SCobra® microtalk®

Operating Instructions for your

&Cobra METALK

2 Way Radio

FRS 220



Nothing comes close to a Cobra™

How to Use Your Cobra® **MICTOTALK®** 2-Way Radio

The Family Radio Service Story

The Family Radio Service Story

Ever wish you could talk to someone who wasn't within earshot? Like contacting ski partners back at the lodge? Or letting a friend know how to find you in a busy mall? Cobra®'s microTALK® FRS 220 is a great way for friends or family to increase their fun–and safety–by staying in touch while on the go.

The FCC (Federal Communications Commission) has created 14 license free frequency bands, or channels, called Family Radio Service (FRS) frequencies. These channels are in the UHF (Ultra High Frequency) band which means great penetration through buildings, thick forests, hills, and other dense structures. They are also FM (Frequency Modulation) signals which means crystal clear reception even in crowded noisy environments.

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 a violation of the technical regulations of part 95 of the FCC Rules, or violation of Type Acceptance requirements of Part 2 of the Rules.

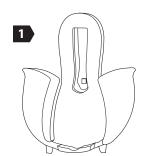
Included with your microTALK®

1. Holster/Belt Clip/Desk Stand

Contents	
Features	
The FRS Story	A1
FCC Warnings	
Included Accessories	
Controls & Indicators	
Our Thanks to You	
Customer Support	A3
Operating your microTALK®	
Battery Installation	
Turning On	
Illuminating the Display	3
Auto Squelch	
Maximum Range Extender/Auto Mon	
Select Channel	
Auto Battery Save	
Calling Another Party	
Talking To Another Party	
Roger Beep Confirmation Tone	9
Listening For Another Party	
Lock Function	
microTALK® Range	
Making Life Easier And Safer	12
Holster/Belt Clip/Desk Stand	13
External Microphone/Speaker Jack	14
Caring for Your microTALK®	
microTALK® Specifications	
Limited Two Year Warranty	18
Optional Accessories	
Order Form	
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Features of This Product

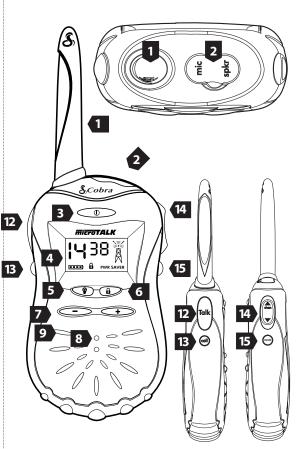
- Two-way static-free radio with up to a 2 mile range
- 14 channels
- SuperFlex[™] antenna
- · Holster belt clip
- Roger beep confirmation tone
- Backlit ICD
- Speaker/Microphone jacks



Our Thanks to You

- 1. Antenna
- 2. Microphone/Speaker Jack
- 3. On/Off Power Button
- 4. LCD Display Panel
- **5.** *Light/Max Range Button*
- 6. Key Lock
- **7.** Down/Up Volume Control
- 8. Speaker
- 9. Microphone
- **10.** Battery Compartment
- 11 Charge Pads
- 12. Talk Button
- 13 Call Button
- 14. Channel Button
- 15 Mode Button





Thank you for purchasing the Cobra® FRS 220 2-way 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, call Cobra® Customer Service at 773.889.3087.

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.

Cobra® Customer Service

Live operators are available M-F 8:00 am - 6:00 pm CST at: 773.889.3087

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

Battery Installation

Note

Always use high quality alkaline or NiMH batteries.

Incorrect positioning can damage both the batteries and the unit.

Only the Cobra® NiMH battery (Part #FA-BP) pack can be recharged.

See Accessories on page 19. Charge ports for recharging NiMH (Nickel Metal Hydride) battery pack are located on back of unit.

Note

When batteries are low or need charging the indicator will blink. Replace alkaline batteries or recharge NiMH battery pack.

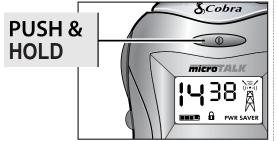
Install Batteries



1 Pull lock tab down to remove battery cover.

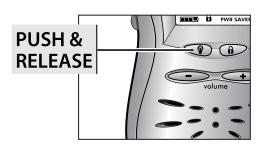
2 Insert four "AAA" batteries. Position batteries according to polarity markings.

