How to Use Your Cobra 29 LTD Classic

Features of This Product
- 40 CB Radio Channels
- Heavy-Duty Dynamic Microphone
- Full 4 Watts AM RF Power Output
- SWR Calibration Meter
- Instant Channel 9
- 4-Pin Front Mount Microphone Connector
- Delta-Tune
- Switchable Automatic Noise Limiter & Noise Blanker
- Adjustable Dynamike® Boost
- 9 Ft. Mic Cord
- RF Gain

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Installation

Location

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

Select a location that is convenient for operation, yet does not interfere with the driver or passenger.

The transceiver is usually mounted to the underside of the dash with the microphone bracket beside it.

Mounting and Connection

Note

The transceiver is held in the universal mounting bracket by two thumbscrews which allow for adjustment at any convenient angle.

The bracket includes two self-tapping screws and star washers. The mounting must be mechanically strong, conveniently located.

Mounting and Connection

1. Hold the radio with the mounting bracket in the exact desired location. If there is no interference, remove the bracket and use it as a template to mark the location for the mounting screws.

2. Connect the antenna cable plug to the receptacle marked “ANT” on the back of the unit.

3. Drill the holes and secure the bracket.

continued
Note: Connecting to an accessory fuse prevents the unit from being left on accidentally, and also permits operating the unit without running the engine.

Note: In positive ground vehicles the red wire goes to the chassis and the black wire is connected to the ignition switch.

Note: Before installing the CB radio, visually check the vehicle’s battery connection to determine which terminal, positive or negative, is grounded (positive is the larger of the two) to the engine block (or chassis). A negatively grounded vehicle has its negative lead grounded to the chassis.

1. In a negative grounded vehicle, connect the red lead of the DC power cord to an accessory 12 volt fuse.

2. Connect the black lead to the negative side of the vehicle. This is usually the chassis. Any convenient location with a good electrical contact (remove paint) may be used.

3. Plug power cable into back of unit marked “Power”. Be sure to observe polarity markings.

4. Mount the microphone bracket on either side of the unit (driver’s left) using two screws supplied. Bracket should be placed under the dash so microphone is readily accessible.

5. Attach the 4-pin microphone cable to receptacle, on the front of unit and install unit on bracket securely.
Marine Installation

Ignition Noise Interference

The transceiver will not operate at maximum efficiency in a boat without a ground plate, (unless it has a steel hull). Before attempting installation, consult your dealer for information regarding an adequate grounding system and prevention of electrolysis between fittings in the hull and water.

CB Antenna

Since the maximum allowable power output of the transmitter is limited by the FCC and IC, the antenna is critical in affecting transmission distance. Only a properly matched antenna system will allow maximum power output*. Cobra loaded type antenna models are highly recommended for most installations. Consult your Cobra dealer for further details.

A standard antenna connector is provided on the transceiver for easy connection.

*Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Note

For optimum performance in passenger cars the ideal antenna location is on the center of the roof. Second choice is on the center of the trunk.

Note

Because many newer trucks feature fiberglass door skins, the outside mirror must be grounded to the chassis via a ground strap when antenna is mounted on the mirror bracket.

Note

3-way Combination Antennas are also available which allow operation of all three bands (AM-FM & CB). Using a single antenna. However, this type of antenna usually results in less than normal transmit and receive range when compared to a standard-type “Single Band” CB antenna. Contact your local dealer for further information.

Marine Installation

The transceiver will not operate at maximum efficiency in a boat without a ground plate, (unless it has a steel hull). Before attempting installation, consult your dealer for information regarding an adequate grounding system and prevention of electrolysis between fittings in the hull and water.

Ignition Noise Interference

The transceiver will not operate at maximum Use of a mobile receiver at low signal levels is normally limited by the presence of electrical noise. The primary source of noise in automobiles is from the alternator and ignition system. Typically, when signal level is adequate, the background noise does not present a serious problem. Also, when extremely low level signals are being received, the transceiver may be operated with the vehicle’s engine turned off. The unit requires very little current and therefore will not significantly discharge the vehicle’s battery.

