



19 DX IV / 19 ULTRA IV Series CB Radio Transceiver



For more information or to order any of our products, please visit our website: www.cobra.com

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Owner's Manual

Nothing Comes Close to a Cobra®

English



Our Thanks, The CB Story, and Customer Assistance

Introduction

Thank you for purchasing the Cobra 19 Series CB Radio Transceiver. Properly used, this Cobra product will give you many years of reliable service.

The Citizens Band 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.)

Customer Assistance



Customer Assistance

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

Monday-Friday 9:00 AM- 5:00 PM EST

Call: 800-543-1608

SERVICE

Monday-Thursday 9:00AM-5:00PM EST

Call: 800-543-1608

Office:

6500 West Cortland Street, Chicago, IL, 60707

Have questions? We can help. Contact us at 800-543-1608

M-F 9:00AM-5PM EST

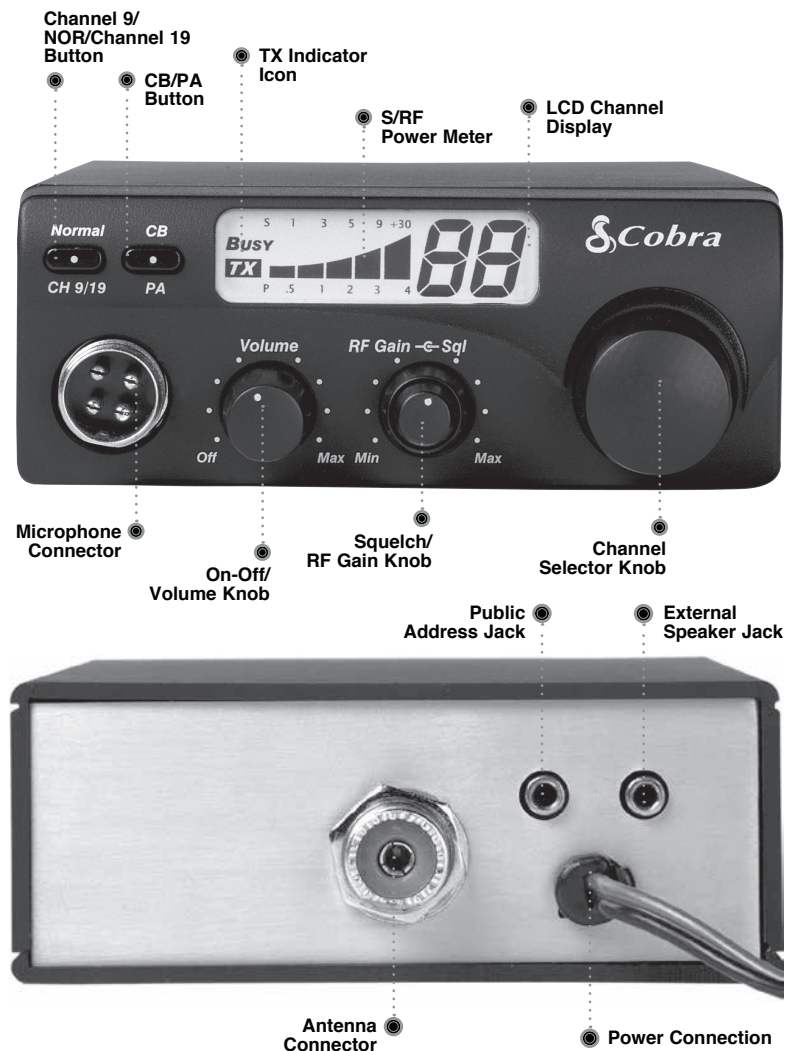
For Assistance Outside the U.S.A.

Contact Your Local Dealer





Product Features



Product Features

Features

- 40 CB Radio Channels
- Instant Channels 9/19 NOR
- PA System
- Compact Size
- Dynamic Microphone
- Nine Foot Microphone Cord
- Front Panel Microphone Connector
- RF Gain



FCC Regulations



FCC Compliance

Any changes or modifications not expressly approved by Cobra Electronics could void your authority to operate the equipment.

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.



