
	USB 2.0
	PTT (6.35mm mono)
	Headphone (3.5mm 4 position jack (TTRS))

Aux Control Head / BoB Connector

These pins are dependant on hardware revisions. Revisions are marked in the table below as Ax where x is the revision number. The revision number can be viewed under Settings < System Info < Version Information.



1. VCC
2. CAN Bus positive pin
3. CH Audio+
4. Rear speaker+
5. Ground
6. Ground
7. CAN Bus negative pin
8. CH Audio-
9. Rear speaker-
10. CAN bus termination
11. Control Head detection
12. not connected
13. USB+ (A11 or later)
14. USB- (A11 or later)
15. USB 5V (A11 or later)

Dimensions

185mm (l) x 270mm (w) x 105mm (h)

Warranty Statement

Barrett Communications (hereafter referred to as 'Seller') provides a three (3) year warranty on all Barrett products from the date of shipment from the Seller. A one (1) year warranty from the date of shipment from the Seller is provided for all batteries.

Each warranty guarantees acceptable performance of the product under normal recommended conditions for the duration of the warranty period. In cases of accident, abuse, incorrect installation or maintenance by a non-Seller representative, subjection to abnormal environmental conditions, negligence or use other than those in accordance with instructions issued by the Seller, the warranty shall be voided. In addition, this warranty shall not cover low performance – specifically the distance or quality of transmission and reception - due to unfavourable environmental or locational conditions. Nor shall this warranty cover the quality of transmission and reception of transceivers mounted in vehicles or vessels that have not been sufficiently electrically suppressed.

Should any fault due to bad design, workmanship or materials be proven at any time within the warranty period, the Seller will rectify such fault free of charge provided that the equipment is returned, freight paid, to Barrett Communications Pty Ltd head office or to an authorised service centre. The repaired or replaced product will remain covered under and throughout the term of the original warranty period up to its expiration. No repair or replacement will extend the warranty term past the original thirty-six (36) month anniversary of the original date of shipment from the Seller.

Firmware and software (pre-installed, stand-alone or provided as an update), hereafter referred to as 'Software', is guaranteed to perform acceptably within the specifications provided by the Seller, provided that the Software is within the warranty period.

Should Software not perform acceptably, the Seller will use all commercially reasonable efforts to correct such nonconformity as reported to the Seller directly or via a support representative. The Seller is not obliged to update Software under warranty if the nonconformity is caused by a) the use or operation of the Software in an environment other than intended or recommended by the Seller in relevant documentation, or b) modifications made to the Software not authorised or undertaken by the Seller or a representative of said Seller.

Subject to the matters set out in this warranty, no liability, expressed or implied is accepted for any consequential loss, damage or injury arising as a result of a fault in the equipment and, all expressed or implied warranties as to quality or fitness for any purpose are hereby excluded.

This warranty does not extend to products supplied by the Seller which are not designed or manufactured by it. The Seller will however make every endeavour to ensure that the purchaser receives full benefit on any warranty given by the original equipment manufacturer.

This warranty is restricted to the original purchaser except where the original purchaser is a reseller authorised by the Seller who has purchased for the purpose of resale, warranty shall be extended to the reseller's customer.

Contact Details

Our customer / dealer technical support department can be contacted via land mail, email, telephone or via support ticket on the technical support web page.
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