

OPERATING INSTRUCTIONS FOR YOUR

Cobra[®]
40 CHANNEL

**SOLID STATE CITIZENS BAND
SSB/AM TWO-WAY RADIO
BASE STATION**

With Seven Weather Channels and
NOAA Emergency Alert Tone

Model 2010 GTL WX



How To Use Your



SOLID STATE CITIZENS BAND SSB/AM 2-WAY RADIO BASE STATION Model 2010 GTL WX

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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."

Replacement or substitution of transistors, regular diodes or other parts of a unique nature, with parts other than those recommended by Cobra Electronics, 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.

What Is Weather Radio?

NOAA WEATHER RADIO (NWR) is a service of the National Oceanic and Atmospheric Administration (NOAA), of the U.S. Department of Commerce. It provides continuous, around-the-clock broadcasts of the latest weather information directly from National Weather Service Offices. The broadcasts are tailored to the weather-information needs of people within the receiving area. For example, coastal and Great Lakes' stations provide specialized weather information for area boaters, fishermen and others engaged in marine activities, as well as general weather information for the public-at-large. Three hundred eighty (380) NWR stations are in operation by the U.S. Government in addition to several NWR stations that are maintained by private interest groups.

Under a January 1975 White House policy statement, NOAA Weather Radio was designated as the sole Government operated radio system to provide direct warnings into private homes for both natural disasters and nuclear attack. The capability is to supplement warnings by sirens and by commercial radio and television.

NWR Frequencies and Transmission Characteristics

NWR broadcasts have been allocated seven frequencies within the VHF radio spectrum reserved for Government use. Assigned frequencies are:

162.400 MHz	162.475 MHz	162.525 MHz
162.425 MHz	162.500 MHz	162.550 MHz
162.450 MHz		

Section I Introduction

FREQUENCY RANGE

The COBRA 2010 GTL WX transceiver represents one of the most advanced AM base station 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 channels as shown below.

CB Channel	Channel Freq. in MHz	CB Channel	Channel Freq. in MHz	Weather Channel	Weather Freq. in MHz
1	26.965	21	27.215	1	162.550
2	26.975	22	27.225	2	162.400
3	26.985	23	27.255	3	162.475
4	27.005	24	27.235	4	162.425
5	27.015	25	27.245	5	162.450
6	27.025	26	27.265	6	162.500
7	27.035	27	27.275	7	162.525
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		

The COBRA 2010 GTL WX has a vastly superior receiver which includes noise blanker circuitry and a switchable automatic noise limiter. The receiver also features increased protection against cross modulation and strong adjacent channel signals.

To obtain maximum performance please read carefully the descriptions and operating instructions in this manual. Fill out below;keep for your records.

Serial No. _____

Date of Purchase _____

Dealer Name _____

Keep this manual for detailed information about your Cobra CB radio.

SAVE YOUR SALES RECEIPT, CARTON AND PACKING FOR POSSIBLE FUTURE USE.

Section II Specifications

GENERAL

Channels	40.
Frequency Range	26.965 to 27.405 MHz.
Frequency Control	Phase Lock Loop (PLL) synthesizer.
Frequency Tolerance	±130 Hz Typical.
Operating Temperature Range	-30° C to + 50° C.
Microphone	Plug-in type; 600Ω dynamic.
Power Source	120V AC nominal. 13.8V DC nominal. (Positive or negative ground).
Power Consumption	<i>Transmit:</i> AM full mod., 65 watts. SSB 70 watts. <i>Receive:</i> Squelched, 30 watts. Full audio, 40 watts.
Current Drain (13.8V DC)	<i>Transmit:</i> AM and SSB, 2.2A DC (nominal). <i>Receive:</i> Full audio output, 1.1A DC
Size	5"(H) x 15"(W) x 4 ⁷ / ₁₆ "(D).
Weight	19 ¹ / ₂ lbs. (Including speaker).
Antenna Conductor	UHF, S0239.
Semiconductors	12 integrated circuits, 3 FETs, 58 transistors, 79 diodes, 1 LCD.
Meter 1	Illuminated; indicates relative power output, received signal strength.
Meter 2	Illuminated; indicates standing wave ratio and level of modulation.

