

# Uniden®



## ***PC687***

### Owner's Manual



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

## SAFETY NOTICE

The antenna used for this radio must be properly installed and maintained and must provide a separation distance of at least 34 cm (13.4 Inches) from all persons and must not be collocated or operated in conjunction with any other antenna or transmitter. Never transmit if any person is closer than the specified distance to the antenna.

Note that Uniden does not specify or supply any antenna with this transceiver. While a 0 dBi gain antenna is normal for a typical installation, the above limit applies to any antenna with up to 3 dBi gain.

L'appareil est conforme aux normes d'Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes : (1) Ce dispositif ne doit pas causer d'interférences et (2), il doit pouvoir accepter les interférences, incluant celles pouvant nuire à son fonctionnement normal.

Changes or modifications to this product or use of accessories not expressly approved by Uniden, or operation of this product in any way other than as provided in the Uniden Owner's Manual could void your authority to operate this product.

A complete Owner's Manual in French can be downloaded from <http://www.uniden.com/>.

## UNPACKING

Your PC687 contains the following:

- PC687 CB 2-way mobile radio
- Microphone and hanger
- Mounting Bracket Kit
- DC Power Cord
- Reference Guide
- Part 95 Subpart D (FCC Rules)

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

## DESCRIPTION

Your PC687 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.***

## FEATURES

- CB AM 40 channels (4W)
- 7 weather channels with Weather Alert (Weather Alert in CB mode only)
- Public Address function (External speaker required - not provided)
- Automatic Noise Limiter
- Noise Blanker
- High Cut
- Transmit/Receive LED (Red and yellow-green)
- CH9 direct tune
- Dimmer control (Bright/Dim)
- Variable RF Gain
- Variable MIC Gain
- Function Meter (RF and Signal Strength)
- Variable Volume control
- Variable Squelch control
- 6-pin microphone jack

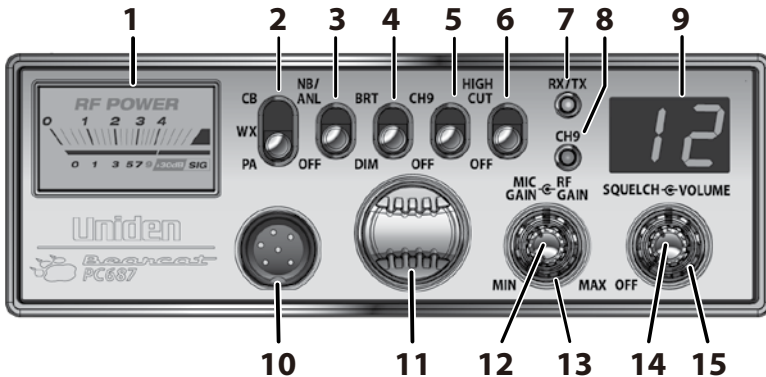
## EMERGENCY OPERATION

1. Move the **CH9/OFF** switch to **CH9**; the radio automatically tunes to Channel 9 and disables the channel selector.
2. Press and hold **PTT** and speak clearly. Release **PTT** after speaking.
3. If there is no response, move the **CH9/OFF** switch to **OFF**, go to CB mode, and select Channel 19.
4. Press and hold **PTT** and speak clearly. Release **PTT** after speaking.
5. If there is still no response, find a party on another channel and ask that party to relay your emergency broadcast on Channel 9.

**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. **Function** meter. When receiving, the meter shows the received signal strength. When transmitting, the meter shows the output power.
2. **CB/WX/PA** switch: Selects **CB** (Citizens Band) or **WX** (Weather) modes, or activates the **PA** (Public Address) feature.