Even though the Cobra 29 LTD Classic has an automatic noise limiter, in some installations ignition interference may be high enough to make good communications impossible. Many possibilities exist and variations between vehicles require different solutions. Consult your COBRA dealer or a 2-way radio technician for help in locating the source of a severe noise.
### Operation

**Turning On**

Make sure the power cord, antenna and microphone are connected to their proper connectors before starting.

1. The CB/PA button should be in the CB position.

2. Rotate the On/Off Volume knob clockwise to a normal listening level.

### Setting Channel Selector

Select one of forty channels and adjust volume. The selected channel is indicated by the LED readout directly above the channel selector knob.
Calibrate For SWR (Standing Wave Ratio)

SWR calibration is done to properly adjust the length of the antenna and to monitor the quality of the coaxial cable and all RF connections. This calibration is critical in order to achieve optimum performance.

1. Select channel 20.

2. Switch to the CAL position.

3. Push and hold mic button.

4. While holding mic button adjust the SWR CAL knob so the meter needle swings to the CAL M mark on the meter (located on the right).

Note
Antenna Indicator LED will illuminate when TX if SWR is high.

Note
Calibration must be made in an open area (never in a garage). Vehicle doors must be closed. No one should be standing near the antenna. (See your antenna directions for more complete information).
Note
The reading will be slightly higher on Channels 1 and 40 compared to Channel 20.

Note
When switched to SWR position the meter needle should ideally be as far to the left as possible. Anything over 3 is not acceptable. The antenna indicator will light. A slight antenna height adjustment (higher or lower) may be required. Repeat recalibration steps.

1. While still holding down the microphone button, set the S/R CAL switch to the SWR position to read the SWR reading.

2. Repeat the same steps two through five on Channel 1 and 40. This will check SWR for all channels.

Rotate the On/Off Volume knob clockwise. The green RX/TX LED will be illuminated.
The S/RF-SWR-CAL switch must be in the S/RF position to read the meter.

Selecting A Channel

1. Switch to NORMAL to select desired channel.

S-Meter

Swings proportionately to strength of incoming signal when receiving.

1. The S/RF-SWR-CAL switch must be in the S/RF position to read the meter.

NB-ANL/ANL/OFF (Noise Blanker/Automatic Noise Limiter) Switch

1. When switched to ANL the Automatic Noise Limiter is activated. This helps reduce noise created by the vehicle's electronics.

When switched to NB/ANL position the RF Noise Blanker is also activated, providing increased noise filtration.

When switched to OFF position all noise filtration will be turned off.

Note

The RF noise blanker is very effective in reducing repetitive noises such as ignition interference.
RF Gain Control

The RF Gain is used to optimize reception in strong or weak signal areas.

1. Switch to BRT or DIM to control brightness of the channel indicator and multi-function meter for day or nighttime driving.

2. Rotate the RF Gain knob counterclockwise to reduce gain in strong signal areas. In weak signal areas turn clockwise to increase gain.
Operation

Setting Delta-Tune
Delta-Tune functions as a "fine tune" control enabling you to capture a more readable signal, as well as eliminate adjacent channel interference.

1. Rotate Delta-Tune knob to the center position for optimum tuning.

Setting Squelch
Squelch is the "control gate" for incoming signals.

2. Full clockwise rotation closes the gate allowing only very strong signals to enter.

3. Full counterclockwise rotation opens the "gate" allowing all signals in.

4. To achieve the Desired Squelch Setting (DSS), turn the Squelch control counterclockwise until you hear noise. Now turn the control clockwise just until the noise stops. This is the DSS setting.
Setting Dynamike®

This controls the microphone sensitivity (outgoing audio level).

Caution!
Be sure the antenna is properly connected to the radio before transmitting. Prolonged transmitting without an antenna, or a poorly matched antenna, could cause damage to the transmitter.

