Uniden®

Bearcat® 680

Owner's Manual

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Uniden is a registered trademark of Uniden America Corporation.
Bearcat is a registered trademark of Uniden America Corporation.

NOTE ***Features, specifications, and availability of optional accessories are all subject to change without notice.***

UNPACKING

Unpack your Bearcat 680 and check the contents against this list:

- Bearcat 680 CB 2-way mobile radio
- Microphone
- Mounting Bracket Kit
- DC Power Cord
- 6-pin to 4-pin microphone adapter
- Reference Guide
- Part 95 Subpart D (FCC Rules)

If any items are missing or damaged, contact your place of purchase immediately.

DESCRIPTION

Your Uniden Bearcat 680 represents the highest quality communications device designed for use in the Citizens Band Radio Service. It will operate on any of the 40 AM frequencies authorized by the Federal Communications Commission (FCC).

The Citizens Band Radio Service is under the jurisdiction of the Federal Communications Commission (FCC). Any adjustments or alterations which would alter the performance of the transceiver's original FCC type acceptance, or which would change the frequency determining method, are strictly prohibited. Replacement or substitution of crystal, transistors, ICs, regulator diodes, or any other part of a unique nature, with parts other than those recommend by Uniden, may cause violations of the technical regulations in Part 95 of the FCC Rules or in violation of type acceptance requirements in Part 2 of the rules.

EMERGENCY OPERATION

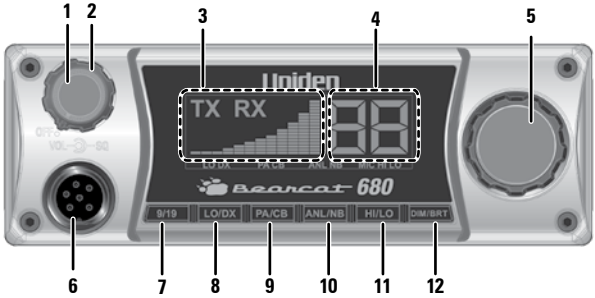
1. Press ***9/19*** or turn **Channel Selector** knob to **Channel 9**.
2. Press ***PTT*** switch on microphone and speak clearly.
3. If there is no response, select an active channel and ask that party to relay your emergency broadcast on **Channel 9**.

NOTE

All channels except Channel 9 may be used for normal communication. The FCC reserves Channel 9 for emergencies involving the immediate safety of individuals or protection of property. Use Channel 9 to render assistance to a motorist.

This is an FCC rule and applies to all CB radio operators.

CONTROLS AND FUNCTIONS



1. ***Volume Control*** knob with ***Power On/Off.***
2. ***SQUELCH*** knob: Reduces background noise when there is no incoming signal.
3. S/RF Meter: Displays Send/Receive signal strength.
4. Channel Number display.
5. ***Channel*** selection knob: Selects transmission and reception channels.

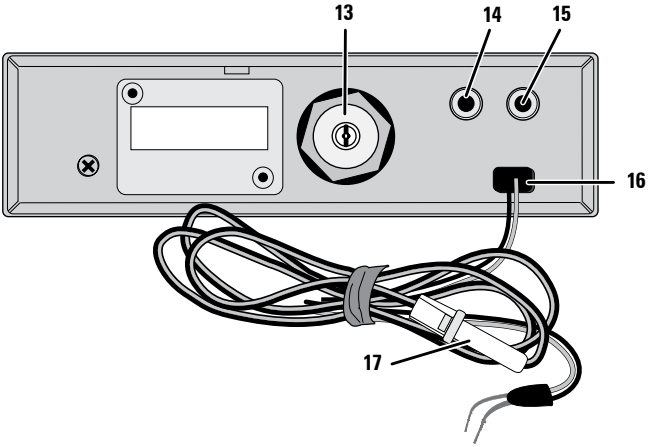
NOTE ***All channels except Channel 9 may be used for normal communication. The FCC reserves Channel 9 for emergencies involving the immediate safety of individuals or protection of property. Use Channel 9 to render assistance to a motorist.***

This is an FCC rule and applies to all CB operators.

6. Microphone socket (6 poles)
7. ***9/19:*** Emergency channel selection.
8. ***LO/DX:*** RF Gain. Improves reception in strong signal areas.
9. ***PA/CB***: Selects **PA** (Public Address) or **CB** (Citizens Band).