Turning On Your microTALK®



Push and hold the POWER button for 2 seconds. An audible "tone" will indicate the unit is on, and display will illuminate for 10 seconds.

Illuminating the Display



• Push and release • LIGHT/MAX RANGE button to illuminate display for ten seconds.

Turning On Your microTALK®

Note

Whenever the unit is on you can receive communications.

Illuminating the Display

2

Operation

Auto Squelch

Maximum Range Extender

Note

To learn more about the range of your microTALK®, see page 10.

Range is dependent on battery condition and geographic territory.

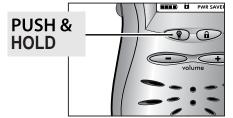
Auto Monitor

Auto Squelch

Your microTALK® is equipped with Auto Squelch, which automatically shuts off weak transmissions and unwanted noise due to terrain conditions or if you have reached your range limit.

Maximum Range Extender

Auto squelch can be temporarily removed to allow all signals to enter (Maximum Range Extender).



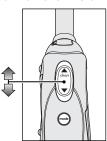
• Push and hold • LIGHT/MAX RANGE button to allow all signals to enter.

Auto Monitor

When the signal you want to hear is consistently weak, you may place the radio in Maximum Range mode without having to constantly hold the button: Press and hold the Maximum Range Extender button for five seconds. To return to normal operation, momentarily press the Maximum Range Extender button again or change channels.

Select Main Channel (1-14)

1 Turn on the microTALK® 2-Way Radio.



2 Select any of the 14 channels by moving the channel button up or down.

Select CTCSS Privacy Code (00-38)

 Press the mode button. After a short delay, small numbers will flash next to the channel display LCD indicating the privacy code.



- 2 Select privacy code number by moving the channel button up or down.
- When the desired code is displayed push the mode button and release. An audible tone will confirm your selection.

Select Main Channel

Note

Units must be on same channel and privacy code to communicate.

Note

Channels 8-12 generally are less used and give better results for communications in most areas.

Note

Push and hold the channel button for fast channel advance.

Select CTCSS Privacy Code

Note

Selecting a CTCSS privacy code will allow you to only hear conversations on that selection. For example, you may be with a group of friends. If all of you select channel 7 and privacy code 1, you will hear your friends but will not hear anybody else on channel 7, privacy code 2 through 38.

Battery Low

Note

When battery capacity is at the 1/4 level it is recommended that you replace alkaline batteries or recharge your NiMH (Nickel Metal Hydride) battery pack.

Only the Cobra® NiMH battery (Part #FA-BP) pack can be recharged.

Note

If the NiMH rechargeable battery pack (Item #FA-BP) and desktop charger (Item #FA-CR) are not included with this unit, see Accessories Section on page 19.

Auto Battery Save

Note

The Auto Battery Save Circuit does not affect the unit's ability to receive incoming transmissions.

Battery Low

When in normal use the icon may begin flashing. This is a warning to you that the batteries are getting low.

Replace alkaline batteries as soon as possible and/or recharge NiMH battery pack.

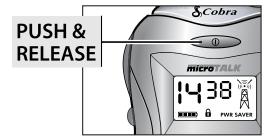


Auto Battery Save

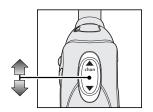
Your FRS 220 has a unique circuit designed to extend battery life. If there are no transmissions or receptions within 10 seconds, the unit will automatically switch to battery save mode and PWR SAVER will be shown in the display.

Calling Another Party

To alert another party that you wish to communicate:



• Turn on your microTALK® 2-way radio. An audible "tone" will indicate the unit is on.



2 Select a channel by pushing the (*) CHANNEL button up or down.

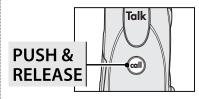
Calling Another Party

Operation

Operation

Note

Your incoming "Call" signal level is dependent on your unit volume setting.



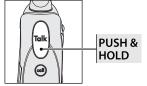
3 Push and release CALL button. The unit you are calling will hear a two second ringing tone.