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Included in this Package

You should find all of the following items in this package:

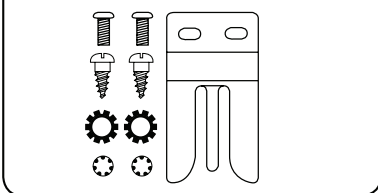
CB Transceiver



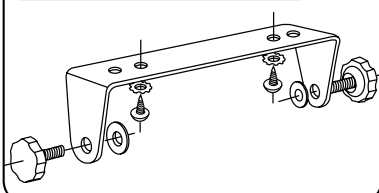
Microphone



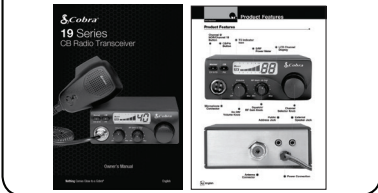
Microphone Bracket



Transceiver Bracket

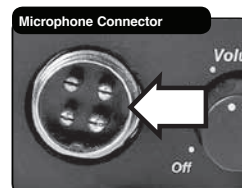
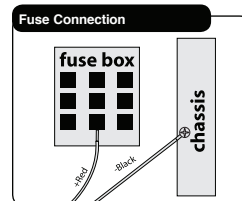
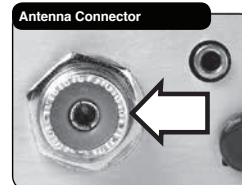
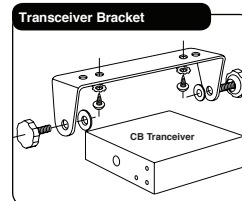


Operating Manual



Mounting and Connections

Select a location for the transceiver and microphone bracket that is convenient for operation. In automobiles, the transceiver is usually mounted to the underneath of the dash panel, with the microphone bracket beside it.



A universal mounting bracket is supplied along with self-tapping screws and star washers. The transceiver is held in the universal mounting bracket by two thumb screws, permitting adjustment at the most convenient angle.

To mount and connect your transceiver:

1. Hold the radio with mounting bracket in the exact location desired. Remove the mounting bracket and use it as a template to mark the location for the mounting screws.
2. Drill necessary holes and secure mounting bracket in location.
3. Connect the antenna cable plug to the receptacle marked "ANT" on the back of the unit.
4. Connect the red lead of the DC power cord to an accessory 12 volt fuse.
5. Connect the black lead to the negative side of the automobile. This is usually the chassis. Any convenient location with good electrical contact (remove paint) may be used.

NOTE

Before installing the CB radio, visually check the vehicle battery connections to determine which battery terminal, positive or negative (positive is the larger of the two) is grounded to the engine block (or chassis).

6. Mount the microphone bracket on right side of the transceiver or near it using two screws supplied. When mounting in an automobile, place the bracket under the dash so the microphone is readily accessible.
7. Attach the four pin microphone cable to receptacle on front of unit and install unit in bracket securely.

NOTE

For improved CB radio performance, **connect the radio power leads directly to the vehicle battery**. This helps to ensure the following: 1) reduces conducted power line noise into radio by taking advantage of the mechanical filtering properties of the vehicle battery. 2) Using the correct wire gauge between the battery and radio, helps to minimize Voltage drop to the radio transmitter section to maximize transmitter RF output power.

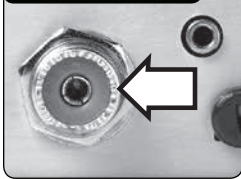


Operation

Operating Your Mobile Radio

Operation

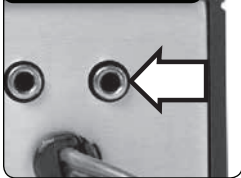
Antenna Connector



Antenna Connector

This female **Connector** on the rear panel permits connection of the transmission line cable male connector to the transceiver.

External Speaker Jack



External Speaker

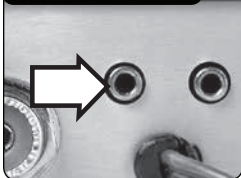
The external speaker jack on the rear panel is used for an **External Speaker**. The external speaker should have 8-ohm impedance and be rated to handle at least 4.0 watts. When the external speaker is plugged in, the internal speaker is automatically disconnected.



NOTE

Cobra external speakers are rated 15 watts.

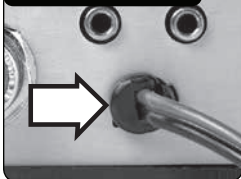
PA Speaker Jack



Public Address (PA)

An external **PA** speaker may be connected to the **PA** speaker jack when used as a public address system. The speaker should be directed away from the microphone to prevent acoustic feed-back. Physical separation or isolation of the microphone and speaker must be employed when operating the PA at high output levels.

Power Cable



Power

These wires supply **Power** to the CB radio. This cable is permanently attached to the radio. If you wish to remove the radio after installation, disconnect at fuse holder and ground connector.