Be sure to read the F.C.C. Rules and Regulations included with this unit before transmitting.

Operation

To Transmit

1. Select desired channel.
2. Initially, set fully clockwise so that maximum voice volume is available. Dynamike® may have to be reduced in some conditions.

Transmit

1. Push and hold mic button to transmit. Transmitter is now activated. When transmitting, hold the microphone two inches from your mouth and speak in a clear, normal voice. Release to receive.
RF Meter

This meter swings proportionately to the RF output (outgoing signal) while transmitting.

Note

1. The S/RF-SWR-CAL switch must be in the S/RF position.

External Speaker

The external speaker jack is used for remote receiver monitoring.

Note

The external speaker should have 8-ohm impedance and be rated to handle at least 4.0 watts. When the external speaker is plugged in, the internal speaker is automatically disconnected.

Note

Cobra external speakers are rated at 10 watts.

Connect an external speaker to the external speaker jack on the rear panel.
**PA (Public Address)**

1. Connect an external PA speaker to the PA jack on the rear panel.
2. Set CB/PA switch to PA position.
3. Push and hold microphone button and speak in a normal voice. Your voice will now transmit on the PA speaker.
4. Adjust PA speaker volume with the Dynamike® control.

**Note**
- Speaker should have 8-ohm impedance and be rated to handle at least 4.0 watts.
- The speaker should be directed away from the microphone to prevent acoustic feedback.
- Activity on the CB channel will be heard through the PA speaker. Adjust volume control to a normal listening level.
Temporary Mobile Set-Up

Temporary Mobile Operation
For temporary mobile operation you may want to purchase an optional automobile power adapter from your COBRA dealer. This adapter and a magnetic mount antenna allow you to quickly “install” your transceiver for temporary use.

Base Station Operation
(From 120V AC House Current)
To operate your transceiver from home or office you will need a 13.8 volt DC Power Pack rated at a minimum of 2 amps, and a properly installed base station antenna.

1. Simply connect the red (+) and black (-) leads of the transceiver to the corresponding terminals of the power pack.

2. Plug power cable into back of unit marked “Power”. Be sure to observe polarity markings.

3. Connect properly installed and matched base station antenna.

Home And Office Set-Up

Warning!
Do not attempt to operate this transceiver by connecting it directly to 120v ac.

Note
For further information call your local dealer.
How Your CB Can Serve You

The FCC gives these examples of permitted and prohibited messages for channel 9. These are only guidelines and not all-inclusive:

<table>
<thead>
<tr>
<th>Permitted</th>
<th>Example Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>&quot;Tornado sighted six miles north of town.&quot;</td>
</tr>
<tr>
<td>No</td>
<td>&quot;Post number 10. No tornado sighted.&quot;</td>
</tr>
<tr>
<td>Yes</td>
<td>&quot;Out of gas on I-95 at mile marker 211.&quot;</td>
</tr>
<tr>
<td>No</td>
<td>&quot;Out of gas in my driveway.&quot;</td>
</tr>
<tr>
<td>Yes</td>
<td>&quot;Four car accident on I-94 at Exit 11. Send police and ambulance.&quot;</td>
</tr>
<tr>
<td>No</td>
<td>&quot;Traffic moving smoothly on I-94.&quot;</td>
</tr>
<tr>
<td>Yes</td>
<td>&quot;Weather Bureau has issued thunderstorm warning. Bring sailboat into port.&quot;</td>
</tr>
<tr>
<td>No</td>
<td>&quot;Attention motorists. Weather Bureau advises snow tomorrow will accumulate 4 to 6 inches.&quot;</td>
</tr>
<tr>
<td>Yes</td>
<td>&quot;Fire in building at 539 Main, Evanston.&quot;</td>
</tr>
<tr>
<td>No</td>
<td>&quot;Halloween patrol number 3. All quiet.&quot;</td>
</tr>
</tbody>
</table>

A Few Rules You Should Know

1. Set to channel 9 for emergencies
   Be sure antenna is properly connected.

2. CB Distress Data
   When transmitting an emergency, you should request a "REACT BASE" and provide the CB distress data (called CLIP):
   - C all Sign Identify yourself.
   - Location Be exact.
   - Injuries Number. Type. Trapped?
   - Problem Give details and help needed.