Talking To Another Party

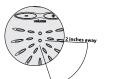
Note

While the TALK button is depressed you cannot receive incoming calls.

Talking To Another Party



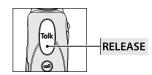




3 Hold mic about 2 inches from mouth. Speak in a normal voice.



2 The TX indicator will be displayed.



● Release TALK button and listen for response.

Roger Beep Confirmation Tone



Your listener will hear an audible tone when you release the half TALK button.

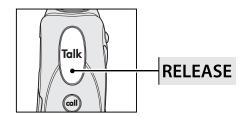
This alerts the other party that you are finished talking and it's OK for them to begin talking.

Confirmation Tone

Roger Beep

Listening For Another Party

When finished talking:



• Release TALK button to receive incoming transmissions.

Your microTALK® is always in listening mode when the ATALK button is not pressed.

2 Adjust volume by *pushing* DOWN/UP buttons.

Listening For Another Party

Note

While the TALK button is depressed you cannot receive incoming calls.

Lock Function

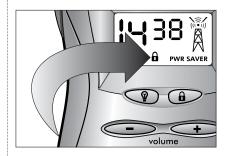
Note

Call button, Range Extender button and Talk button do not lock and are fully operational while the unit is locked.

The unit cannot lock while in function mode.

Lock Function

The purpose of the LOCK function is to lock most buttons to avoid accidental operation.
To engage the LOCK function:



- 1 Push and hold Lock 6 button until 6 flashes. Channel up/down, Mode and Power buttons are now locked.
- 2 To "unlock" push and hold Lock **a** button until **a** disappears.

microTALK® Range

Your microTALK® Radio has a range of up to 2 miles. This effective range can be shortened under some conditions.



1. Under flat, open conditions you will experience the microTALK®'s maximum range.





2. Range can be reduced by buildings and foliage in the path of the signal.

 Range will be further reduced by dense foliage and hilly terrain.

microTALK® Range

Note

To achieve maximum range the auto squelch can be overridden. Refer to Maximum Range Extender section on page 4.

Making Life Easier and Safer

Making Life Easier and Safer

microTALK® 2-Way Radio Can Make Life Easier and Safer

microTALK® 2-Way Radio Can Make Life Easier and Safer

As you become familiar with your microTALK® Radio you will find many of your own uses for the unit.

Some suggestions include:



1. Talking with fellow hikers.



2. Keeping track of the kids in a shopping mall.



3. Communicating between basement and first, second or third floor.



4. Talking to a neighbor or a friend.



5. Checking on traveling companions in another car.



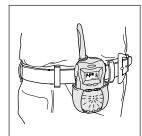
6. Agree on a meeting spot after an event.

Holster/Belt Clip/Desk Stand

Your microTALK® Radio comes with a custom molded plastic holster. Its unique dual-function design enables it to act as a handy desktop storage unit, as well as easily attaching to your belt for maximum convenience and portability.



1. Desk Stand



2. Belt Clip

Holster-Belt Clip and Desk Stand

External Microphone/ Speaker Jack

Caring for Your **microTALK** Radio

External Microphone/ Speaker Jack

If an External microphone/

speaker is not included with

the unit, see Accessories on

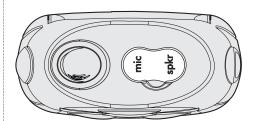
page 19 for available units.

Note

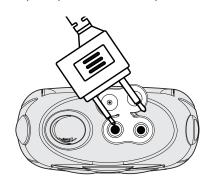
External Microphone/Speaker Jack

Your microTALK® 2-Way Radio can be fitted with an external microphone/speaker, freeing your hands for other tasks.

To attach the external microphone/speaker:



1 Open Spkr/Mic tab on top of unit.



2 Insert plug into the Mic/Spkr jack.

Caring for Your microTALK® Radio

The microTALK® 2 Way Radio will give you years of service if cared for properly.

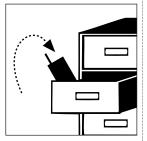
Here are some suggestions:



1. Handle unit gently.



3. Never place the unit in water or in a moist place.



2. Keep away from dust.



4. Avoid exposure to extreme temperatures.

Caring for Your microTALK® Radio

Note

Modifying or tampering with the radio's internal components can cause malfunction and will invalidate the warranty. If your radio is not performing as it should, please call Cobra® at 773.889.3087.

