

APPENDIX 5
USERS MANUAL

OWNER'S MANUAL FOLLOWS THIS SHEET

USERS MANUAL
FCC ID: BBOHH28
APPENDIX 5

S Cobra HH 28

Cobra Electronics Corporation
6500 West Cortland Street
Chicago, IL 60707

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 - 8:00 pm, Monday through Friday, CST.

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

If you think you need service call 1.773.889.3087

"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 W. Cortland St., Chicago, IL 60707.
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 1.773.889.3087 for assistance.

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Printed in Thailand

Part No. 000-000-0-000

**Operating Instructions
for your Cobra HH 28**

Citizens Band 2-Way Handheld CB Radio

Need ART



"Ingenious Products for Easier Communication."

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.

FCC Regulations

FCC regulations permit only "transmissions" (one party to another) rather than "broadcasts" (to a wide audience). Advertising is not allowed on CB Channels because it is considered "broadcasting."

FCC Warnings

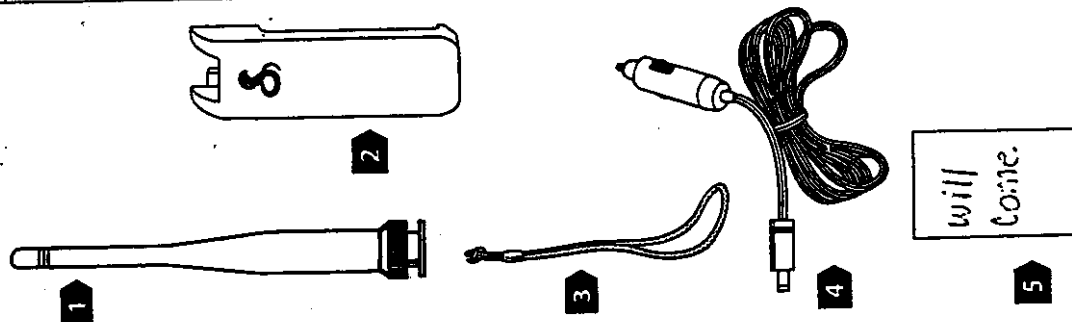
Replacement or substitution of transistors, regular diodes or other parts of a unique nature, with parts other than those recommended by Cobra, may cause a violation of the technical regulations of Part 95 of the FCC Rules, or violation of Type Acceptance requirements of Part 2 of the Rules.

Citizens Band (CB) Radio operators are not required to obtain an FCC license to operate their CB equipment or provide station identification.

Nevertheless, an operator of a CB radio station is still required to comply with the communications act and with the rules of CB Radio Operation.

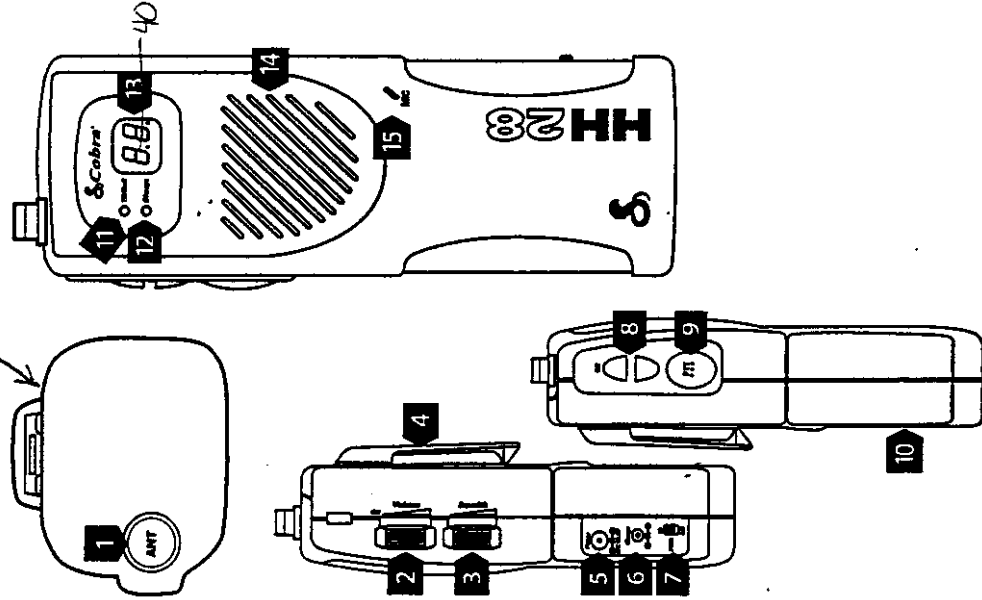
What's Included with Your HH 28

- 1 High Efficiency Antenna
- 2 Removable Belt Clip
- 3 Wrist Strap
- 4 12 Volt Cigarette Lighter Plug
- 5 Operating Manual