TRANSMITTER

Power Output	AM, 4 watts. SSB, 12 watts, PEP.
Modulation	High-and low-level Class B, Amplitude Modulation.
Intermodulation Distortion	SSB: 3rd order, more than -25 dB. 5th order, more than -35 dB.
SSB Carrier Suppression	55 dB.
Unwanted Sideband	50 dB.
Frequency Response	AM and SSB; 300 to 2500 Hz.
Output Impedance	50 ohms, unbalanced
Output Indicators	Meter shows relative RF output power and SWR. RX/TX USB/LSB AM ANT. icons on LCD, channel frequency and clock.

Section II Specifications (Cont.)

RECEIVER

Sensitivity	SSB: 0.25 μ V for 10dB (S+N)/N at greater than 1/2-watt of audio output. AM: 0.5 μ V for 10 dB (S+N)/ at greater than 1/2-watt of audio output.
Selectivity	AM: 6dB @ 3 KHz, 50 dB @ 9 KHz. SSB: 6 dB @ 1.1 KHz, 60 dB @ 2.3 KHz.
Image Rejection	More than 65 dB.
IF Frequency	AM: 7.8 MHz 1st IF, 455 KHz 2nd IF. SSB: 7.8 MHz.
Adjacent-Channel Rejection	60 dB AM & 70 dB SSB.
AM and SSB RF Gain Control	40 dB adjustable for optimum signal reception.
Automatic Gain Control (AGC)	Less than 10 dB change in audio output for inputs from 10 to 100,000 microvolts.
Squelch	Adjustable; threshold less than 0.25 μ V.
ANL	Switchable.
Noise Blanker	RF type, effective on AM and SSB.
Voice Lock Range	\pm 1.5 KHz.
Audio Output Power	4 watts into 8 ohms.
Frequency Response	300 to 2500 Hz.
Built-in Speaker	8 ohms, round.
External Speaker (Not Supplied)	8 ohms; disables internal speaker when connected.

CLOCK/COUNTER

Clock	24 hr. time.
Counter	Displays transmit and receive frequency.

WEATHER (WX) RECEIVER

Type	Single Conversion, Superhet 455Hz IF.
Modulation	FM; \pm 5 KHz Deviation.
Sensitivity	Less than 1 μ V for 12dB Sinad.
Frequency Range	162.400 to 162.550 MHz.
Channels	7; 25KHz Spacing.
Frequency Control	Crystal.
WX Emergency Warning	Phase Lock Loop; 1050Hz.
Audio Output Power	4 watts.

(SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE)

Section III Installation

LOCATION

Prior to beginning operation of the transceiver, a basic installation must be prepared. Installation of the transceiver itself is a rather simple procedure.

In selecting the location for the unit, two basic factors must be considered:

1. Access to a 120V, 60 Hz power source.
2. The location must be convenient for running the antenna lead-in cable if outside antenna installation is proposed.

BASE STATION ANTENNA

Since the maximum allowable power output of the transmitter is limited by the FCC, the antenna is the most important factor affecting transmission distance. Only a properly matched antenna system will allow maximum power transfer from the 50-ohm transmission line to the radiating element.

The recommended method of antenna tuning is to use the built-in SWR meter to adjust the antenna tuning for minimum reflected power on channel 21.

The radio may be used with any type of 50-ohm base station antenna. A ground plane vertical antenna will provide the most uniform horizontal coverage. This type of antenna is best suited for communication with a mobile unit. For point-to-point operation where both stations are fixed, a directional beam will usually increase communicating range since this type of antenna concentrates transmitted energy in one direction. The beam antenna also allows the receiver to "listen" in only one direction thus reducing interfering signals.

Antenna height is an important factor when maximum range is desired. Keep the antenna clear of surrounding structures or foliage. FCC regulations for base station antenna height are:

1. Omnidirectional antennas may not be higher than 60 feet above the ground when using a tower, mast or pole, and no higher than 20 feet above an existing structure.