Transmit CLIP repeatedly so any monitor can assist.

How Your CB Can Serve You

- Warn of traffic problems
- Provide weather and road data
- Provide help in event of an emergency
- Provide direct contact with home or office
- Assist police by reporting erratic drivers
- Get "local information" to find destination
- Communicate with family and friends
- Suggest spots to eat and sleep
- Keep you alert while traveling

A Few Rules You Should Know

1. Conversations cannot last more than 5 minutes with another station. A one minute break is required to let others use the channel.
2. You cannot blast others off the air by use of illegally amplified transmitters or illegally high antennas.
3. You cannot use CB to promote illegal activities.
4. Profanity is not allowed.
5. You may not transmit music with a CB.
6. Selling of merchandise and/or services is prohibited.

Transmit CLIP repeatedly so any monitor can assist.

Note

If no response on channel 9, try channels 19 or 14.
CB 10-Codes

Citizen Bands have adopted the "10-CODES" for standard questions and answers. These codes provide quick and easy communication, especially in noisy areas. Following are some of the more common codes and meanings:

<table>
<thead>
<tr>
<th>Code</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-1</td>
<td>Receiving poorly</td>
</tr>
<tr>
<td>10-2</td>
<td>Receiving well</td>
</tr>
<tr>
<td>10-3</td>
<td>Stop transmitting</td>
</tr>
<tr>
<td>10-4</td>
<td>OK, message received</td>
</tr>
<tr>
<td>10-5</td>
<td>Relay message</td>
</tr>
<tr>
<td>10-6</td>
<td>Busy, stand by</td>
</tr>
<tr>
<td>10-7</td>
<td>Out of service, leaving</td>
</tr>
<tr>
<td>10-8</td>
<td>In service, subject to call</td>
</tr>
<tr>
<td>10-9</td>
<td>Repeat message</td>
</tr>
<tr>
<td>10-10</td>
<td>Transmission completed standing by</td>
</tr>
<tr>
<td>10-11</td>
<td>Talking too rapidly</td>
</tr>
<tr>
<td>10-12</td>
<td>Visitors present</td>
</tr>
<tr>
<td>10-13</td>
<td>Advise weather/roads</td>
</tr>
<tr>
<td>10-14</td>
<td>Make pick up at</td>
</tr>
<tr>
<td>10-15</td>
<td>Urgent business</td>
</tr>
<tr>
<td>10-16</td>
<td>Anything for us?</td>
</tr>
<tr>
<td>10-17</td>
<td>Return to base</td>
</tr>
<tr>
<td>10-18</td>
<td>My location is</td>
</tr>
<tr>
<td>10-19</td>
<td>Call by phone</td>
</tr>
<tr>
<td>10-20</td>
<td>Report in person to</td>
</tr>
<tr>
<td>10-21</td>
<td>Stand by</td>
</tr>
<tr>
<td>10-22</td>
<td>Completed last assignment</td>
</tr>
<tr>
<td>10-23</td>
<td>Can you contact</td>
</tr>
<tr>
<td>10-24</td>
<td>Disregard last info</td>
</tr>
<tr>
<td>10-25</td>
<td>Moving to channel</td>
</tr>
<tr>
<td>10-26</td>
<td>Identify your station</td>
</tr>
</tbody>
</table>

CB 10-Codes

Time is up for contact
Does not conform to FCC rules
Emergency traffic
Trouble at this station
Confidential information
Correct time is
Wrecker needed at
Ambulance needed
Message delivered
Turn to channel
Traffic accident at
Traffic tie up at
Have a message for
All units within range please report
Break channel
What is next message number?
Unable to copy. Use phone
Net directed to
Net clear
Awaiting your next message/assignment
All units comply
Fire at
Proceed, transmission in sequence
Negative contact
Reserve hotel room for
Reserve room for
My address is
Talk closer to mic
Check my frequency on this channel
Give me a long count
Mission completed, all units secure
Police needed at
The COBRA 29 LTD Classic transceiver represents one of the most advanced AM two-way radios used as a Class D station in the Citizens Radio Service. This unit features advanced Phase Lock Loop (PLL) circuitry providing complete coverage of all 40 CB channels.