NOTE ***Do not use* PA *function unless an external speaker is connected.***

10. ***ANL/NB:*** Turns ***ANL*** (Automatic Noise Limiter)/***NB*** (Noise Blanker) feature on and off. ***ANL*** reduces external noise and ***NB*** reduces interference from vehicle ignition systems.
11. ***HI/LO***: Adjusts microphone sensitivity (Mic gain).
12. ***DIM/BRT***: Changes LCD backlight intensity between Day and Night modes.



13. ***Antenna:*** Connects antenna to the unit.
14. ***PA SP***: Connects optional external 8-ohm, 4-watt speaker for use as a public address system.

NOTE ***To prevent acoustic feedback, separate the microphone from the speaker when operating the PA at high output levels.***

15. ***EXT. SP***: Connects an 8-ohm 4-watt speaker to remotely monitor the receiver.

When the external speaker is plugged in, the internal speaker is off.

16. ***POWER***: Connects DC power to transceiver.
17. Fuse

INSTALLATION

MOBILE STATION INSTALLATION

Plan the location of the transceiver and microphone bracket before beginning installation.

1. Select a location that is convenient for operating the radio, but does not interfere with the driver or passenger.
2. Install bracket with self-tapping screws provided.
3. Connect wiring (see page 7).
4. Attach the microphone bracket to side of the radio.
5. Attach radio to bracket.

Mobile Station Antenna

Because the maximum power output of the transmitter is limited by the FCC, the quality of your antenna is very important. To achieve the maximum transmission distance, Uniden strongly recommends that you install only a high quality antenna. You have just purchased a superior transceiver - don't diminish its performance by installing an inferior antenna.

Only a properly matched antenna system will allow maximum power transfer from the 50 ohm transmission line to the radiating element. Your Uniden dealer is qualified to help you select the proper antenna for your requirements. A whip style antenna may be used for automobile installation.

A short 'loaded' whip antenna is easier to install on an automobile, but its efficiency is less than that of a full quarter-wave whip antenna.

Connecting the Power Cords

Uniden recommends connecting the power lead to the Ignition Switch Accessory Terminal. This way, the transceiver is automatically turned off when the ignition switch is turned off.

As an alternative, the power cord may be connected to an available terminal on the fuse block or to a point in the wiring harness. However,

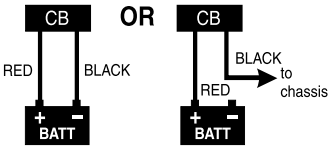
caution must be taken to prevent a short circuit. If in doubt, contact your vehicle dealer for information.

Ground Information

NOTE ***This transceiver may be installed and used in any 12-volt DC negative ground system vehicle.***

Negative Ground System

With a negative ground system, the negative (-) battery terminal is usually connected to the vehicle motor block.



Connect the red DC power cord from the transceiver to the positive (+) battery terminal or other convenient point. Then connect the black power cord to the vehicle chassis or negative (-) battery terminal.

INSTALL 6-PIN TO 4-PIN ADAPTER

The Bearcat 680 is pre-configured for Uniden's new 6-pin wireless, noise-cancelling technology, available in 2012. Your Bearcat 680 comes with an adapter to connect the radio's 6-pin microphone to a current standard 4-pin microphone.

1. Insert the 6-pin side of the adapter into the Bearcat 880 6-pin microphone connection.
2. Plug a standard 4-pin microphone connector into the 4-pin side of the adapter.

MARINE INSTALLATION

Consult your dealer for information regarding marine istallation. It is important to adequately ground the system and to prevent electrolysis between the fittings in the hull and the water.

USING YOUR BEARCAT 680

S/RF METER

You can check your incoming and outgoing signal strength as you use your Bearcat 680. The 12-column LCD display (refer to item number

3 on page 4) displays this data. Press and hold the ***PTT*** button on the microphone to see the RF output power levels. Release the ***PTT*** button to see incoming signal strengh.

RECEIVE

Be sure that the power source, antenna, and microphone are properly connected before proceeding.

1. Turn unit **ON**. Set ***VOLUME*** to a comfortable level.
2. Select **CHANNEL**.
3. Set noise limitations as desired ***(ANL/NB)***.
4. Adjust squelch.
   - Turn ***SQUELCH*** fully clockwise so only strong signals can get through.
   - Turn ***SQUELCH*** fully counterclockwise until you hear a hiss. Everything gets through - noise, weak signals, and strong signals.
   - Turn ***SQUELCH*** back clockwise until the hiss stops. Only clearer signals get through.

Set Squelch only when the radio is not receiving a strong signal.

5. Press ***LO/DX*** button to set the RF gain sensitivity to Local or Distance.
6. Press ***HI/LO*** to adjust the microphone sensitivity (mic gain) between LO and HIGH.