Do not return the unit to the retailer.

microTALK° Specifications

Frequency Ranges

. GENERAL SPI	FCIFICATIONS			C. RECEIVER		
. GLIVEIVAL DI I	Len icritions				UNIT	NOMINAL
A. FREQUE				1. SENSITIVITY	ID.	440
CHANNE	EL ASSIGNMENT			FOR 12dB SINAD FOR CALL SIGNAL DETECTION	dBm dBm	-119 -121
	Channel		Channel	2. MAX. AUDIO OUTPUT @ 10% THD	mW	150
FRS	Frequency	FRS	Frequency	3. MAX S/N RATIO @ 1mV RF INPUT	dB	45
Channel	in MHz	Channel	in MHz	4. SOUELCH		
1	462.5625	8	467.5625	a) SENSITIVITY	dBm	-121
2	462.5875	9	467.5875	b) ATTACK TIME	mS	120
3	462.6125	10	467.6125	c) CLOSING TIME	mS	200
4	462.6375	11	467.6375	AUDIO FREQUENCY RESP.		
5	462.6625	12	467.6625	@ 300 HZ	dB	-15
6	462.6875	13	467.6875	@ 2500 HZ	dB	-10
7	462.7125	14	467.7125	6. SIGNAL DISPLACEMENT BW	+/- KHZ	5
D CHDCHAI	NNEL ASSIGNMENT	rc .		7. ADJACENT CH. REJECTION	dB	60
	ININEL ASSIGNMENT			8. INTERMODULATION REJECTION	dB	65
CTCSS		CTCSS		9. SPURIOUS RESPONSE REJECTION	dB	65
hannel	Frequency	Channel	Frequency			
01	67.0 Hz	21	136.5 Hz	D. TRANSMITTER		
02	71.9 Hz	22	141.3 Hz	1 FEEECTIVE DADIATED DOIMED	UNIT	NOMINAL
03	74.4 Hz	23	146.2 Hz	EFFECTIVE RADIATED POWER	mW	500
04	77.0 Hz	24	151.4 Hz	CARRIER FREQ. STABILITY	Hz	+/-500
05	79.7 Hz	25	156.7 Hz	3. MODULATION LIMITING	kHz	2.5
06	82.5 Hz	26	162.2 Hz	4. CARRIER ATTACK TIME	mS	30
07	85.4 Hz	27	167.9 Hz		נווז	50
08	88.5 Hz	28	173.8 Hz	5. AUDIO FREQUENCY RESPONSE	٦n	10
09	91.5 Hz	29	179.9 Hz	@ 300 HZ @ 2500 HZ	dB dB	-10 4
10	94.8 Hz	30	186.2 Hz			
11	97.4 Hz	31	192.8 Hz	6. AUDIO DISTORTION	%	3
12	100.0 Hz	32	203.5 Hz	7. HUM NOISE	dB	38
13 14	103.5 Hz 107.2 Hz	33 34	210.7 Hz 218.1 Hz	8. TRANSIENT FREQ. BEHAVIOR		
15	107.2 Hz 110.9 Hz	34 35	218.1 Hz 225.7 Hz	a) TX ON	mS	30
16	114.8 Hz	36	233.6 Hz	b) TX OFF	mS	5
17	118.8 Hz	37	241.8 Hz			
18	123.0 Hz	38	250.3 Hz	E. POWER SUPPLY		
19	127.3 Hz					
20	131.8 Hz			1. BATTERY LIFE (1:1:18 RATIO)	HR	24
				2. BATTERY	V	4.2-6.0

Limited Two Year Warranty

Optional Accessories



Cobra® Electronics **Corporation**

6500 West Cortland Street Chicago, Illinois 60707 USA

COBRA® ELECTRONICS CORPORATION warrants that its COBRA® FRS 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.

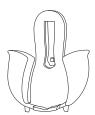
COBRA® will, without charge, repair or replace, at its option, defective FRS radios, products or component parts upon delivery to the COBRA® factory Service Department, accompanied by proof of the date of first consumer purchase, such as a duplicated copy of a sales receipt.

