Cobra®

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

Operating instructions
for your

Cobra®

HH36ST

Citizens Band 2-way Handheld CB Radio

INTERNAL INGENUITY

"Ingenious Products for Easier Communication."

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How to use your

Cobra®

MODEL HH36ST

CITIZENS BAND 2-WAY HANDHELD RADIO

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SOUND-TRACKER™ SYSTEM

Cobra proudly introduces the first Patent Pending technology that dramatically improves the transmission and reception of CB radio signals.

This revolutionary system reconfigures the transmission signal which allows it to be transferred more effectively through cluttered airwaves. It literally “punches” your message through the hundreds of thousands of signals that are in the air. At the same time, SoundTracker system dynamically adjusts the relationship between the signal and static commonly referred to as noise. This allows Cobra’s **SoundTracker** system to significantly reduce the amount of static on all incoming CB signals. The system can be further optimized when two **SoundTracker** CB’s are used to talk to each other.

The end result is a clearer, cleaner sounding reception of signals and more powerful transmissions which *dramatically* improve CB communications.

The 36ST is designed to give you consistent, outstanding performance in virtually all conditions and situations. To insure you get the most from the Cobra 36ST, please read this operating guide carefully before using the unit.

FEATURES

-Full 4 Watts Power Output
-High Efficiency Flexible Antenna
-Battery Saver Circuitry
-High \ Low Power Switch
-Transmission/Receive Indicators
-40 CB Radio Channels
-SoundTracker™ System
-Low Battery Indicator
-BNC Antenna Connector
-Charging Jack

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.