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

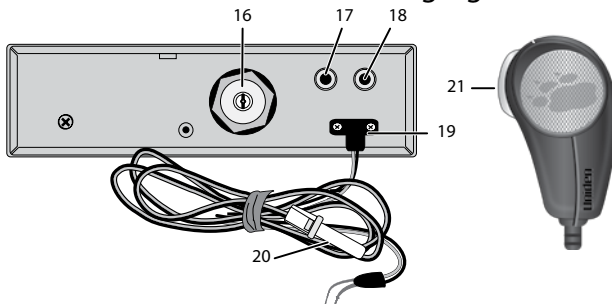
3. **NB/ANL/OFF** switch: Activates the Noise Blanker (**NB**) and

Automatic Noise Limiter (**ANL**) features. **NB** reduces external noise and **ANL** reduces background noise from the car engine and other sources. **OFF** turns off both the **NB** and **ANL** features.

4. **BRT/DIM** switch: Adjust backlight brightness.
5. **CH9/OFF** switch: Move the switch to select emergency channel 9 or turn to off for normal CB operation.

**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.**

6. **HIGH CUT/OFF** switch: Select **HIGH CUT** to apply the High Cut filter.
7. **RX/TX** LED: Indicates whether the radio is transmitting (red) or receiving (yellow-green).
8. **CH9** LED: Indicates that emergency channel 9 is selected.
9. Channel Indicator: Displays the channel currently in use.
10. 6-Pin Microphone Jack: Connects the radio to the detachable microphone (included).
11. Channel Selector knob: Turn this knob to select CB or Weather channels.
12. **RF GAIN** inner knob: Turn the inner knob to reduce interference in strong signal areas.
13. **MIC GAIN** outer knob: Turn the outer knob to adjust the microphone sensitivity.
14. **VOL** inner knob: Turn the inner knob to turn the radio on and off and to adjust the volume.
15. **SQUELCH** outer knob: Turn the outer knob to reduce background noise when there is no incoming signal.



16. Antenna socket: Connects antenna to the unit.
17. **PA SP**: Connects optional external 8-ohm, over 5-watt speaker for use as a public address system.

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

18. **EXT. SP**: Connects optional external 8-ohm, over 5-watt speaker for CB and WX operation.

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

19. **POWER**: Connects DC power to transceiver.

20. Fuse.

21. **PTT**: Push-to-Talk.

## INSTALLATION

### MOBILE 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 power cords (see page 9).
4. Attach the microphone bracket to side of the radio.
5. Attach radio to bracket.

#### **Mobile Antenna**

***WARNING! The antenna used for this radio must be installed at least 13.4 inches (34 cm) away from all persons. The antenna must not be collocated or used with any other antenna or transmitter.***

***CAUTION: Never operate your radio with no antenna or with a damaged antenna cable. This can damage the radio.***

You must purchase an antenna to operate this radio. 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.

### ***Wireless CB Microphone Installation (Optional)***

Your PC687 is compatible with Uniden's BC906W Wireless CB Microphone. With a range up to 300 feet, the BC906W allows you to use your CB to communicate even when you need to get out of your vehicle. Follow the instructions provided in the BC906W kit to install the wireless microphone.

### ***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.

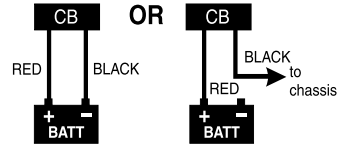
### ***Ground Information***

***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.



## USING YOUR PC687

### TURN PC687 ON/OFF

Turn the **VOL** knob clockwise until the unit turns on and the display backlight turns on.

Turn the **VOL** knob counter-clockwise to turn the unit off.

### CB MODE

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

#### Basic Settings

1. Turn unit on. Set volume to a comfortable level.
2. Set switch to **CB**.
3. Select a CB channel (**CH** knob).
4. Set noise limitations as desired (**NB/ANL/OFF** switch).
5. Adjust squelch.
  - Turn **SQ** knob fully clockwise so only strong signals can get through.
  - Turn **SQ** knob fully counterclockwise until you hear a hiss. Everything gets through - noise, weak signals, and strong signals
  - Turn **SQ** knob clockwise until the hiss stops. Only clearer signals get through.