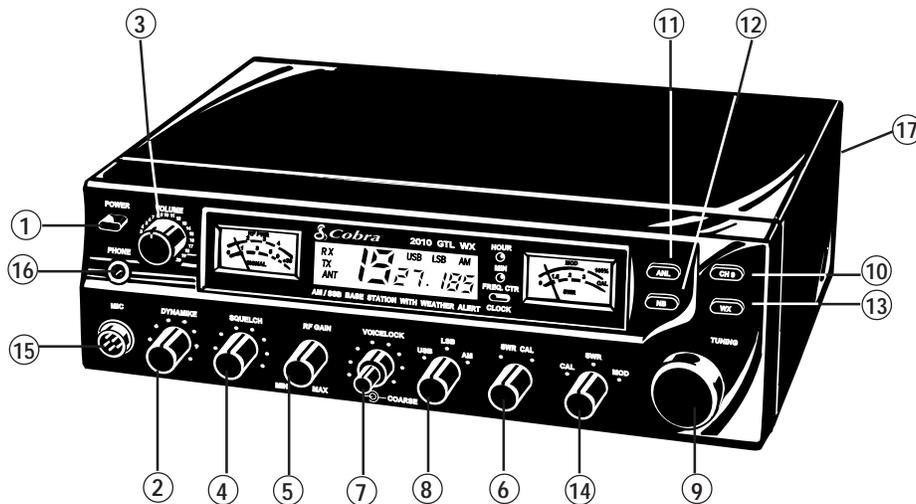
These are only general regulations applicable to most but not all parts of the nation. Locations near airports and some military installations are subject to different rules; therefore, it is best to contact your nearest Federal Communications Commission office for information regarding your specific area.

MOBILE OPERATION/EMERGENCY POWER OPERATION

It is possible to operate the Cobra 2010 GTL WX from an external 13.8V DC power supply for emergency conditions or from an automobile battery for mobile operation. We recommend using a genuine Cobra DC power cord (not supplied). The DC power cord can be purchased through your local dealer, or direct from Cobra. See CB radio Accessories on the back page of this manual.

CONTROLS AND INDICATORS

There are eighteen controls, 2 meters, 1 LCD and 1 jack on the front panel of your 2010 GTL WX.



A. CONTROL FUNCTIONS

1. **POWER SWITCH.** Press in to turn on radio. Press in, again, and release to turn off radio.
2. **DYNAMIKE.** Adjusts the microphone gain in the transmit mode. This controls the gain to the extent that full talk power is available several inches away from the microphone.
3. **VOLUME.** Turn clockwise to set the desired listening level.
4. **SQUELCH.** This control is used to cut off or eliminate receiver background noise in the absence of an incoming signal. For maximum receiver sensitivity the control should be adjusted only to the point where the receiver background noise or ambient background noise is eliminated. Turn fully counterclockwise then slowly clockwise until the receiver noise disappears. Any signal to be received must now be slightly stronger than the average received noise. Further clockwise rotation will increase the threshold level which a signal must overcome in order to be heard. Only strong signals will be heard at a maximum clockwise setting.
5. **RF GAIN CONTROL.** Adjust as required to optimize the signal. This control is used primarily to optimize reception in strong signal areas. Gain is reduced by counterclockwise rotation of the control.

Section IV Operation (Continued)