is this correct yes

1. BNC Antenna Connector
2. On/Off Volume Control
3. Squelch Control
4. Removable Belt Clip
5. 13.8 Volt DC Power Jack
6. ? *Charge Jack*
7. Power (HI/LOW) Saver Switch
8. Channel Up/Down Key
9. PTT (Push To Talk) Key
10. Battery Chamber
11. TX(transmit)/ Batt (low battery) LED
12. Charge LED
13. LED Channel Display
14. Speaker
15. Microphone



Thank you for purchasing the Cobra HH 28 handheld CB. 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.

Cobra Customer Service
Live operators are available
M-F 8:00 am - 8:00 pm CST at:
773.889.3087

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

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

How to Use Your Cobra HH28

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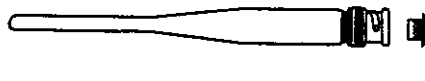
Features of This Product

- Full 4 Watts Power Output
- High Efficiency Flexible Antenna
- Low Battery Indicator
- ~~Transmission~~ Receive Indicator
- Charge Indicator
- 40 CB Radio Channels
- In-vehicle DC power cord included
- Omni-directional microphone
- Battery Saver Circuitry
- BNC Antenna Connector
- Charge Jack
- Removable Belt Clip

Attach Antenna

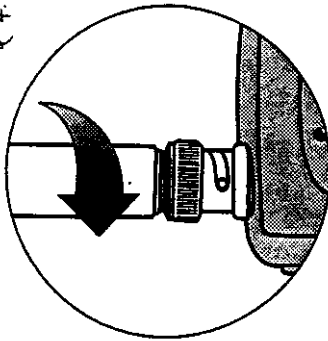
Attach Antenna

- 1 Insert.

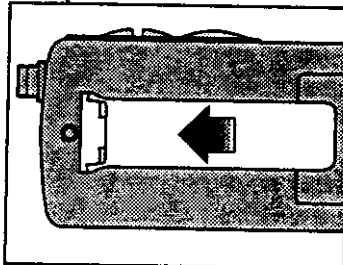


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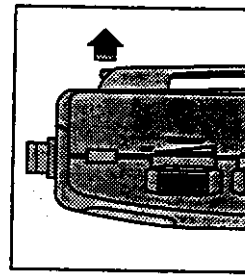
- 2 Turn clockwise, as indicated.



Attach Belt Clip

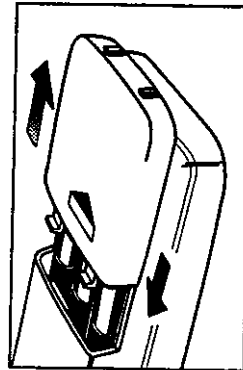


flip illustrations



- 1 Slide belt clip up on rails of base until tab locks.
- 2 To remove belt clip, lift tab out and slide belt clip down.

Install Batteries



- 1 Remove battery chamber cover.
- 2 Install batteries by polarity markings.
- 3 Replace cover.

Battery Installation

Note

Incorrect battery installation can damage the batteries and chamber.

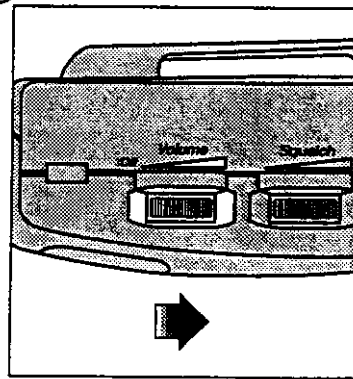
Operation

Operation

Turning On

Turning On

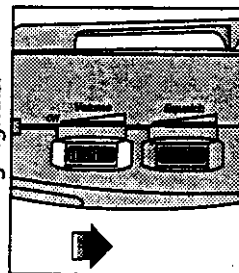
Rotate ON - OFF Volume Control  downward.