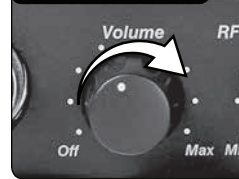


Operation

Operating Your Mobile Radio

Operation

On-Off/Volume Knob



Turning on Your Mobile Radio

Turn the **On-Off/Volume** knob clockwise to turn the power on and set the desired listening volume.

CB Antenna

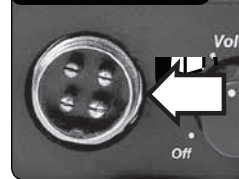
Only a properly matched **Antenna** system will allow maximum power output. In mobile installations (cars, trucks, boats, etc.), a system that is nondirectional should be used. When installed in a boat, the transceiver will not operate at maximum efficiency without a ground plate unless the vessel has a steel hull. Before installing the transceiver in a boat, consult your dealer for information regarding an adequate grounding system.



NOTE

Cobra offers a line of antennas for use with your 19 Series CB Radio. Consult your Cobra dealer or go to Cobra.com for antenna options.

Microphone Connector



Microphone Connector

Allows for convenient removal of the **Microphone** plug when storage is required. The **Microphone** **MUST** be connected to the unit at all times, when in use, for proper operation.



Operation

Operating Your Mobile Radio

Operation

Squelch

This control is used to cut **off** or eliminate receiver background noise in the absence of an incoming signal. Adjust until the receiver noise disappears. This will require the incoming signal to be slightly stronger than average receiver noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard. Only strong signals will be heard at a maximum clockwise setting.

Squelch is the “control gate” for incoming signals.

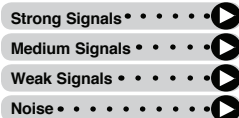
Adjust Squelch/RF Gain Knob



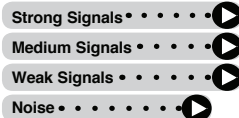
To squelch your radio:

1. Full clockwise rotation closes the gate, allowing only very strong signals to enter.
2. Full counterclockwise rotation opens the “gate,” allowing all signals in.
3. 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.

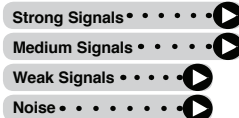
Gate Closed



Gate Open



Desired Squelch Setting (DSS)



RF Gain

This control is used to adjust receiver sensitivity. Maximum sensitivity allows weak signals to be received. However, very strong signals (such as from a nearby transmitter) can cause distortion at that setting. Adjust until the distortion disappears. Reducing the receiver’s **RF Gain** eliminates distortion from very strong incoming signals.

Adjust Squelch/RF Gain Knob



To set RF Gain:

1. Full counterclockwise rotation minimizes gain for maximum distortion control.
2. To achieve the desired level of distortion control, turn the RF Gain knob counterclockwise until the distortion is eliminated.
3. After moving away from the strong signal, turn the RF Gain knob fully clockwise to receive all possible signals.



Operation

Operating Your Mobile Radio

Operation



Selecting a Channel

Rotate the **Channel** knob clockwise until desired channel is displayed.



Channel 9/NOR/Channel 19

Set **CH 9** to obtain instant access to the emergency channel.

Set **NOR** position to use the channel knob to choose any of the 40 channels.

Set **CH 19** to obtain instant access to the information and calling channel.

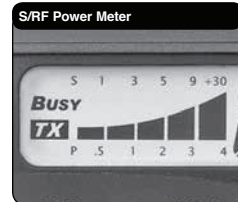


CB/PA

In the **CB** position, the **PA** function is disabled and the unit will transmit and receive on the selected channel.

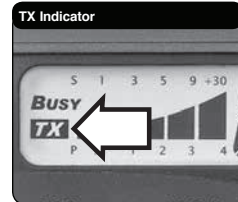
The **PA function** should not be used unless a **PA speaker** is connected.

In the **PA** position, the transmit function is disabled and the microphone output will go only to the **PA** speaker.



S/RF Power Meter

Shows relative transmitter **RF** output power and input signal strength when receiving. The Liquid Crystal Display (LCD) segments increase with signal strength.



TX Indicator

The **TX Indicator** will light when in the transmit mode. “Busy” will appear when there is an incoming signal.



Operation

Ignition Noise Interference

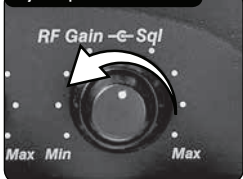
Use of a mobile receiver at low signal levels is normally limited by the presence of electrical noise. Under most operating conditions, when signal level is adequate, the background noise does not present a serious problem. Also, when extremely low level signals are being received, the transceiver may be operated with vehicle engine turned off. The unit requires very little current and therefore will not significantly discharge the vehicle battery.