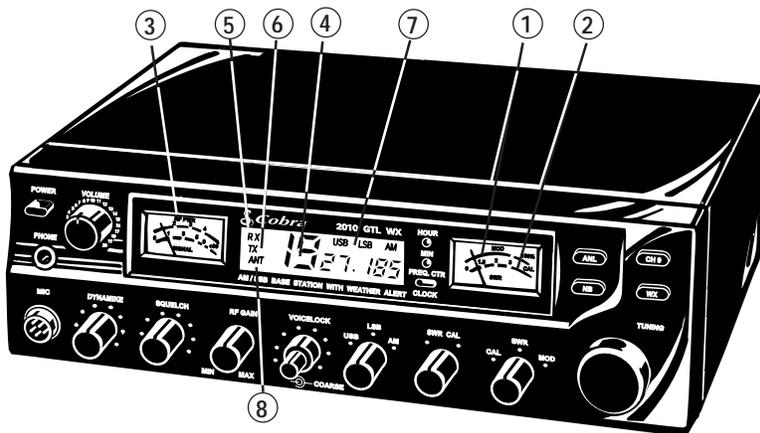
6. **SWR CAL CONTROL** . In order for you to achieve maximum radiated power and the longest range, it is important that your antenna be in good condition, properly adjusted and matched to your transceiver. The Built-in SWR (standing wave ratio) meter lets you easily measure your antenna condition. To operate this function, connect your antenna to the transceiver antenna output connector. Select a channel near the middle of the band such as 21 or the channel you plan to use most frequently. Turn the power on, set mode switch to AM, and set the meter function switch to the CAL position. Press and hold the microphone push-to-talk button and using the SWR CAL control, adjust the meter to read the CAL position indicated on the meter face. Then, without releasing the microphone button, switch the meter function switch to the SWR position and read the SWR indicated. The lower the figure, the better, with 1 being ideal. Generally speaking, readings up to 3 are acceptable, but over 3 indicates that you are losing radiated power and antenna adjustment may be advisable. This feature cannot be used in Weather Mode.
7. **VOICE LOCK FINE/COURSE**. Allows variation of the receiver operating frequencies above and below the assigned frequency. Although this control is intended primarily to tune in SSB signals, it may also be used to optimize AM signals. This feature cannot be used in the Weather Mode.
8. **MODE SWITCH (USB/LSB/AM)**. This switch selects AM (Amplitude Modulation), USB (Upper Side Band) or LSB (Lower Side Band) mode of operation. The Mode selector switch changes the mode of operation of both the transmitter and receiver simultaneously. This feature cannot be used in the Weather Mode.
9. **CHANNEL SELECTOR**. In the CB Mode, this electronic selector selects any one of the forty Citizens Band channels desired. The selected channel appears on the LCD readout directly above the Channel Selector knob. In WX Mode, any one of the 7 Weather Channels will be selected.
10. **INSTANT CHANNEL 9 BUTTON**. Use to activate Emergency Channel 9 instantly.
11. **ANL SWITCH**. In the ANL position, the noise reduction circuits of the Automatic Noise Limiter are activated. This feature cannot be used in the Weather Mode.
12. **NB SWITCH**. When this switch is placed in the NB position the RF noise blanker is activated. The RF noise blanker is very effective for repetitive impulse noise such as ignition interference. This feature cannot be used in the Weather Mode.
13. **WX/CB SWITCH**. Selects the mode of operation. In the CB position, the WX function is placed in Alert mode and the unit will transmit and receive on the selected CB frequency. In the WX position, select one of 7 Weather Channels for continuous WX monitoring.
Note: Clock is displayed when in Weather Mode.
14. **SWR/SWR CAL/MOD SELECTOR**. In the MOD position, the MOD meter is activated. When in the SWR or SWR CAL positions the SWR meter is activated. This feature cannot be used in Weather Mode. In USB or LSB mode, the MOD meter does not operate.

Section IV Operation (Continued)

15. **PRESS-TO-TALK MICROPHONE.** The receiver and transmitter are controlled by the press-to-talk switch on the microphone. Press the switch and the transmitter is activated; release switch to receive. When transmitting, hold the microphone two inches from the mouth and speak clearly in a normal "voice." The radio is supplied with a low-impedance 500-ohm dynamic desktop microphone. For installation instructions on other microphones, see "ALTERNATE MICROPHONES AND INSTALLATION."
16. **HEAD PHONE JACK.** For your individual listening with head phones.
17. **EXTERNAL SPEAKER (Optional).** The External Speaker Jack is used for remote receiver monitoring. The external speaker should have 8-ohm impedance and be rated to handle at least 4.0 watts. When the external speaker is plugged in, the internal speaker is automatically disconnected.

- **WX ALERT TONE.** If threatening weather is nearby, the National Weather Service may broadcast a 10 second alert tone. This tone will be heard through the CB, even if the CB/WX Switch is in the CB mode or the unit is turned off (see NOTE below). This enables you to monitor CB frequencies and still be warned by the National Weather Service Emergency Alert. When you hear the Alert, place the CB/WX switch in the WX position. You will then be able to hear the Weather Warning Broadcast.
NOTE: If you are using the CB mode, remember to change the CB/WX Switch from CB to WX every so often to make sure you are continually tuned to the clearest weather band channel in case an alert is broadcast.

Section IV Operation (Continued)



INDICATOR FUNCTIONS

1. **MODULATION METER.** Indicates the percent modulation (AM only).

