& Cobra

COBRA ELECTRONICS CORPORATION 6500 W. Cortland Street Chicago, Illinois 60707 Operating instructions for your

S)
Cobra®

FRS 200

Family Radio Service Transceiver





"Ingenious Products for Easier Communication."

How to use your



## FRS 200

### Family Radio Service Transceiver

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#### INTRODUCTION

This ultra compact, ultra clear 2-way handheld radio is a convenient way for friends or family to increase their fun—and safety—by staying in touch while on the go. All you need to do is select a common channel, push a button on the side, and talk. It's that easy and Cobra's FRS 200 radio works just as well indoors no matter what walls or structures are in the way. Your new Cobra unit uses UHF (Ultra High Frequency) which mean outstanding penetration through buildings, thick forests, hills, and other dense structures. FM (Frequency Modulation) signal transmission means crystal clear reception even in crowded environments. This is the first time professional business band frequencies are available to the general public with no costly license or air time charges.

#### **FEATURES**

- -UHF FM Frequencies
- -No License Required
- -No Air Time Fees
- -Up to 2 Miles Range
- -14 User Selectable Channels
- -Call/Ring Feature
- -LCD Display
- -Battery Saver Circuitry
- -Auto Squelch
- -Battery Low Indicator
- -High Efficiency Antenna
- -Wrist Strap

#### **TECHNICAL SUPPORT**

For technical assistance, please call our Automated Help Desk which can assist you by answering the most frequently asked questions about Cobra products.

(773) 889-3087

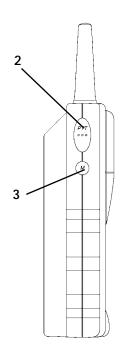
24 hours a day, 7 days a week.

A Consumer Service Representative can be reached through this same number 8:00 am - 8:00 pm, Monday through Friday, CST.

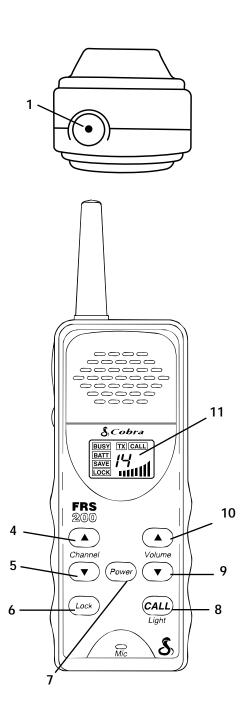
Technical assistance is also available on-line in the Frequently Asked Question (FAQ) section at www.cobraelec.com or by e-mail to productinfo@cobraelec.com

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## CONTROLS AND INDICATORS



- 1. Antenna Connector
- 2. PTT (Push To Talk) Key
- Monitor Key
- 4. Channel Up Key
- 5. Channel Down Key
- 6. Lock Key
- 7. Power On / Off
- 8. Call / Light Key
- 9. Volume Down
- 10. Volume Up
- 11. LCD Display Panel



#### THE FAMILY RADIO SERVICE STORY

The FCC (Federal Communication Commission) has created 14 high quality, license free frequency bands, or channels for Family Radio Service (FRS). Any of these 14 channels are easily accessed on your Cobra FRS 200 with a single push of a button. These new UHF FM frequencies provide you with ultra clear, high penetrating signals that allow high quality communications in most environments. The FCC regulates the amount of output power that any FRS (Family Radio Service) Transceiver can have. The maximum output is 500mW power capacity. Your Cobra FRS 200 is equipped with 500mW power to guarantee maximum distance and full range capabilities.

#### **FCC WARNINGS**

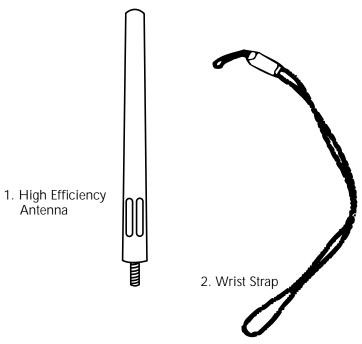
Replacement or substitution of transistors, regular diodes or other parts of a unique nature, with parts other than those recommended by Cobra, may cause violation of the technical regulations of Part 95 of the FCC Rules, or violation of Type Acceptance requirements of Part 2 of the Rules.

#### **TALK RANGE**

Your FRS 200 has been designed to maximize performance, however talk range depends on the terrain. These are line-of-sight radios and although this radio uses UHF frequencies, talk range will be reduced in dense foliage and mountainous areas. Maximum range will be obtained in flat, open areas.