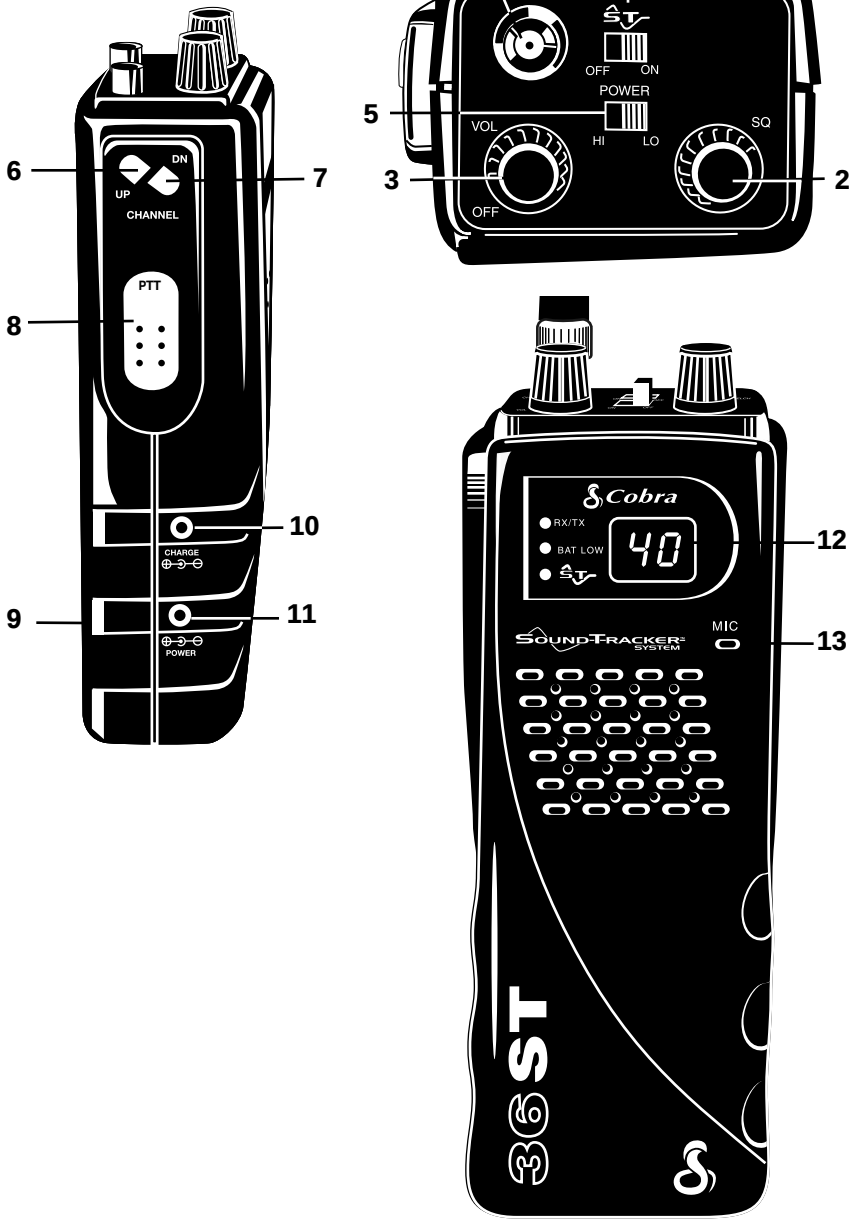
(773) 889-3087

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

4 CONTROLS AND INDICATORS



1. BNC Antenna Connector
2. Squelch Control
3. On/Off Volume Control
4. Belt Clip
5. High & Low Power
6. Channel Up Key
7. Channel Down Key
8. PTT (Push To Talk) Key
9. Battery Chamber
10. Charging Jack
11. DC Power Jack
12. LED Display Panel
13. Microphone
14. SoundTracker Switch

THE CB STORY

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

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

FCC WARNINGS

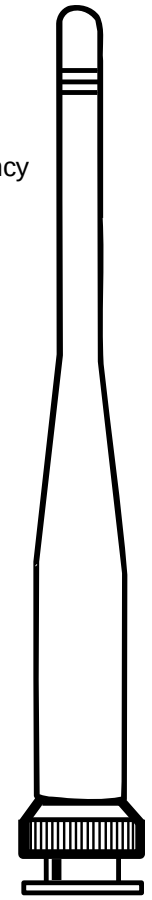
Replacement or substitution of transistors, regular diodes or other parts of a unique nature, with parts other than those recommended by Cobra, may cause violation of the technical regulations of Part 95 of the FCC Rules, or violation of Type Acceptance requirements of Part 2 of the Rules.

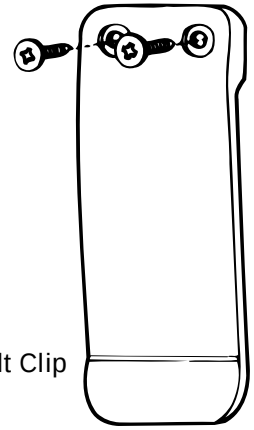
Citizens Band (CB) Radio operators are no longer required to obtain an FCC license to operate their CB equipment or provide station identification.

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.

INCLUDED WITH YOUR 36ST

1. High Efficiency Antenna





2. Belt Clip

GETTING STARTED

ANTENNA

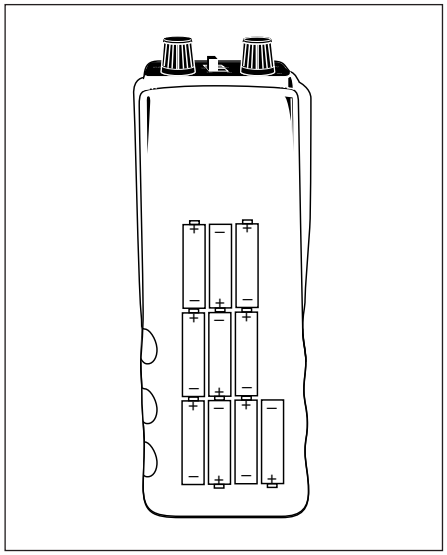
Attach antenna securely by turning clockwise.

**See Accessories on page 22 for rechargeable battery pack option.

BATTERIES

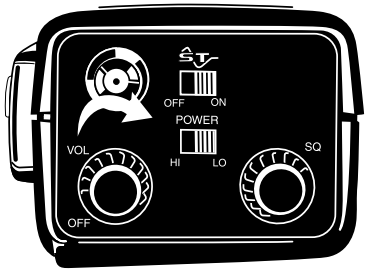
Insert (10) new "AA" Alkaline or NiCad batteries (not provided) into the battery chamber.
To install batteries, (**1**) remove the battery chamber cover from the unit. (**2**) Install the batteries according to the polarity markings provided on the chamber. Note: Incorrect battery installation can damage the batteries and chamber. (**3**) Return battery chamber cover.

Alkaline batteries:
Top grade Alkaline batteries should be used.



Nickel Cadmium (NiCad) Batteries:
Batteries with 700 mAh minimum recommended. Top Grade NiCad batteries can be ordered direct from Cobra. See page 22 for details.