NOTE

The SWR/SWR CAL/MOD switch must be in the MOD position to read modulation.

2. **SWR METER.** Measures the ratio of standing wave voltage of the antenna system. Used to properly adjust the length of the antenna, and to monitor the quality of the coaxial cable and all RF electrical connections. If there is any degradation whatsoever in any of the above, due to humidity, salt spray, vibration or corrosion, the SWR meter reading will rise, thereby indicating that a problem exists.
To calibrate, switch to the CAL position. Transmit by pressing the mic switch (AM mode), and adjust the SWR/CAL control to the CAL mark on the meter. Then switch to SWR position for the SWR measurement.
3. **S/RF METER.** Indicates relative output power and incoming signal strength.
4. **CHANNEL INDICATOR.** The selected channel appears on the LCD left of the channel selector knob.
5. **RECEIVE INDICATOR (RX).** Appears in LCD.
6. **TRANSMIT INDICATOR (TX).** Appears in LCD.
7. **MODE INDICATOR (USB/LSB/AM).** Mode appears in LCD when set by mode selector.
8. **ANTENNA WARNING INDICATOR.** Appears on the lower left corner of the LCD if there is a serious degradation of the antenna system SWR due to humidity, salt spray, vibration or corrosion.

Section IV Operation (Continued)

OPERATING PROCEDURE TO RECEIVE

1. Place the WX/CB Switch in the CB position.
2. Turn the set ON by pressing the POWER Switch.
3. Adjust the VOLUME for a comfortable listening level.
4. Set the Channel selector switch to the desired channel.
5. Set RF GAIN fully clockwise.
6. Set the Mode Selector to desired mode for LSB, AM or USB.
7. Adjust the VOICE LOCK control to clarify the SSB signals or to optimize AM signals.
8. Listen to the background noise from the speaker. Turn the SQUELCH control slowly clockwise, until the noise JUST disappears. (No signal should now be present.) Leave the control at this setting. The SQUELCH is now properly adjusted. The receiver will remain quiet until a signal is actually received. Do not advance the control too far, or some of the weaker signals will not be heard.

OPERATING PROCEDURE TO TRANSMIT

1. Select the desired channel of transmission.
2. Set the DYNAMIKE control fully clockwise.
3. If the channel is clear, press the push-to-talk switch on the microphone and speak in a normal voice.

The S-RF meter will indicate relative power output and the modulation meter will indicate percentage of modulation as you speak into the microphone.

CAUTION

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

OPERATING PROCEDURE TO RECEIVE WEATHER BAND

1. Place WX/CB Switch in the WX position.
2. Turn the Weather Channel Selector (1-7) until you find the Weather Channel with the clearest reception. Sometimes more than one channel can be received depending on your location in the broadcast area; however, the closest broadcast to you will be the one with the clearest signal (the least static or background noise).

Section IV Operation (Continued)

OPERATING PROCEDURE TO RECEIVE WEATHER BAND continued

3. If threatening weather is nearby, the National Weather Service may broadcast a 10 second alert tone. This tone will be heard through the CB, even if the WX/CB Switch is in the CB mode or the unit is turned off (see NOTE below). This enables you to monitor CB frequencies and still be warned by the National Weather Service Emergency Alert. When you hear the alert, place the WX/CB Switch in the WX position. You will then be able to hear the Weather Warning Broadcast.

NOTE: If you are using the CB Mode, remember to change the WX/CB Switch from CB to WX every so often to make sure you are continually tuned to the clearest weather band channel in case an alert is broadcast.

FREQUENCY COUNTER/LCD DIGITAL CLOCK

1. Located on the right side of the LCD is the Counter/Clock Indicator.
2. For proper procedure to set your LCD Clock, there are the following features:
TIME SET: 2 switches (used to set time).
COUNTER/CLOCK: 1 switch (used to select display).

TO SET TIME

1. Press **FREQ. CTR./CLOCK** Switch to select the clock.
2. **HOUR SWITCH:** Press this switch to get correct hour setting.
3. **MINUTE SWITCH:** Press this switch to get correct minutes setting.