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#### **INCLUDED WITH YOUR FRS 200**



#### **INSTALLING BATTERIES**

Insert (4) new "AA" Alkaline batteries (not provided) into the battery cartridge. To install batteries, (1) remove the battery cover from the unit. (2) Install the batteries according to the polarity markings provided on the cartridge. (3) Slide battery retainer to center of battery cartridge. Note: Incorrect battery installation can damage the batteries and cartridge. Slide on Battery pack until secure.

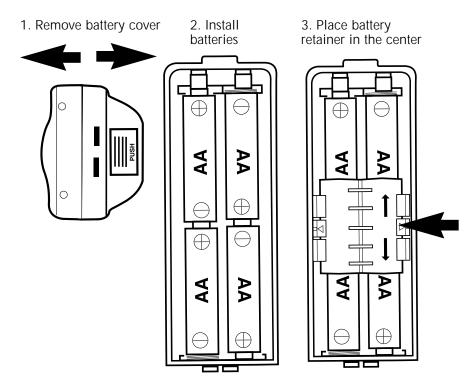
#### Alkaline batteries:

Top grade Alkaline batteries should be used. (Not included)

#### Nickel Cadmium (NiCad) Batteries:

Batteries with 700 mAh minimum recommended. Only Top Grade NiCad should be used.

**Note:** You must charge NiCad batteries on a separate, remote charger.



# OPERATION TURNING ON/OFF/AUTO SQUELCH

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## TURNING YOUR FRS RADIO ON

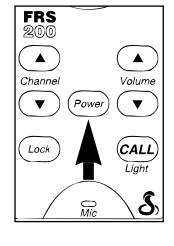
Push and hold the power ON-OFF key. The LCD display will illuminate and an audible "Beep" will be heard to indicate you have turned the unit on.

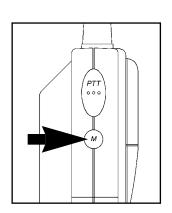
## TURNING YOUR FRS RADIO OFF

Push and hold the power ON-OFF key until the LCD goes blank.

#### **AUTO SQUELCH**

Your FRS 200 is equipped with Auto Squelch. A unique circuit design that keeps you from hearing unwanted noise and static. You can override the auto squelch feature by depressing and holding the monitor key. Holding the monitor key will allow you to hear weaker, distant transmissions.





# OPERATION SELECT CHANNEL/DISPLAY

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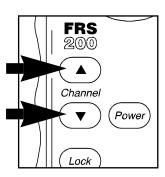
#### **SELECTING A CHANNEL**

Turn on your FRS 200.

To select a higher channel, push the UP arrow key.

To select a lower channel, push the DOWN arrow key.

\*\*Note: To quick advance channels, press and hold the selection key.



#### **LCD DISPLAY**

All the information you need is provided from this LCD display panel.

**SAVE** = Auto Battery Save feature indicator

**LOCK** = Lock key indicator

**BATT** = Battery low indicator

**CALL** = Call indicator

**BUSY** = Receiving incoming transmission indicator

**TX** = Transmitting outgoing communications indicator

**\*\*\*\*\*\*\*\*\*\*** = Volume level display



# **OPERATION** TO TALK/TO RECEIVE

# OPERATION TO CALL/TO RECEIVE A CALL

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#### TO TALK

To talk hold the FRS 200 mic about 2 inches from your mouth. (Be sure to turn the volume down before you hold the speaker up to your ear.)

Push the PTT button on the side.

Speak into the microphone in a normal voice.

When you finish your communication release the PTT button.

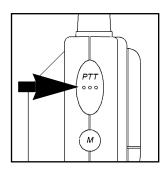
You can communicate with everyone who has a radio set to your channel. There is no limitation to the number of people you can talk to.

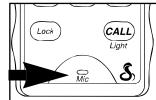
The **TX** will be displayed during transmissions.

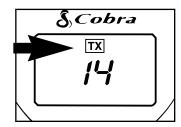
#### TO RECEIVE A CALL

To receive incoming transmissions release the PTT button. Your FRS 200 is always ready to receive communications when the PTT button is released.

\*\*Note: While the PTT button is depressed, you cannot receive incoming transmissions. The **BUSY** icon is displayed when the radio is receiving an incoming communication.

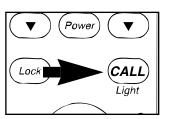






#### TO CALL/RING

Push and hold the CALL button until a confirmation tone is heard.



The **CALL** icon appears briefly.

This will send a call signal to other Cobra FRS-200 units on the same channel within calling range. If you do not believe your call was received, <u>wait 10 seconds</u> and call again. The other units may not be in Battery Save mode.