Even though this radio has an automatic noise limiter, in some installations ignition interference may be high enough to make good communications impossible. Consult your authorized Cobra dealer or a two-way radio technician for help in locating and correcting the source of severe noise.

On-Off/Volume Knob



Adjust Squelch/RF Gain Knob



Operating Procedure to Receive

Be sure that power cord, antenna and microphone are connected to the proper connectors before proceeding further (see pages 4 and 5). The **CB/PA** switch should be in the CB position.

To receive:

1. Turn the radio **on** by rotating the On-Off/Volume knob clockwise.
2. Rotate the **Squelch/RF Gain** knob counterclockwise until incoming signal is heard.
3. Select the desired channel.
4. Set the **On-Off/Volume** knob and the **Squelch/RF Gain** knob to a comfortable listening level.

Operating Procedure to Transmit

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

Press-to-Talk Switch



To transmit:

1. Select the desired channel.
2. The receiver and transmitter are controlled by the **Press-to-Talk** switch on the microphone. Press the switch and the transmitter is activated; release switch to receive. When transmitting (on a clear channel), hold the microphone two inches from the mouth and speak clearly in a normal voice.



Maintenance/Adjustment

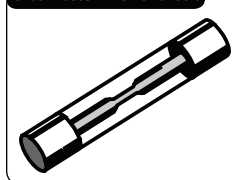
Your Cobra CB transceiver is specifically designed for the environment encountered in mobile installations. The use of all solid state circuitry and its light weight result in high reliability. Should a failure occur, however, review the following, then if necessary, replace parts only with identical parts. Do not substitute.

Check Power Source



1. Check connections to the source of power and make sure it is the 13.8 VDC required to operate your radio.

Check Fuses in DC Power Cord



2. Check the fuses in the DC power cord. The main power lead (red) has a two amp 3AG type fuse in its holder. Use only the above specified type and size fuse for maximum protection. Failure to do so will void the warranty.

Check Microphone Connection



3. Make certain the microphone is properly plugged in.

Check Antenna Connection



4. Make certain the antenna is properly assembled and connected. If you are unable to correct the problem, refer to product service on page 14 for the correct procedure for warranty and post-warranty service from Cobra.



Frequency Ranges

Operating Your Mobile Radio

Frequency Ranges

The Cobra 19 Series radio transceiver represents one of the most advanced AM two-way radios for use 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.

CB Channel	Channel Frequency in MHz
1	26.965
2	26.975
3	26.985
4	27.005
5	27.015
6	27.025
7	27.035
8	27.055
9	27.065
10	27.075
11	27.085
12	27.105
13	27.115
14	27.125
15	27.135
16	27.155
17	27.165
18	27.175
19	27.185
20	27.205

CB Channel	Channel Frequency in MHz
21	27.215
22	27.225
23	27.255
24	27.235
25	27.245
26	27.265
27	27.275
28	27.285
29	27.295
30	27.305
31	27.315
32	27.325
33	27.335
34	27.345
35	27.355
36	27.365
37	27.375
38	27.385
39	27.395
40	27.405



Specifications

Operating Your Mobile Radio

Specifications

General

Channels	CB – 40 CH
Frequency Range	CB – 26.965 to 27.405 MHz
Frequency Tolerance	0.005 %
Frequency Control	PLL (Phase Lock Loop) Synthesizer
Operating Temperature Range	-30° C TO + 65° C
Microphone	Plug-in Condenser
Input Voltage	13.8VDC nom. (negative ground)
Current Drain	Transmit: AM full mod., 1.4A (maximum) Receive: Squelched, 0.9 A; full audio output, 1.2A (nominal)
Size	1.75" H x 4.5" W x 7" D
Weight	3.25 lbs.
Antenna Connector	UHF; SO-239
Meter	LCD's; indicates relative power output and received signal strength

Transmitter

Power Output	4 watts
Modulation	AM (Amplitude Modulation)
Frequency Response	300 to 3000 Hz
Output Impedance	50 ohms, unbalanced

Receiver

Sensitivity	Less than 1 μ V for 10dB (S+N)
Selectivity	6 dB @ 7 KHz, 60 dB @ 10KHz
Image Rejection	60 dB, typical
Adjacent-Channel Rejection	50 dB, typical
Automatic Noise Limiter	Built-in



Limited One-Year Warranty

Warranty Terms:

Cobra warrants your product against all defects in materials and workmanship for a period of one (1) year from the date of original purchase.