NOTE: the 2010 GTL WX uses a 24-hour clock display (no a.m. or p.m. indicated). Example:

Display Reads	Time Is:
01:00	1:00 a.m.
12:00	12:00 noon
18:00	6:00 p.m.
24:00	12:00 midnight

FREQ. CTR./CLOCK:

On power up, the display shows channel number and frequency being received. Pressing the **FREQ. CTR./CLOCK** button will select the Clock. Clock mode only is displayed in the WX (weather) mode. When switching out of WX mode, the display will continue to show the clock until the **FREQ. CTR./CLOCK** button is pressed again.



Display in RX mode with Clock showing.

Section IV Operation (Continued)

RECEIVING SSB SIGNALS

There are three types of signals presently used for communications in the Citizens Band: AM, USB, and LSB. When the MODE switch on your unit is placed in the AM position, only standard double-sideband, full carrier signals will be detected. An SSB signal may be recognized while in the AM mode by its characteristic "Donald Duck" sound and the inability of the AM detector to produce an intelligible output. The USB and LSB modes will detect upper sideband and lower sideband respectively, and standard AM signals.

SSB reception differs from standard AM reception in that SSB receiver does not require a carrier or opposite sideband to produce an intelligible signal. A single-sideband transmitted signal consists only of the upper or the lower sideband and no carrier is transmitted. The elimination of the carrier from the AM signal helps to eliminate the biggest cause of whistles and tones heard on channels which make even moderately strong AM signals unreadable. Also, SSB takes only half of an AM channel, therefore two SSB conversations will fit into each channel, expanding the 40 AM channels to 80 SSB channels. The reduction in channel space required also helps in the receiver because only *half* of the noise and interference can be received with 100% of the SSB signal.

An SSB signal may be received only when the listening receiver is functioning in the same mode. In other words, an upper sideband signal (USB) may be made intelligible *only* if the receiver is functioning in the USB position.

If a lower sideband (LSB) signal is heard when the receiver is in the USB mode, no amount of tuning will make the signal intelligible. The reason for this may be understood if you consider that when the modulation is applied to the transmitter's microphone in the USB mode, the transmitter's output frequency is increased whereas in the LSB mode the transmitter's output frequency is decreased. The result in listening to the receiver is that when the MODE switch is in the proper position (either USB or LSB), a true reproduction of single tone of modulation will result, and if the tone is increased in frequency (such as a low-pitched whistle or a high-pitched whistle) you will hear the increase in the output tone of the receiver. If the incorrect mode is selected, an increase in tone of a whistle applied to the transmitter will cause a decrease in the resultant tone from the receiver.

Thus when a voice is used in place of a whistle or tone, in the proper listening mode the voice will be received correctly whereas in the incorrect mode, the voice will be translated backwards and cannot be made intelligible by the voice lock control. When listening to an AM transmission, a correct sideband is heard in either mode since both upper and lower sideband are received.

Section IV Operation (Continued)

RECEIVING SSB SIGNALS *continued*

Once the desired SSB mode has been selected, frequency adjustment may be necessary in order to make the incoming signal intelligible, the VOICE LOCK control allows the operator to vary frequency above and below the exact-center frequency of the received signal. If the sound of the incoming signal is high or low pitched, adjust the operation of the VOICE LOCK. Consider it as performing the same function as a phonograph speed control. When the speed is set too high, voices will be high-pitched and if set too low, voices will be low-pitched. Also, there is only *one* correct speed that will make a particular record produce the same sound that was recorded. If the record is played on a turntable that rotates in the wrong direction (opposite sideband) no amount of speed control (VOICE LOCK) will produce an intelligible sound.

An AM signal received while listening in one of the SSB modes will produce a steady tone (carrier) in addition to the intelligence, unless the SSB receiver is tuned to exactly the same frequency by the VOICE LOCK control. For simplicity it is recommended that the AM modes be used to listen to AM signals.

Section V Maintenance and Adjustment

The COBRA 2010 GTL WX transceiver is specifically designed for the environment encountered in base station installations. The use of all solid state circuitry and its light weight result in high reliability. Should a failure occur, however, replace parts only with identical parts. Do not substitute. Refer to the schematic diagram and parts list.

NOTE

If the performance described in the OPERATION and MAINTENANCE AND ADJUSTMENT sections is not obtained, review the operating instructions to insure that proper procedures were followed. If a problem still exists, refer to WARRANTY SERVICE INSTRUCTIONS elsewhere in this manual.