#### TO RECEIVE A CALL

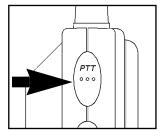
Your FRS 200 must be in BATTERY SAVE mode before you can receive a call.

\* To place your unit in BATTERY SAVE mode, do not push <u>any</u> buttons for 10 seconds.

When another FRS-200 unit is calling, you will hear a ringing sound.

Just push the PTT button on the side to answer the call.





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### **OPERATION** LIGHTED DISPLAY/KEY LOCK

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#### **AUTO BATTERY SAVE**

Your FRS 200 has a unique circuit designed to extend the life of the batteries. If there are no transmissions within 10 seconds, your FRS 200 will automatically switch to battery save mode. The **SAVE** icon will appear and power usage will be reduced. Full power will be restored with the push of any key.

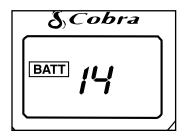
\*\*Note: The Auto Battery Save Circuit will not effect your unit's ability to receive incoming



## transmissions.

#### **BATTERY LOW**

When your batteries get low, the **BATT** icon will appear. Replace batteries as soon as possible. See Installing Batteries section.

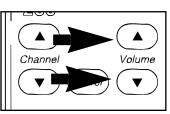


#### **VOLUME ADJUSTMENT**

To adjust the volume, push the volume up or down. You will hear a "beep" with each change in volume.

The volume level is displayed with a meter.

\*\*Note: To quick advance volume settings, press and hold the Volume Selector Key.





#### LIGHTED DISPLAY

To illuminate the display push the Call/Light key.

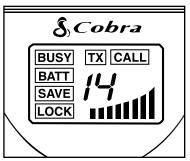
Display will illuminate for 5 seconds, then automatically turn off to save batteries.

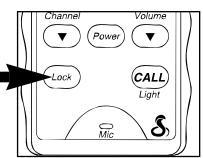
#### **LOCK KEY**

Lock all function buttons preventing accidental actuation.

To lock the key pad push the lock key.

To Unlock, push the LOCK key again.





#### FRS 200 SPECIFICATIONS

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#### HOW YOUR FAMILY RADIO SERVICE TRANSCEIVER CAN SERVE YOU

- -Contacting a family member on the other side of the park
- -Talk to your friend while biking or hiking
- -Find your partner in a busy mall
- -"Call" car-to-car while traveling
- -Talk to your friends at the amusement park
- -Coordinate a meeting spot with friends during a festival

Great for **any** outdoor activity where you want to **stay in touch!** 

#### FREQUENCY RANGE

The COBRA FRS 200 transceiver represents one of the most advanced FM two-way radios used. This unit features advanced Phase Lock Loop (PLL) circuitry providing complete coverage of all 14 FRS channels shown below.

FRS Channel	Channel Freq in MHz	FRS Channel	Channel Freq in MHz	FRS Channel	Channel Freq in MHz
1	462.5625	6	462.6875	11	467.6375
2	462.5875	7	462.7125	12	467.6625
3	462.6125	8	467.5625	13	467.6875
4	462.6375	9	467.5875	14	467.7125
5	462.6625	10	467.6125		

#### **CARING FOR YOUR RADIO:**

To ensure maximum enjoyment and long life of your radio.

- 1) Handle it gently.
- 2) Keep it away from dust, moisture, and temperature extremes.
- 3) Clean it with a damp cloth. DO NOT SUBMERGE IN WATER. Do not use harsh chemicals.

Modify or tampering with the radio's internal components can cause malfunction and might invalidate the radios warranty. If your radio is not performing as it should, please call Cobra before taking it back to the store direct at 773-889-3087.

DO NOT TAKE YOUR RADIO BACK TO THE STORE. Call 773-889-3087.

**GENERAL** 

**CHANNELS** 

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FREQUENCY RANGE FREQUENCY CONTROL **OPERATING TEMPERATURE RANGE MICROPHONE INPUT VOLTAGE** 

ANTENNA CONNECTOR

**METER** SIZE WEIGHT **SPECIAL** 

6 VDC, 4-AA

LCD DISPLAY, ICONS 43/4" H x 13/4" W X 13/8" D

FRS - 462.5 to 467.7 MHz

ELECTRET, PUSH-TO-TALK

-30° C TO + 50° C

PLL (PHASE LOCK LOOP) SYNTHESIZER

5 oz.