OPERATION
TURNING ON/SQUELCH



TURNING YOUR HANDHELD CB ON

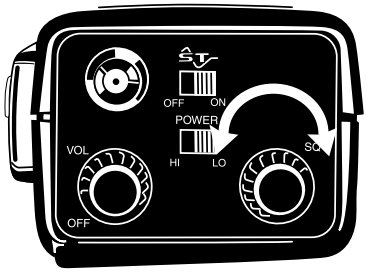
Rotate the power ON-OFF Volume Control clockwise.

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

SETTING THE SQUELCH

Think of your squelch control as a gate for incoming signals. If you turn the squelch control fully clockwise, you effectively close the "gate" and no signals will pass through. If you turn the squelch control fully counterclockwise, you open the gate and all signals come through.

To achieve the **Desired Squelch Setting (DSS)**, turn the squelch control counterclockwise until you just hear noise. Then turn the squelch control back clockwise just until the noise stops. This **DSS** setting only lets strong signals through.



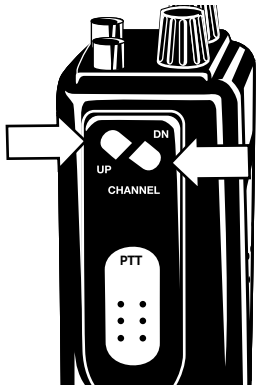
SELECTING A CHANNEL

Turn on your 36ST.

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

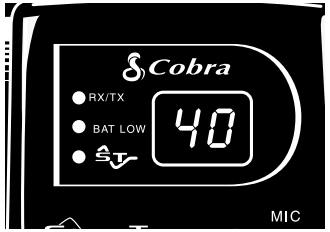
To select a lower channel, push the DOWN arrow key.

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



LED DISPLAY

- Red LED for TRANSMIT (TX)
- Green LED for RECEIVE (RX)
- Red BATT LOW Indicator
- Red SoundTracker™ "ON" Indicator



TRANSMIT / RECEIVE

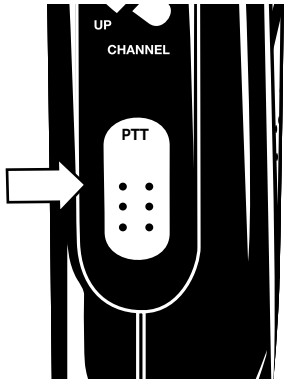
To transmit, push the PTT button. The Red TX LED will be displayed during transmissions.

Hold the 36ST about 2 inches from your mouth.

Speak into the microphone in a normal voice.

Release the PTT button to receive incoming transmissions.

**Note: While the PTT button is depressed, you cannot receive transmissions. The Green RX LED is displayed when the radio is in receive mode.

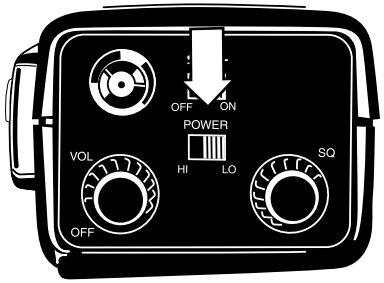


POWER HIGH / LOW

To reduces power output to 1 watt, and extend battery life, switch the H/L power key to the LOW position.

To return to full power, switch the H/L power key to the HIGH position.

**Note: Reduce power setting reduces the range of your 36ST.



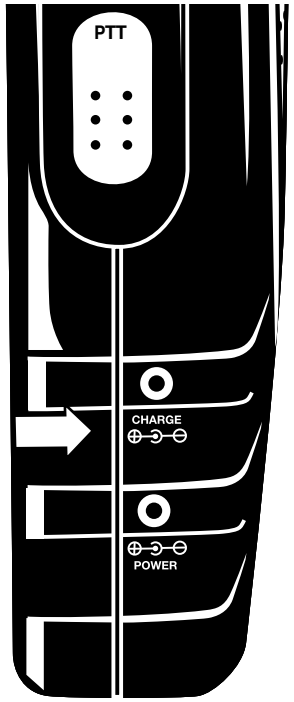
NI-CAD BATTERY RECHARGING

Caution: Use only the Cobra AC Charger with your 36ST, so as to avoid the possibility of improper charging, damage to the batteries, the unit, or an injury from burn or explosion of the battery or charger. **DO NOT CHARGE ALKALINE BATTERIES. THEY MAY EXPLODE OR LEAK. YOU CANNOT RECHARGE ALKALINE BATTERIES.**

To recharge NiCad batteries, first insert the plug from the charger into the charge jack then plug charger into AC outlet. To charge batteries fully will take 14 hours.