FCC WARNING

All transmitter adjustments other than those provided on front panel by the manufacturer must be made by or under the supervision of the holder of an FCC-issued general radio-telephone operator's license.

Section VI Appendix

Citizens Band 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.

10 CODE

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 the 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		

Section VI Appendix (Continued)

A FEW RULES THAT SHOULD BE OBEYED

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 over-powering them with illegally amplified transmitter power, or illegally 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.

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 for you as you travel.
- Provide "local information" to find you destination.
- Help law enforcement officers by reporting drunk and reckless drivers.

Colonel Samuel S. Smith of the Missouri Highway Patrol called the number of drunken drivers, wrong-way drivers and speeders reported by CBers as "amazing." He said, that even the "Smokey Bear" warnings don't shake their beliefs that "the potential benefits of CB radio to law enforcement are so great that they far outweigh the disadvantages." In regards to CB radar warnings to other CBers, Colonel Smith said cheerfully that "We've overheard warnings being relayed to truckers long after our operations have been discontinued...so we actually receive a residual benefit from these warnings."

Section VI Appendix (Continued)

USE CHANNEL 9 FOR EMERGENCY MESSAGES ONLY

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."
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 thunder storm 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."

Section VI Appendix (Continued)

ALTERNATE MICROPHONES AND INSTALLATION

For best results, the user should select a low-impedance dynamic type microphone or a transistorized microphone. Transistorized type microphones have a low output impedance characteristic. The microphones must be provided with a five-lead cable. The audio conductor and its shielded lead comprise two of the leads. The third lead is for receive control, the fourth is for grounding and fifth is for transmit control.

The microphone should provide the functions shown in schematic below.

5 WIRE MIC CABLE	
Pin Number	Mic Cable Lead
1	Audio Lead
2	Audio Shield
3	Receive Control
4	Grounding
5	Transmit Control

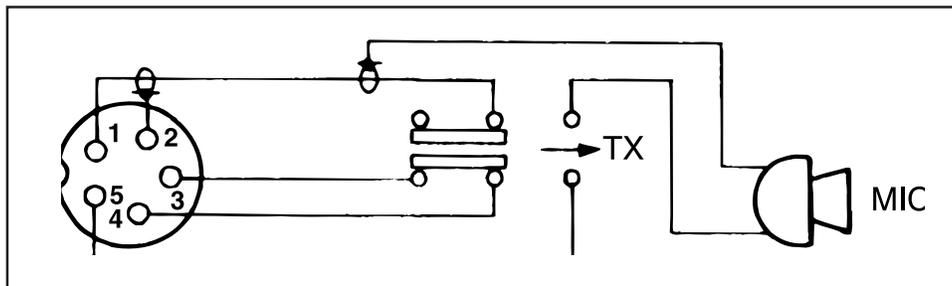


Fig. 1. Cobra 2010 GTL WX microphone schematic.

If the microphone to be used is provided with pre-cut leads, they must be revised as follows.

1. Cut leads so that they extend 7/16" beyond the plastic insulating jacket of the microphone cable (see Fig. 2.)
2. All leads should be cut to the same length. Strip the ends of each wire 1/8" and tin the exposed wire.

Before beginning the actual wiring, read carefully, the circuit and wiring information provided with the microphone you select. Use the minimum lead required in soldering the connections. Keep the exposed wire lengths to a minimum to avoid shorting when the microphone plug is reassembled.

Section VI Appendix (Continued)

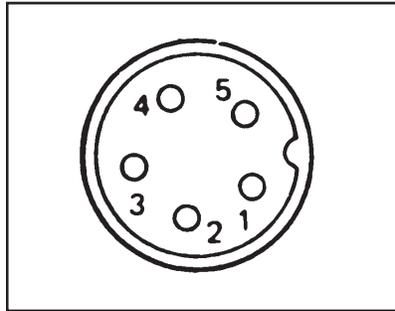


Fig. 4. Microphone plug pin numbers viewed from rear of pin receptacle.

Be sure that the housing and the knurled ring of Fig. 3 are pushed back onto the microphone cable before starting to solder. If the washer is not captive to the pin receptacle body, make sure that it is placed on the threaded portion of the pin receptacle body before soldering.