### General Specifications

<table>
<thead>
<tr>
<th>Channel</th>
<th>CB</th>
<th>Channel</th>
<th>Freq. In MHz</th>
<th>Channel</th>
<th>CB</th>
<th>Channel</th>
<th>Freq. In MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>26.965</td>
<td>21</td>
<td>27.215</td>
<td>2</td>
<td>26.975</td>
<td>22</td>
<td>27.225</td>
</tr>
<tr>
<td>6</td>
<td>27.025</td>
<td>26</td>
<td>27.265</td>
<td>7</td>
<td>27.035</td>
<td>27</td>
<td>27.275</td>
</tr>
<tr>
<td>11</td>
<td>27.085</td>
<td>31</td>
<td>27.315</td>
<td>12</td>
<td>27.105</td>
<td>32</td>
<td>27.325</td>
</tr>
<tr>
<td>16</td>
<td>27.155</td>
<td>36</td>
<td>27.365</td>
<td>17</td>
<td>27.165</td>
<td>37</td>
<td>27.375</td>
</tr>
</tbody>
</table>

### Transmitter Specifications

- **Frequency Ranges**: 26.965 to 27.405 MHz
- **Frequency Tolerance**: 0.005%
- **Frequency Control**: PLL (Phase lock loop) Synthesizer
- **Operating Temperature Range**: -30°C to +50°C
- **Input Voltage**: 13.8VDC nom. (positive or negative ground)
- **Current Drain**: Transmit: AM full mod., 1.5A (maximum); Receive: Squelched, 0.3A; full audio output, 1.2A (nominal)
- **Size**: 8-5/8” D x 7-9/32” W x 2-13/64” H
- **Weight**: 4 lbs.
- **Antenna Connector**: UHF; SO-239

### Receiver Specifications

- **Sensitivity**: Less than 1 µV for 10 dB (S+N)/N
- **Image Rejection**: 80 dB, typical
- **Adjacent-Channel Rejection**: 80 dB, typical
- **RF Gain Control**: Automatic Gain Control (AGC) -30 to 5000 kHz
- **Noise Blanker**: RF type
- **Output Power**: 4 watts
- **Frequency Response**: 300 to 3000 Hz
- **Distortion**: Less than 5% at 1000 Hz
- **Built-in Speaker**: 8 ohms, 5 watts

### PA System Specifications

- **Power Output**: 4 watts into external speaker
- **Controller for PA**: 4 lines, when PA-1 Switch is PA

(SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE)
Limited Two Year Warranty

For Products Purchased in Canada
Your new Cobra CB radio is covered by a two year replacement warranty. If any manufacturing defect becomes apparent in this product within two years from the original date of purchase, it will be replaced. Please return the CB radio to your dealer with original or copy of dated proof of purchase. This warranty does not cover damages due to careless handling, negligence, accident, abuse or failure to follow operating instructions. Alteration of this product or defacing of the serial number cancels all obligations of this warranty. This warranty gives you specified legal rights. Additional warranty rights may be provided by law in some areas.