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.

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.

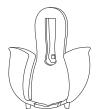
All implied warranties, including warranties of merchantability and fitness for a particular purpose are limited in duration to the length of this warranty. COBRA® shall not be liable for any incidental, consequential or other damages; including, without limitation, damages resulting from loss of use 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.



Replacement Holster

FA-HR1



Vox/Headset Mic

VOX (Voice Operated Transmitter) headset and microphone allows hands-free operation. MA-VOX



Lapel Speaker/Microphone

Remote microphone/speaker with Push-to-Talk switch. MA-SM



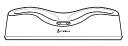
NiMH Recharaeable **Battery Pack**

High performance Nickel Metal Hydride battery pack for multiple charging. FA-BP



Ear Bud Mic with PTT

Compact earbud and microphone with Push-to-Talk switch MA-EBM







2 Port Desktop Charaer

Charges two microTALK® radios or two NiMH battery packs. FA-CR

You Can Find These Fine Accessories At Your Local Cobra® Dealer

If you wish, you can order directly from Cobra®.

Order by phone

Call 773.889.3087 (Press 1 from the main menu) 8 a.m.-8 p.m. M-F CST.)

Order by mail or fax

Call 773.889.3087 for pricing. Fill out order form on next page, and mail/fax directly to Cobra®.

Order over the Web

www.cobra.com

Accessory Order Form

Tax Table

Item #	Description	Cost Ea.	Qty.	Amount
MA-EBM	Ear Bud Mic with PTT			
MA-VOX	Vox Headset Mic			
MA-SM	Lapel Speaker/ Microphone			
FA-HR1	Replacement Holster			
FA-CR	Charger			
FA-BP	Battery			

Shipping & Handling

Amount of Order	Shipping/ Handling
\$25.00 and under	\$4.75
\$25.01 - \$40.00	\$6.95
\$40.01 - \$80.00	\$9.25
\$80.01 - \$120.00	\$10.25
\$120.01 - \$160.00	\$11.75
\$160.01 and up	\$14.50

For AK, HI and PR please add an additional \$15.00 for UPS shipments.

Ohio residents add 5%
Wisconsin residents add 5%
For credit card orders fill out order

Illinois residents add 8 75%

Michigan residents add 6 %

Indiana residents add 5%

Prices subject to change without notice.

For credit card orders fill out order form and fax to: 773.622.2269 or call 773.889.3087 (Press 1 from the main menu) 8:00 am - 8:00 pm, M-F, CST.

Make check or money order (no stamps) payable to: Cobra® Electronics Attn: Accessories Dept. 6500 West Cortland Street Chicago, IL 60707 USA

Subtotal

Total

(Tax if applicable)

Shipping/handling

Please	print	clea	rly				
Name _							
	<i>(</i>		_				

Address (No P.O. Box) _______ State ______

Zip _____ Telephone (____) ____ Exp. Date _____

Customer Signature _____

Circle One: Visa MasterCard Discover

Allow 2 to 3 weeks for delivery. Offer valid in Continental U.S. only.

Cobra®

SCobra®

Cobra® Electronics Corporation 6500 West Cortland Street Chicago, IL 60707 USA www.cobra.com

If You Think You Need Service

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 - 6:00 pm, Monday through Friday, CST.

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

If you think you need service call 773.889.3087

"If your product should require factory service please call Cobra® first before sending your unit in. This will ensure the fastest turn-around 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.

- 1. For Warranty Repair include some form of proof-of-purchase, such as a mechanical reproduction or carbon or a sales receipt. If you send the original receipt it cannot be returned.
- 2. Send the entire product.
- 3. Enclose a description of what is happening with the unit. Include a typed or clearly print 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 such as United Parcel Service (UPS) or First Class Mail to avoid loss in transit to: Cobra® Factory Service, Cobra® Electronics Corporation, 6500 West Cortland Street, Chicago, IL 60707 USA.
- 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.

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The Cobra[®] line of quality products also includes:

- Citizens Band Radios
- microTALK® Radios
- Radar/Laser Detectors
- GPS
- SafetyAlert® **Traffic Warning Systems**
- Accessories
- HighGear[™] Accessories

Nothing comes close to a Cobra™