If the microphone jack is used to hold the pin receptacle during soldering operation, best results are obtained when the connections to pins 1 and 3 are made first and then the connections to pins 2, 4 and 5. Use a minimum amount of solder and be careful to prevent excessive solder accumulation on pins, which could cause a short between the pin and the microphone plug housing.

6. When all soldering connections to the pins of the microphone are complete, push the knurled ring and the housing forward and screw the housing onto the threaded portion of the pin receptacle body. Note the location of the screw clearance hole in the plug housing with respect to the threaded hole in the pin receptacle body. When the housing is completely threaded into the pin receptacle body, a final fraction of a turn either clockwise or counterclockwise may be required to align the screw hole with the threaded hole in the pin receptacle body. When these are aligned, the retaining screw is then screwed into place to secure the housing to the pin receptacle body.
7. The two cable clamp retainer screws should now be tightened to secure the housing to the microphone cord. If the cutting directions have been carefully followed, the cable clamp should secure to the insulation jacket of the microphone cable.
8. Upon completion of the microphone plug wiring, connect and secure the microphone plug in the transceiver.

Section VI Appendix (Continued)

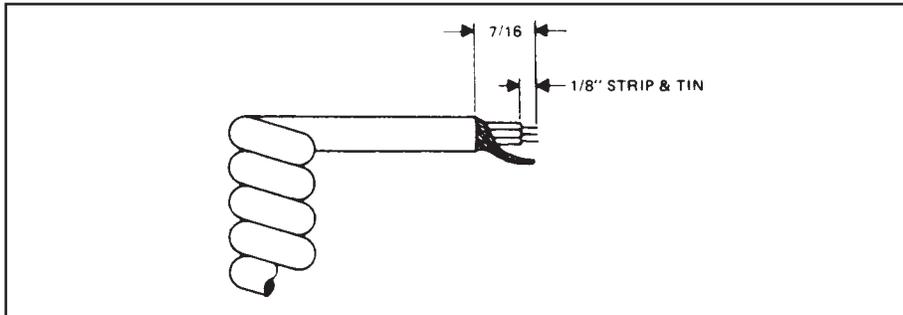


Fig. 2. Microphone Cable Preparation

To wire the microphone cable to the plug provided, proceed as follows.

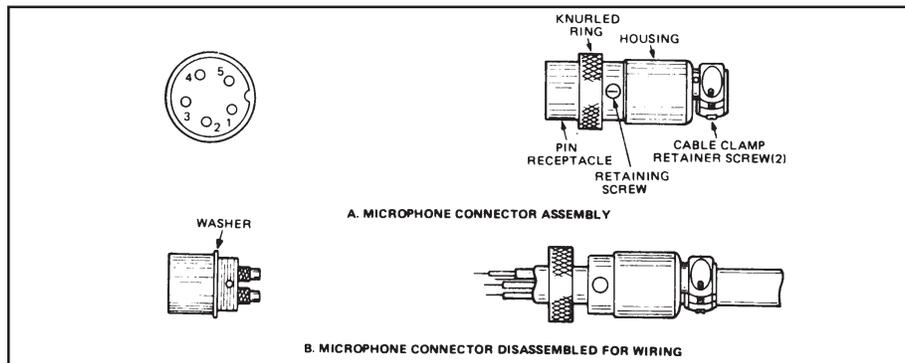


Fig. 3. Microphone plug wiring.

1. Remove the retaining screw.
2. Unscrew the housing from the pin receptacle body.
3. Loosen the two cable clamp retainer screws.
4. Feed the microphone cable through the housing, knurled ring and washer as shown Fig. 3B.
5. The wires must now be soldered to the pins as indicated in the above wiring tables. If a vise or clamping tool is available it should be used to hold the pin receptacle body during the soldering operation, so that both hands are free to perform the soldering. If a vise or clamping tool is not available, the pin receptacle body can be held in a stationary position by inserting it into the microphone jack on the front panel. The numbers of the pins of the microphone plug are shown in Fig 4, as viewed from the back of the plug. Before soldering the wire to the pins, pre-tin the wire receptacle of each pin of the plug.

If You Need Service

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

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. 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.

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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.

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