FM

**TRANSMITTER** 

**POWER OUTPUT** 

**MODULATION** 

FREQUENCY RESPONSE **OUTPUT IMPEDANCE** 

500mW AT 6 VDC

300 - 3000 HZ AT -6 DB 50 OHMS, UNBALANCED

**RECEIVER** 

**SENSITIVITY** IF FREQUENCY

**AUDIO OUTPUT** FREQUENCY RESPONSE 2ND IF IMAGE REJECTION

ADJACENT CH. REJECTION FREQUENCY CONTROL

LESS THAN 1 uV FOR 12 DB SINAD

**DUAL CONVERSION** 

1 ST - 21.4 MHZ, 2ND - 455 KHZ

110db/spl MAXIMUM AT 10 % DISTORTION

300 - 3000 HZ AT -6 DB **GREATER THAN 60 DB** 

50 DB MIN.

PLL (PHASE LOCK LOOP)

#### If You Think You Need Service, Call 773-889-3087

### LIMITED TWO YEAR WARRANTY

**COBRA ELECTRONICS CORPORATION** warrants that its COBRA Radios, and the component parts thereof, will be free of defects in workmanship and materials for period of two (2) 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 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. For further details concerning procedures for obtaining service, see the "If You Think You Need Service" section of the Owner's Manual.

**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.

COBRA ELECTRONICS CORPORATION 6500 W. Cortland Street Chicago, Illinois 60707

#### "If your product should require factory service please call Cobra first before sending your unit in. This will ensure the fastest turnaround time on your repair."

You may be asked to send your unit to the Cobra factory. It will be necessary to furnish the following, in order to have the product serviced and returned.

- For Warranty Repair, proof-of-purchase, such as a mechanical reproduction or carbon or a sales receipt will be required. If you send the original receipt it cannot be returned.
- 2. The entire product, including FRS unit must be sent in.
- 3. Enclose a description of what is happening with the unit. Include a typed or clearly printed name and address of where the unit is to be returned.
- **4.** Pack unit securely to prevent damage in transit. If possible, use the original packing material.
- 5. Ship prepaid and insured by way of a traceable carrier (to avoid loss in transit) such as United Parcel Service (UPS), Roadway Parcel Service (RPS) or First Class Insured Mail to Cobra Factory Service, Cobra Electronics Corporation, 6500 W. Cortland St., Chicago, IL 60707. Cobra is not responsible for units not received if package has not been properly insured.
- 6. If the unit is in warranty, upon receipt of your unit it will either be repaired or exchanged depending on the model. Please allow approximately 3 to 4 weeks before contacting us for status. If the unit is out of warranty a letter will automatically be sent informing you of the repair charge or replacement charge. If you have any questions, please call 773-889-3087 for assistance.

For technical assistance, please call our Automated Help Desk which can assist you by answering the most frequently asked questions about Cobra products.

(773) 889-3087

24 hours a day, 7 days a week.

A Consumer Service Representative can be reached through this same number 8:00 am - 8:00 pm, Monday through Friday, CST.

Technical assistance is also available on-line in the Frequently Asked Question (FAQ) section at www.cobraelec.com or by e-mail to productinfo@cobraelec.com

#### **OPTIONAL ACCESSORIES**

You can find these fine accessories at your local Cobra FRS dealer.



Rugged nylon holster with metal belt clip CA-200B \$19.95 ea.



High performance NiCad rechargeable battery cell 212-001-N-001 \$4.00 ea. (4 required)

#### If you wish, you can order directly from Cobra

Order by phone:

Call 1-773-889-3087 (Press 1 from the main menu) 8a.m.-8p.m. M-F CST.

Order by mail or fax: Please fill out order form below, and mail/fax directly to Cobra.

Part No.	Cost Ea.	X Qty.	= Amount
CA-200-B	\$19.95		
212-001-N-001	\$4.00		

- \*\* Illinois residents add 7%
- \*\* Cook Co. residents add .75% (7.75% total)
  - \*\* Chicago residents add 1% (8.75% total)
- \*\* Indiana residents add 5%
- \*\* Michigan residents add 4 %
- \*\* Minnesota residents add 6%
- \*\* Ohio residents add 6%
- \*\* Wisconsin residents add 5%

(Prices subject to change without notice.)

**Amount** 

(Tax if applicable )

Shipping//handling

Cobra Accessories Dept.6500 W. Cortland St.,Chicago, IL 60707

Please print clearly:

Fax to:

1-773-622-2269

Name						
Address (Not P.O. Box)						
City		State	Zip			
Credit Card	l No		Exp. Date			
Customer Signature						
Circle One:	Visa	MasterCard	Discover			

\$3.75

Allow 4 to 6 weeks for delivery. Offer valid in Continental U.S. only.