For Products Purchased in the U.S.A.
Cobra Electronics Corporation warrants that its Cobra CB radios, and the component parts thereof, will be free of defects in workmanship and materials for a period of two years from the date of first consumer purchase. This warranty may be enforced by the first consumer purchaser, provided that the product is utilized within the U.S.A.
Cobra will, without charge, repair or replace, at its option, defective CB radios, products or component parts upon delivery to the Cobra Factory Service department, accompanied by proof of the date of first consumer purchase, such as a duplicated copy of a sales receipt.
You must pay any initial shipping charges required to ship the product for warranty service, but the return charges will be at Cobra's expense, if the product is repaired or replaced under warranty. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

Exclusions: This limited warranty does not apply: 1) To any product damaged by accident, 2) In the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs, 3) If the serial number has been altered, defaced or removed, 4) If the owner of the product resides outside the U.S.A. All implied warranties, including warranties of merchantability and fitness for a particular purpose are limited in duration to the length of this warranty. Cobra shall not be liable for any incidental, consequential or other damages; including, without limitation, damages resulting from loss of use or cost of installation.
Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

For Products Purchased Outside the U.S.A.
Please contact your local dealer for warranty information.

Optional Accessories

Replacement DC Power Cord
For in vehicle use 426-002-N-001

Replacement Mounting Bracket
For in vehicle use 251-353-9-001

Replacement Thumb Screws
For in vehicle use 634-081-9-001

Replacement Microphone Bracket
For in vehicle use 741-080-9-001

Base Loaded Magnet Mount Antenna
HG A1000

Base Loaded Magnet Mount Antenna
HG A1500

Fiberglass Antenna
HG A300 FG

Fiberglass Antenna
HG A400 FG

Stainless Steel Antenna
HG A7000
Optional Accessories cont.

4 Pin Replacement Dynamic Microphone
HG M73

Power Microphone
HG M75

4 Pin Noise Cancelling Microphone
HG M77

4 Pin Premium Noise-Cancelling Microphone
HG M84

4 Pin Premium Noise-Cancelling Microphone
Wood Grain
HG M84W

Dynamic External Speaker
HG S100

Noise Cancelling External Speaker
HG S300

Noise Cancelling With Talk Back External Speaker
HG S500

Optional Accessories

You can find quality Cobra products and accessories at your local Cobra dealer.
Operating Instructions for your Cobra 29 LTD CLASSIC

The CB Story

The Citizens Band lies between the shortwave broadcast and 10-meter Amateur radio bands, and was established by law in 1949. The Class D two-way communications service was opened in 1959. (CB also includes a Class A citizens band and Class C remote control frequencies.)

IC & FCC Regulations

Industry Canada Notice: This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: 1) this device may not cause interference, and 2) this device must accept any interference, including interference that may cause undesired operation of the device.

FCC Regulations

FCC regulations permit only “transmission” (one-party to another) rather than “broadcast” (to a wide audience). Thus, advertising is not allowed on CB channels because that is “broadcasting”.

FCC Warnings

All transmitter adjustments other than those supplied by the manufacturer as front panel operating controls, must be made by, or under the supervision of, the holder of an FCC-issued general Radio-Telephone Operator’s License. Replacement or substitution of transistors, regular diodes or other parts of a unique nature, with parts other than those recommended by Cobra, may cause violation of the technical regulations of Part 95 of the FCC Rules, or violation of Type Acceptance requirements of Part 2 of the Rules. You should read and understand Part 95 (included with this unit) of the FCC Rules and Regulations, before operating your Cobra radio, even though the FCC no longer requires you to obtain an operator’s license.

What’s Included with Your 29 LTD Classic

1. CB transceiver
2. Microphone
3. Transceiver bracket
4. Microphone bracket
5. Operating Manual
Thank you for purchasing the Cobra 29 LTD Classic CB Radio. Properly used, this Cobra product will give you many years of reliable service.

Customer Support

Should you encounter any problems with the product or not understand its many features, please refer to this owner's manual. If, after referring to the manual, you still need help, Cobra Electronics offers the following assistance services:

Automated Technical Assistance available 24 hours a day, seven days a week. E-mail questions to: productinfo@cobra.com

Cobra on the World Wide Web: Frequently Asked Questions (FAQ) can be found on-line at: www.cobra.com