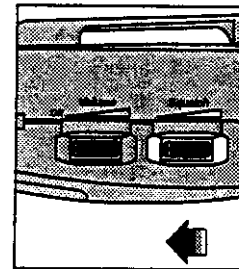
Setting Squelch

Setting Squelch

Think of the squelch control as a "control gate" for incoming signals.

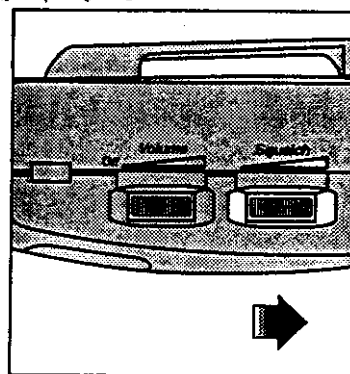


1 Turn volume up louder than normal.



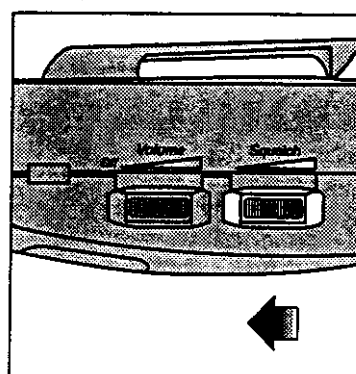
2 Fully turned up closes the "gate," allowing no incoming signals.

replace



Turning the squelch downward closes the gate allowing only very strong signals.

3 Open the squelch by fully turning downward and adjust the volume to a comfortable level.

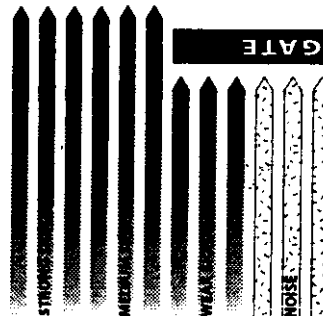


4 To achieve the Desired Squelch Setting (DSS) turn the squelch control upward until you hear noise. Now turn the control downward just until the noise stops. This is the DSS setting which will only allow strong signals to enter.

Gate open

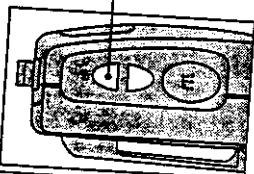


Gate set to Desired Squelch Setting (DSS)

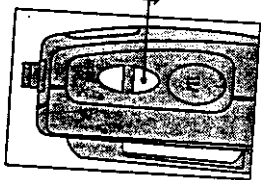


Selecting A Channel

- 1 Turn ON your HH 28.



- 2 To select a higher channel, push the channel UP key.



- 3 To select a lower channel, push the channel DOWN key.

Note

For quick advance, push and hold the selection key(s).



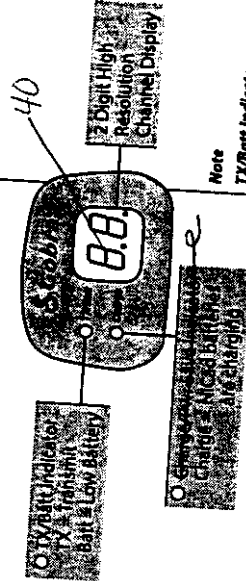
Note

When switching from one channel to another, squelch will need to be reset. See Setting Squelch on page 4.

Operation

LED Display

The top LED button is illuminated in red for Transmit (TX) and Low Battery (Batt). The lower LED button is illuminated red while charging (Charge). *rechargeable batteries.*



Note

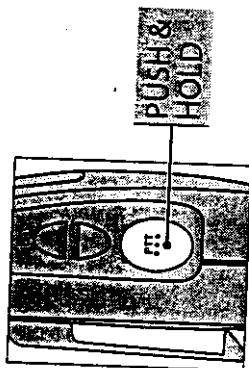
TX/Batt Indicator

This LED will illuminate red when the PTT button is pushed and held (this means your unit is transmitting) or batteries are low and need recharging or replacement.

To Transmit/Receive

Note
While the PTT button is depressed, you cannot receive transmissions.

To Transmit/Receive

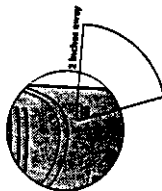


- 1 To transmit, push and hold the PTT button.



- 2 Transmitter is now activated. The red TX LED will be on during transmission.