TRANSMIT

Perform a voltage Standing Wave Ratio (SWR) measurement prior to using the transmitter. A SWR ratio in excess of 2:1 may damage the transmitter.

Be sure to read and understand Part 95, FCC Rules and Regulations, before operating your transmitter.

1. Select a channel.
2. Press ***HI/LO*** to adjust the microphone sensitivity (mic gain) between LO and HIGH.

3. When the channel is clear, press the ***PTT*** button and speak. Release the button when you have finished speaking.

You can also transmit while you are on emergency channels 9 or 19. Press the ***PTT*** button to transmit emergency information.

PREVENTIVE MAINTENANCE

Every six months:

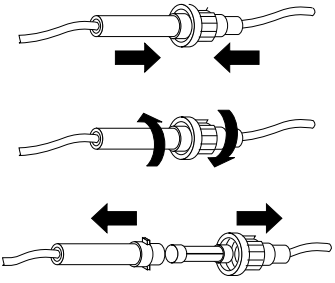
1. Check the Standing Wave Ratio (SWR).
2. Be sure all electrical connections are tight.
3. Inspect antenna coaxial cable for wear or breaks in shielding.
4. Be sure all screws and mounting hardware are tight.

MAINTENANCE

The Bearcat 680 is designed to give you years of trouble-free service. There are no user-serviceable parts inside. Except for the fuse in the DC power cord, no maintenance is required.

To replace a blown fuse:

1. Press ends of the fuse holder together. Twist to open. Carefully separate the two pieces.
2. Remove the fuse and inspect. If blown, replace with the same type fuse.



Use only the fuse specified for your Bearcat 680. Failure to do so may void your warranty.

TROUBLESHOOTING

In the event of system malfunction, perform the following procedures:

Problem	***Suggestion***
Unit does not power up	• Check power cord connections. • Check fuse. • Check vehicle electrical system.
No reception	• Check microphone connection. • Set ***CB/PA*** to ***CB***. • Check ***VOLUME*** and ***SQUELCH***. • Check antenna. • Check antenna connection. • Set ***LO/DX*** to ***DX***.
Poor Reception	• Check ***VOLUME*** and ***SQUELCH***. • Be sure antenna ***SWR*** is normal. • Set ***LO/DX*** to ***DX***.
No Transmission	• Set ***CB/PA*** switch to ***CB***. • Check microphone connection. • Set ***HI/LO*** to ***HI***.
Low Transmission	• Set ***HI/LO*** to ***HI***.

If you do not get satisfactory results after performing the above checks, call the ***Uniden Customer Service Center*** at 1-800-297-1023, 8:00 a.m. to 5:00 p.m. CST, Monday through Friday.

SERVICING YOUR TRANSCEIVER

Technical information, diagrams, and charts are provided on request. It is the user's responsibility to see that this radio is operating at all times in accordance with the FCC Citizens Radio Service regulations. We highly recommend that you consult a qualified radio/telephone technician for servicing and aligning this CB radio product.

When ordering parts, be sure to specify the correct model number and serial number of the unit.

SPECIFICATIONS

GENERAL

Channel:	40
Frequency Range:	26.965 - 27.405 MHz
Frequency Control:	PLL Synthesizer
Antenna Impedance:	50 ohms
Power Input:	13.8VDC
Current Drain	
TX:	AM Full Modulation 1.5A (max)
RX:	At no signal: 200mA
Operating Temperature:	-22℉ to 140℉ (-30℃ to 60℃)
Accessories:	DC Power Cord Microphone Microphone Hanger Mounting Bracket
Size (W x D x H):	6.3 in x 6.3 in. x 2.2 in. (without knobs and jacks) (160 mm x 160 mm x 54 mm)
Weight:	2.2 Pounds

TRANSMITTER

Output Power:	4 watts
Emission Type:	6A3
Hum and Noise:	Better than 40 dB
Frequency Tolerance:	±0.002%
Modulation Percentage (Peak):	100%
Spurious Rejection:	-70 dB
Output Impedance:	50 ohm, unbalanced

RECEIVER

Sensitivity at 10 dB S+N/N:	0.5 µV
Sensitivity at 500 mW Audio Output:	0.5 µV
Squelch Threshold:	0.5 µV
Antenna Impedance:	50 ohms
Squelch Tight:	1000 µV
Signal Meter S-9:	100 µV
Audio Output Power (max.):	5 watts
Audio Output (10% Dist.):	4 watts

Adjacent Channel Rejection:	55dB
Image Rejection:	65dB
Internal Speaker Impedance:	16 ohms
External Speaker Impedance:	8 ohms
PUBLIC ADDRESS	
Output Power at 10% Distortion:	4 watts

Specifications shown are typical and subject to change without notice.