Battery suppliers specify that NiCad batteries may be recharged up to 1,000 times or more under normal conditions.

There are variations in batteries from brand to brand even as to size of batteries. Cobra recommends that you use NiCad batteries rated at a minimum of 700mAh for maximum operation time. You may wish to order them from Cobra (see order form at back of this manual for details).



SOUNDTRACKER SYSTEM

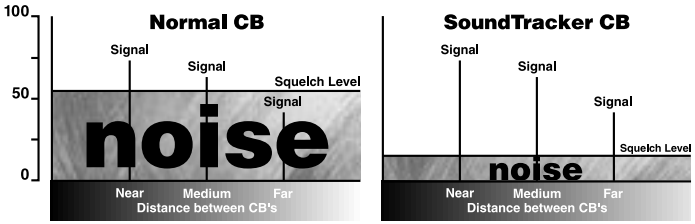
While previous systems only “blanked out” or limited noise in higher sound frequencies, the revolutionary new SoundTracker System actually reduces noise while leaving the signal intact in the reception mode. In the transmission mode, it actually strengthens the signal, providing you with a significant reduction in noise on reception and transmission.

Sound clarity is measured by the ratio of the signal level to the noise level. The higher the signal-to-noise ratio, the better the sound.

HOW SOUNDTRACKER WORKS

On Reception–*“Cuts Noise Coming In”*

With a normal CB, distant signals fall below the squelch level and are unintelligible. With a SoundTracker CB, the noise level is cut by up to 90%, which increases the signal-to-noise ratio and dramatically improves signal clarity. This also allows you to significantly reduce the squelch level, which greatly expands your listening range.

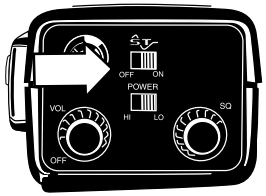


On Transmission–*“Strengthens Signals Going Out”*

A SoundTracker CB strengthens the transmit signal by more effectively using the available RF power output of the CB. The result is improved transmission signal clarity and an expanded transmission range.

ACTIVATING SOUNDTRACKER

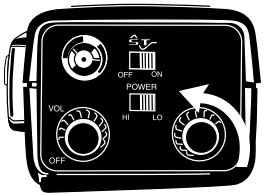
1. Switch the SoundTracker toggle to ON position.



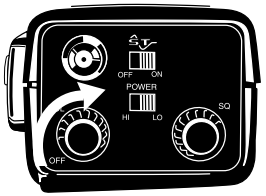
TESTING SOUNDTRACKER

1. Select any unused channel on your CB.

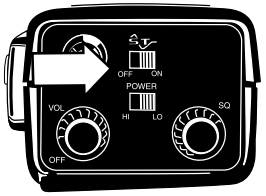
2. Open the squelch fully by turning the knob counter-clockwise until it stops.



3. Turn the volume up louder than your normal listening level.



4. Switch the SoundTracker toggle off and on. Notice the significant reduction in noise.



BATTERY DISPOSAL

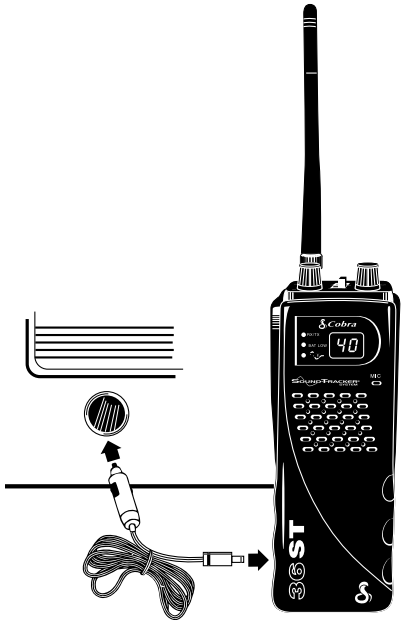
When no longer capable of holding a charge, rechargeable nickel cadmium (Ni-Cad) batteries must be recycled or disposed of properly in compliance with all applicable laws. Certain states or municipalities require recycling and have established collection programs. Please contact your local waste removal authority for instructions.

DO NOT PUT BATTERIES INTO FIRE OR EXPOSE TO HIGH HEAT. THEY MAY EXPLODE.