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



In Vehicle Use

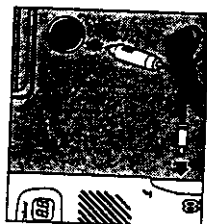
Note

Due to the characteristics of CB transmissions, it is necessary to use an external car roof antenna and a BNC adapter to receive optimal performance while in your vehicle. See Accessories section on page 20.

Note

DC Power Cord is provided.

In Vehicle Use



The HH 28 can be connected to your cigarette lighter with the provided car cord. This power connection does NOT charge the batteries.

- 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

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

A Few Rules You Should Know

Column Note

Never used a CB before?
Your first time using a CB
First: When you first use your new CB you should tune to channel 19. At first, you may hear what you think is a lot of noise and garble. What you're hearing are parts of many far away conversations that are drifting into your transceiver. To eliminate this "noise" you will need to use your squelch control (See page 2).
Second: Try a broadcast.
Say, "Break One-Nine for a Radio Check." Listen for a response from another CB'er near you. If you do not get a response repeat the message. When you get a response ask, "How are you receiving my transmission?" NOW YOU ARE ON THE AIR! Try asking about road conditions, weather conditions, or a good place to eat. Don't be afraid to talk.

Channel 9 Emergency Messages

Note

If no response on channel 9,
try channels 19 or 14.

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.
L	ocation	Be exact.
I	njuries	Number. Type. Trapped?
P	roblem	Give details and help needed.

Transmit CLIP repeatedly so any monitor can assist.

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

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

CB 10-Codes

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:

Code	Meaning
10-1	Receiving poorly
10-2	Receiving well
10-3	Stop transmitting
10-4	OK, message received
10-5	Relay message
10-6	Busy, stand by
10-7	Out of service, leaving
10-8	In service, subject to call
10-9	Repeat message
10-10	Transmission completed standing by
10-11	Talking too rapidly
10-12	Visitors present
10-13	Advise weather/roads
10-16	Make pick up at
10-17	Urgent business
10-18	Anything for us?
10-19	Return to base
10-20	My location is
10-21	Call by phone
10-22	Report in person to
10-23	Stand by
10-24	Completed last assignment
10-25	Can you contact
10-26	Disregard last info
10-27	Moving to channel
10-28	Identify your station

14

Code

Meaning

10-29	Time is up for contact
10-30	Does not conform to FCC rules
10-33	Emergency traffic
10-34	Trouble at this station
10-35	Confidential Information
10-36	Correct time is
10-37	Wrecker needed at
10-38	Ambulance needed
10-39	Message delivered
10-41	Turn to channel
10-42	Traffic accident at
10-43	Traffic tie up at
10-44	Have a message for
10-45	All units within range please report
10-50	Break channel
10-60	What is next message number?
10-62	Unable to copy Use phone
10-63	Net directed to
10-64	Net clear
10-65	Awaiting your next message/assignment
10-67	All units comply
10-70	Fire at
10-71	Proceed, transmission in sequence
10-77	Negative contact
10-81	Reserve hotel room for
10-82	Reserve room for
10-85	My address is
10-91	Talk closer to mic
10-93	Check my frequency on this channel
10-94	Give me a long count
10-99	Mission completed, all units secure
10-200	Police needed at

15

The COBRA HH 28 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 and 10 weather channels as shown below.

CB Channel	Channel Freq. in MHz	CB Channel	Channel Freq. in MHz
1	26.965	21	27.215
2	26.975	22	27.225
3	26.985	23	27.235
4	27.005	24	27.245
5	27.015	25	27.255
6	27.025	26	27.265
7	27.035	27	27.275
8	27.055	28	27.285
9	27.065	29	27.295
10	27.075	30	27.305
11	27.085	31	27.315
12	27.105	32	27.325
13	27.115	33	27.335
14	27.125	34	27.345
15	27.135	35	27.355
16	27.155	36	27.365
17	27.165	37	27.375
18	27.175	38	27.385
19	27.185	39	27.395
20	27.205	40	27.405