TWO-YEAR EXTENDED WARRANTY

Important: Evidence of original purchase is required for warranty service.

WARRANTOR: UNIDEN AMERICA CORPORATION ("Uniden")

ELEMENTS OF WARRANTY: Uniden warrants, for two years, to the original retail owner, this Uniden Product to be free from defects in materials and craftsmanship with only the limitations or exclusions set out below.

WARRANTY DURATION: This warranty to the original user shall terminate and be of no further effect two years after the date of original retail sale. The warranty is invalid if the Product is (A) damaged or not maintained as reasonable or necessary, (B) modified, altered, or used as part of any conversion kits, subassemblies, or any configurations not sold by Uniden, (C) improperly installed, (D) serviced or repaired by someone other than an authorized Uniden service center for a defect or malfunction covered by this warranty, (E) used in any conjunction with equipment or parts or as part of any system not manufactured by Uniden, or (F) installed or programmed by anyone other than as detailed by the owner's manual for this product.

STATEMENT OF REMEDY: In the event that the product does not conform to this warranty at any time while this warranty is in effect, warrantor will either, at its option, repair or replace the defective unit and return it to you without charge for parts, service, or any other cost (except shipping and handling) incurred by warrantor or its representatives in connection with the performance of this war-

ranty. Warrantor, at its option, may replace the unit with a new or refurbished unit. THE LIMITED WARRANTY SET FORTH ABOVE IS THE SOLE AND ENTIRE WARRANTY PERTAINING TO THE PRODUCT AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES OF ANY NATURE WHATSOEVER, WHETHER EXPRESS, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS WARRANTY DOES NOT COVER OR PROVIDE FOR THE REIMBURSEMENT OR PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES.

Some states do not allow this exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you.

LEGAL REMEDIES: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This warranty is void outside the United States of America.

PROCEDURE FOR OBTAINING PERFORMANCE OF WARRANTY: If, after following the instructions in the owner's manual you are certain that the Product is defective, pack the Product carefully (preferably in its original packaging). The Product should include all parts and accessories originally packaged with the Product. Include evidence of original purchase and a note describing the defect that has caused you to return it. The Product should be shipped freight prepaid, by traceable means, to warrantor at:

Uniden America Corporation
Parts and Service Division
4700 Amon Carter Blvd
Fort Worth, TX 76155
(800) 297-1023, 8 a.m. to 5 p.m., Central, Monday through Friday

RADIO CODE DEFINITIONS

The following list contains common "10-Codes" used by CB radio operators for faster communication and better understanding.

Code	Meaning	Code	Meaning
10-1	Received poorly	10-34	Trouble at this station
10-2	Receiving well	10-35	Confidential information
10-3	Stop transmitting	10-36	Correct time is
10-4	OK, message received	10-37	Wrecker needed at
10-5	Relay message	10-38	Ambulance needed at
10-6	Busy, stand by	10-39	Your message is delivered
10-7	Out of service, leaving air	10-41	Please turn to channel
10-8	In service, subject to call	10-42	Traffic accident at
10-9	Repeat message	10-43	Traffic tie up at
10-10	Transmission completed, standing by	10-44	I have a message for you
10-11	Talking too rapidly	10-45	All units within range please report
10-12	Visitors present	10-50	Break channel
10-13	Advise Weather/ Road conditions	10-60	What is next message number
10-16	Make pickup at	10-62	Unable to copy, use phone
10-17	Urgent business	10-63	Net directed to
10-18	Anything for us?	10-64	Net clear
10-19	Nothing for you, return to base	10-65	Awaiting your next message/ assignment
10-20	My location is	10-67	All units comply
10-21	Call by telephone	10-70	Fire at
10-22	Report in person to	10-71	Proceed with transmission in sequence
10-23	Stand by	10-77	Negative contact
10-24	Completed last assignment	10-81	Reserve hotel room for
10-25	Can you contact	10-82	Reserve room for
10-26	Disregard last information	10-84	My telephone number is
10-27	I am moving to channel	10-85	My address is
10-28	Identify your station	10-91	Talk closer to microphone
10-29	Time is up for contact	10-93	Check my frequency on this channel
10-30	Does not conform to FCC rules	10-94	Please give me a long count
10-32	I will give you a radio check	10-99	Mission completed, all units secure
10-33	EMERGENCY TRAFFIC	10-200	Police needed at