IN VEHICLE USE

Your 36ST can be connected to a 12 volt power source with the cigarette power cord adapter provided. Connect adapter as shown.

**Note: Due to the characteristics of CB transmissions, it may be difficult to transmit and receive from inside your car. Roof mounted antennas can dramatically improve transmissions and will increase your range. You will need a quality roof mount antenna and a BNC/SO239 adapter. See accessories section for details.



HOW YOUR CB CAN SERVE YOU

- Warn of traffic tie ups ahead.
- Provide weather and road information.
- Provide help fast in event of emergency or breakdown.
- Suggest good spots to eat and sleep.
- Make long trips more interesting, and help keep you awake.
- Provide direct contact with your office or home.
- Make friends as you travel.
- Provide “local information” to find your destination.
- Help law enforcement officers by reporting drunk and reckless drivers.

Never Used A CB Before?

WHAT TO EXPECT FROM YOUR NEW COBRA CITIZENS BAND TRANSCEIVER

Citizens Band Two-Way Radios operate on an AM frequency, just like your car radio.

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 are hearing are parts of many faraway conversations that are drifting into your transceiver. To eliminate the "noise" you need to set up the SQUELCH control. It will silence the "noise" by tuning your receiver to "hear" only close-by communications. Turn the SQUELCH control to the right until you silence the noise. You will need to adjust this control as the "noise" level will go up or down depending on your location.

SECOND: Try a broadcast. Say, "Break One-Nine for a Radio Check." Listen for a response from another CBer 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 the road conditions, the weather conditions, a good place to eat. **Don't be afraid to talk.**

A FEW RULES YOU SHOULD KNOW

1. You are not allowed to carry on a conversation with another station for more than five minutes at a time without taking a one-minute break to give others a chance to use the channel.
2. You are not allowed to blast others off the air by overpowering them with illegally amplified transmitter power or illegal high antennas.
3. You can’t use the CB to promote illegal activities.
4. You are not allowed to use profanity.
5. You may not play music in your CB.
6. You may not use your CB to sell merchandise or professional service.

USE CHANNEL 9 FOR EMERGENCY ONLY

Operating Procedure for Emergency Communications

1. For **EMERGENCY** communications, **set radio to Ch. 9**. For non-emergency communications, select desired Channel by rotating the CHANNEL UP/DOWN tuning knob until reaching the desired Channel.

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

2. When asking for aid on Channel 9 it is suggested that you request a **REACT** base to respond by saying "Break Channel 9 for a REACT base" and provide the **CB DISTRESS DATA (called "CLIP):**

   CALL SIGN-Identify yourself and vehicle.

   LOCATION-Be exact.

   INJURIES-Number. Type. Trapped?

   PROBLEM- Give details and help required. Air **CLIP** repeatedly so any monitor can aid you.

If you don't receive a response on Ch. 9; try Ch.14 or 19.

FCC gives the following examples of permitted and prohibited types of communications for use on Channel 9. These are guidelines and are not intended to be all-inclusive.

Permitted	Example Message
Yes	"A tornado sighted six miles north of town."
No	"This is observation post number 10. No tornado sighted."
Yes	"I am out of gas on Interstate 95 at mile marker 121."
No	"I am out of gas in my driveway."
Yes	"There is a four-car collision at Exit 10 on the Beltway, send police and ambulance."
No	"Traffic is moving smoothly on the Beltway."
Yes	"Base to Unit 1, the Weather Bureau has just issued a thunderstorm warning. Bring the sailboat into port."
No	"Attention all motorists. The Weather Bureau advises that the snow tomorrow will accumulate 4 to 6 inches."
Yes	"There is a fire in the building on the corner of 6th and Main Streets."
No	"This is Halloween patrol unit number 3. Everything is quiet here."

CB 10-CODES

Citizens Band radio operators have largely adopted the **"10-code"** for standard questions and answers. Its use permits faster communications and better understanding in noisy areas. The following table lists some of the more common codes and their meanings:

Code	Meaning	Code	Meaning
10-1	Receiving poorly	10-37	Wrecker needed at
10-2	Receiving well	10-38	Ambulance needed at
10-3	Stop transmitting	10-39	Your message delivered
10-4	OK, message received	10-41	Please turn to channel
10-5	Relay message	10-42	Traffic accident at
10-6	Busy, stand by	10-43	Traffic Tie up at
10-7	Out of service, leaving air	10-44	I have a message for you
10-8	In service, subject to call	10-45	All units within range please report
10-9	Repeat message	10-50	Break channel
10-10	Transmission completed, standing by	10-60	What is next message number?
10-11	Talking too rapidly	10-62	Unable to copy, use phone
10-12	Visitors present	10-63	Net directed to
10-13	Advise Weather/Road conditions	10-64	Net clear
10-16	Make pick up at	10-65	Awaiting your next message/assignment
10-17	Urgent business	10-67	All units comply
10-18	Anything for us?	10-70	Fire at
10-19	Nothing for you, return to base	10-71	Proceed with transmission in sequence
10-20	My location is	10-77	Negative contact
10-21	Call by telephone	10-81	Reserve hotel room for
10-22	Report in person to	10-82	Reserve room for
10-23	Stand by	10-84	My telephone number is
10-24	Completed last assignment	10-85	My address is
10-25	Can you contact	10-91	Talk closer to mike
10-26	Disregard last information	10-93	Check my frequency on this channel
10-27	I am moving to channel	10-94	Please give me a long count
10-28	Identify your station	10-99	Mission completed, all units secure
10-29	Time is up for contact	10-200	Police needed at
10-30	Does not conform to FCC rules		
10-32	I will give you a radio check		
10-33	EMERGENCY TRAFFIC		
10-34	Trouble at this station		
10-35	Confidential information		
10-36	Correct time is		

FREQUENCY RANGE

The COBRA 36ST 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 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	27.255
4	27.005	24	27.235
5	27.015	25	27.245
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

HH-36ST 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	ELECTRET, PUSH-TO-TALK
INPUT VOLTAGE	9V VDC, DETACHABLE 12 VDC, EXTERNAL
ANTENNA CONNECTOR	TYPE BNC
METER	LCD DISPLAY, ICONS
SIZE, WITH 6 CELL BATT. PACK	2½"L x 5¾"H X 1⅜"D
WEIGHT	9 oz.

TRANSMITTER

POWER OUTPUT	3.5 W AT 9 VDC - HIGH, 1.0 W IN LOW 4.0 W AT 13.8 VDC - HIGH, 2.0 IN LOW
MODULATION	AM
FREQUENCY RESPONSE	300 - 3000 HZ AT -6 DB
OUTPUT IMPEDANCE	50 OHMS, UNBALANCED

RECEIVER

CB	
SENSITIVITY	LESS THAN 1 uV FOR 10 DB S/N
IF FREQUENCY	DUAL CONVERSION 1 ST - 10.690 MHZ, 2ND - 455 KHZ
AUDIO OUTPUT	500 mW MAXIMUM AT 10 % DISTORTION
FREQUENCY RESPONSE	300 - 3000 HZ AT -6 DB
2ND IF IMAGE REJECTION	GREATER THAN 60 DB
ADJACENT CH. REJECTION	50 DB MIN.
AUTOMATIC NOISE LIMITER	BUILT- IN.
FREQUENCY CONTROL	PLL (PHASE LOCK LOOP)

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 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.

1. For Warranty Repair, include some form of proof-of-purchase, such as a mechanical reproduction or carbon or sales receipt. If you send the original receipt it cannot be returned.
2. Send the entire product. Must include CB unit and microphone.
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

LIMITED TWO YEAR WARRANTY

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. 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

OPTIONAL ACCESSORIES

You can find these fine accessories at your local Cobra CB deal-

High performance NiCad rechargeable battery cell
212-001-N-001 $4.00
(10 batteries required)

120 V A/C Wall charger with plug. Charges the (10) NiCad batteries
CA-25 $10.00

BNC/SO239 antenna adapter. Allows connection of your handheld CB to standard antennas.
CA-43 $5.00

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

Long Range antenna. Doubles the range of your handheld CB.
CA-41 $15.95

Magnetic Mount Weather Antenna (not shown). Allows greater transmission range while in a moving vehicle. (Requires a CA-43 connector)
ATW-400 $39.75

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
212-001-N-001	$4.00		
420-017-N-001	$7.00		
CA-25	$10.00		
CA-43	$5.00		
CA-41	$15.95		
ATW-400	$39.75		

(Prices subject to change without notice.)

** 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%

Fax to:
1-773-622-2269

Amount _____
(Tax if applicable) _____
Shipping//handling **$3.75**
Total _____

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

Please print clearly:

Name _____

Address (Not P.O. Box) _____

City _____ State _____ Zip _____

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.

NOTES