Cobra, at our sole discretion, will repair or replace your product (with the same or comparable product) free of charge.

Cobra will not pay shipping charges that you incur for sending your product to us. Products received COD will be refused.

To make a warranty claim, we will require proof of purchase in the form of an invoice or receipt. No proof of purchase is required for factory direct purchases.

Warranty Exclusions: Warranty does not apply to your product under any of the following conditions:

1. The serial number has been removed or modified.
2. Your product has been subjected to misuse or damage (including water damage, physical abuse, and/or improper installation).
3. Your product has been modified in any way.
4. Your receipt or proof-of-purchase is from a non-authorized dealer or internet auction site including E-bay, U-bid, or other non-authorized resellers.

LIMITATION OF WARRANTY: EXCEPT AS EXPRESSLY PROVIDED HEREIN, YOU ARE ACQUIRING THE PRODUCT "AS IS" AND "WHERE IS", WITHOUT REPRESENTATION OR WARRANTY. COBRA SPECIFICALLY DISCLAIMS ANY REPRESENTATION OR WARRANTY INCLUDING, BUT NOT LIMITED TO THOSE CONCERNING THE MERCHANTABILITY AND SUITABILITY OF THE PRODUCT FOR A PARTICULAR PURPOSE. COBRA SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INCIDENTAL DAMAGES INCLUDING, WITHOUT LIMITATION, DAMAGES ARISING OUT OF THE USE, MISUSE OR MOUNTING OF THE PRODUCT.

The above limitations or exclusions shall be limited to the extent they violate the laws of any particular state. Cobra is not responsible for products lost in shipment between the owner and our service center.

General Warranty Information

Each product we manufacture is covered by our factory warranty. While each product may have unique components and policy, the general guideline below will apply to most Cobra products.

All Cobra products purchased factory-direct or from our Authorized Resellers will come with a full one to three (1-3) year warranty from the date of the original retail purchase (see policy statement above for full warranty details and exclusions).

Standard accessories packaged with each model will have a one-year factory warranty.

Accessory items have a one-year factory warranty.

Shipping to our facility is not covered in our warranty. Return shipping is included within the US.

This warranty is non-transferrable.

For the sake of clarity, 'repair or replace the Product or its defective part' does not include removal or installation work, costs or expenses which include but are not limited to labor costs or expenses.

Cobra will not be responsible for lost packages.



Product Service

If you have any questions about operation or installing your new Cobra product, PLEASE CONTACT COBRA FIRST...do not return this product to any retail store.

The contact information for Cobra will vary depending on the country in which you purchased and utilize the product. For the latest contact information, please go to www.cobra.com/support For products purchased in the U.S.A. you may call 800-543-1608.

For products purchased in the U.S.A., if your product should require factory service, please please go to www.cobra.com/support and follow the instructions for returning your product to the Cobra Factory Service Department for service.

Should there be any problems with this product or further information is needed on its features please visit www.cobra.com for support, frequently asked questions, Declarations of Conformity, and full manuals.

For Products Purchased Outside the U.S.A. or Canada

Please contact your local dealer for product service information.

For Products Used in Canada

Industry Canada Notice

This device complies with Industry Canada license-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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.



Ordering Info

You can find quality Cobra products and accessories at your local Cobra dealer, or in the U.S.A., you can order directly from Cobra.

Please visit www.cobra.com

Web orders will normally ship the next business day if received by us before 2:00 PM Eastern Time. Orders do not ship on weekends or holidays. All standard deliveries are Monday-Friday only. Saturday delivery can be requested in certain areas of the country for an additional shipping fee by calling Sales at **800-543-1608**.

Certain orders may require additional days to process prior to shipping. Holidays may also impact processing and shipping time frame. Occasionally, items may not ship due to inventory depletion. If you need your item to be expedited, **we recommend calling Sales at 800-543-1608**.

Order Acceptance

Once your order has been accepted and processed, you will receive an email that will include the shipping carrier and tracking information.

Shipping and Delivery

Free ground shipping is included to 48 states. Hawaii, Alaska and Puerto Rico ship based on assessed fee at checkout.

We require a physical address for shipping. Sorry, no P.O. Boxes or APO/FPO addresses. Please select 2-day or next day air for shipments to Hawaii or Alaska. Shipping charges are calculated on a per-product basis. Please make note of the shipping charges associated with each item.

** For safety reasons, we cannot ship power packs/Jumpacks via air delivery methods. These items are available to ship via ground service only.

**For your protection, some orders may require a signature for delivery.

NOTES