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

6. Press and hold **PTT** and check the multifunction meter. It will

show the RF output power. ~~Adjust as needed. (Delete)~~

7. Turn **RF** knob to set RF gain sensitivity. Normally, the knob is turned clockwise to maximum.
8. Turn **MIC** knob to adjust microphone sensitivity for transmission. Normally, the knob is turned clockwise to maximum.
9. Set the brightness (**BRT** or **DIM**).

The Weather Alert system monitors the last weather channel you were on before you changed to CB mode. It sounds a seven-second signal when it decodes a severe weather alert issued for your area. Change to Weather mode for details.

## **WEATHER MODE (WX MODE)**

Your radio combines a CB radio with a Weather radio and a Weather Alert system. The Weather radio continually broadcasts weather conditions when you are in Weather mode.

***Weather Alert function does not work in Weather mode.***

1. Set the **CB/WX/PA** switch to **WX**. Your radio is now in Weather radio mode.
  2. Turn the channel selector knob to select 1 of 7 weather channels.
- ANL** and **NB** do not work in WX mode.

## **PA MODE**

***Using the PA mode requires an optional speaker.***

1. Switch to **PA**.
2. Press and hold **PTT** to speak.
3. Release when finished.

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

If you are in PA mode but not pressing PTT, the radio receives CB transmissions and transmits them through the PA speaker. You cannot respond to the transmission.

## PREVENTIVE MAINTENANCE

Every six months:

1. Be sure all electrical connections are tight.
2. Inspect antenna coaxial cable for wear or breaks in shielding.
3. Be sure all screws and mounting hardware are tight.

## MAINTENANCE

The PC687 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 PC687. 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 <b>CB/WX/PA</b> to <b>CB</b> . Check <b>VOL</b> and <b>SQ</b> . Check antenna. Check antenna connection. Adjust <b>RF Gain</b> .
Poor Reception	Check <b>VOL</b> and <b>SQ</b> . Adjust <b>RF Gain</b> .

<b>Problem</b>	<b>Suggestion</b>
No Transmission	Set <b>CB/WX/PA</b> switch to <b>CB</b> . Check microphone connection. Adjust <b>MIC Gain</b> .
Low Transmission	Adjust <b>MIC Gain</b> .
Calibration does not move the meter needle to the left side	Adjust the antenna height. Check all antenna connections.

If you do not get satisfactory results after performing these 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**

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: 2.1A (max)
RX:	At no signal: 400mA
Operating Temperature:	-22°F to 140°F (-30°C to 60°C)
Accessories:	DC Power Cord Microphone Microphone Hanger Mounting Bracket

Size (W x D x H): 6.31 in. x 6.45 in. x 2.16 in.  
(without knobs and jacks)  
(160.5 mm x 164 mm x 55 mm)

Weight: 2.2 Pounds

#### TRANSMITTER

Output Power: 4 watts

Emission Type: 6A3

Hum and Noise: Better than 40 dB

Frequency Tolerance:  $\pm 0.002\%$

Modulation Percentage (Peak): 100%

Spurious Rejection: -70 dB

Output Impedance: 50 ohm, unbalanced

#### RECEIVER

Sensitivity at 10 dB S+N/N: 0.5  $\mu\text{V}$

Sensitivity at 500 mW Audio Output: 0.5  $\mu\text{V}$

Squelch Threshold: 0.5  $\mu\text{V}$

Antenna Impedance: 50 ohms

Squelch Tight: 1000  $\mu\text{V}$

Signal Meter S-9: 100  $\mu\text{V}$

Audio Output Power (max.): 5 watts

Audio Output (10% Dist.): 4 watts

Adjacent Channel Rejection: 60dB

Image Rejection: 90dB

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.***

# RADIO CODE DEFINITIONS

## 10-CODES

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

<b>Code</b>	<b>Meaning</b>	<b>Code</b>	<b>Meaning</b>
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

Code	Meaning	Code	Meaning
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

## FCC PART 15 INFORMATION

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. Privacy of communications may not be ensured when using this radio.

## 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 warranty. 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**

743 Henrietta Creek Rd.  
Roanoke, TX 76262

(800) 297-1023, 8 a.m. to 5 p.m., Central, Monday through Friday