GENERAL CHANNELS	
FREQUENCY RANGE	CB - 40 CH
FREQUENCY TOLERANCE	CB - 24.965 TO 27.405 MHz
FREQUENCY CONTROL	0.005 %
OPERATING TEMPERATURE RANGE	PLI (PHASE LOCK LOOP) SYNTHESIZER
AMPLITUDE MODULATION	30° C TO +65° C
AMPLITUDE RESPONSE	ELECTRET PUSH-TO-TALK
AMPLITUDE IMPEDANCE	12V DC INTERNAL BATTERIES
AMPLITUDE	13.8 VDC EXTERNAL
AMPLITUDE	6-3/4" H X 2-1/2" W X 1-3/4" D
AMPLITUDE	WEIGHT: 10 OZ.
AMPLITUDE	ANTENNA CONNECTOR: TYPE BNC
TRANSMITTER	
POWER OUTPUT	3.5 W AT 12 VDC - HIGH 4.0 W AT 13.8 VDC - HIGH
MODULATION	AM (AMPLITUDE MODULATION)
FREQUENCY RESPONSE	500 HZ AT 4 DB
OUTPUT IMPEDANCE	50 OHMS, UNBALANCED
RECEIVER	
SENSITIVITY	LESS THAN 1 μV FOR 10 DB SN
SELECTIVITY	6 DB @ 7 KHZ, 60 DB @ 10 KHZ
2ND IF IMAGE REJECTION	GREATER THAN 60 DB
ADJACENT CH REJECTION	50 DB MIN
IF FREQUENCY	DUAL CONVERSION
SOURCE	1 ST - 10.690 MHz, 2ND - 455 KHZ
AUDIO OUTPUT	ADJUSTABLE THRESHOLD LESS THAN 1
FREQUENCY RESPONSE	500 HZ MAXIMUM AT 10 % DISTORTION
AUTOMATIC NOISE LIMITER	BUILT-IN
FREQUENCY CONTROL	PLI (PHASE LOCK LOOP)
(SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE)	

one UV.

(lower case u
upper case V)

Limited Two Year Warranty



Cobra Electronics Corporation
6500 West Cortland Street
Chicago, Illinois 60707

COBRA ELECTRONICS CORPORATION warrants that its COBRA CB 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 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.

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.

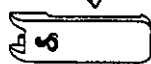
Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

Optional Accessories

BNC/SO238 Antenna Adapter
Allows connection of your HI 28 to standard antenna.
CA-43 \$5.00

Magnetic Mount Weather Antenna
Allows greater transmission range while in a moving vehicle.
ATW-400 \$39.75

Long Range Antenna
Doubles the range of your handheld HI 28.
CA-41 \$15.95



Replacement Belt Clip
HA-BC \$4.95



Replacement DC Power Cord
For in vehicle use
420-017-N-001 \$7.00

There are 3 missing illustrations here. Is there existing art? If not I will need product in order to create the illustrations

You Can Find These Fine Accessories At Your Local Cobra CB Dealer
If you wish, you can order directly from Cobra.

Order by phone
Call 1.773.893.3087
(Press 1 from the main menu) 8 a.m.-8 p.m. M-F CST.

Order by mail or fax
Please fill out order form on next page and mail/fax directly to Cobra.

add - 71111
1- CA45C -
(on HT45 manual)
2- Reck. Nicade
Better is
(need to get)

Accessory Order Form

← If BNC Antenna adapter stays, I will add to this listing \$4.00

Item #	Description	Cont. Ea.	Qty.	Amount
CA-41	Lump Sum Antenna	\$15.95		
AW-400	Magnetic Mount Weather Antenna	\$39.95		
CA-43	SWR/50/25 Antenna Adapter	\$5.00		
RA-10	Replacement Bolt Clip	\$4.95		
CA-44	Replacement DC Power Cord	\$7.00		
BB-72	Rechargeable Batteries	\$4.00		
CA-45C	Battery Charger Adapter	\$15.95		
Prices subject to change without notice.				
Subtotal				\$115.95
Tax (if applicable)				\$4.00
Shipping/Handling				\$4.00
Total				\$123.95

Should this be a specific order? NO

212-001-N-001

For credit card orders fill out order form and fax to: 1.773.633.2269 or call 1.773.885.3007 (Press 1 from the main menu) 6500 Ave - 8500 Ave, N-4, CS.

Make check or money order (no stamps) payable to: Cohen Accessories Dept. 6500 West Cortland St. Chicago, IL 60670

Please print clearly

Name _____
 Address (No P.O. Box) _____
 City _____ State _____
 Zip _____
 Telephone (____) _____
 Credit Card No. _____ Exp. Date _____
 Customer Signature _____
 Circle One: Visa MasterCard Discover

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