uniden®

Bearcat®

BC 890XLT

Auto Scanner

PRECAUTIONS

Before you read anything else, please observe the following:

WARNING!

Uniden **DOES NOT** represent this unit to be waterproof.
To reduce the risk of fire or electrical shock, **DO NOT** expose this unit to rain or moisture.

NOTE:

The installation, possession, or use of this scanning radio in a motor vehicle may be prohibited, regulated, or require a permit in certain states, cities, and/or local jurisdiction. Your local law enforcement officials should be able to provide you with information regarding the laws in your community.

Table of Contents

About Your New BC 890XLT

The BC 890XLT is a brand new state-of-the-art *information radio* with automatic scanning capabilities. You can use it at home as a base unit, or install in your vehicle as a mobile unit.

The BC 890XLT can store frequencies such as, police, fire/emergency, marine, air, weather, and other broadcasts into 10 banks of 20 channels each. The new Rotary Tuner feature enables rapid and easy selection of channels and frequencies. And with AUTO STORE, you can automatically program any channel.

With the BC 890XLT, you can scan all 200 channels at selectable speeds, including the super fast Turbo Scan. In addition, the BC 890XLT has AUTO SORT — an automatic frequency sorting feature for faster scanning within each bank.

What is Scanning?

Unlike standard AM or FM radio stations, most two-way communications (listed below) do not transmit continuously. The BC 890XLT scans programmed channels at the rate of up to 100 channels per second (in Turbo Scan Mode), until it finds an active frequency. Scanning stops on an active frequency, and remains on that channel as long as the transmission continues. When the transmission ends, and no response is detected, the scanning cycle resumes until another transmission is received. An optional DELAY can be set so that the scanner stays on the channel for 2 more seconds, waiting for another transmission before resuming scanning.

Types of Communication

You will be able to monitor communication such as:

- Police and fire department (including rescue and paramedics)
- NOAA weather broadcasts (7 preprogrammed channels)
- Business/industrial radio
- Motion picture and press relay
- Utility
- Land transportation frequencies, such as trucking firms, buses, taxis, tow trucks, and railroads
- Marine and amateur (ham radio) bands
- Air band
- Public Service 800 MHz band

And many more in the 29-54 MHz, 108-174 MHz, 216-512 MHz, and 806-956 MHz ranges.

Where to Obtain More Information

The Bearcat Radio Club and other similar hobby clubs have publications, information on computer bulletin boards, and even contests for the radio enthusiast. See the enclosed pamphlets for more information. Additional information is also available through your local library.

Unpacking

Carefully check the contents against this list:

- BC 890XLT Auto Scanner
- Telescoping Antenna
- AC Adapter (AD580U)
- This Operating Guide
- Registration Form
- Frequency Directories Order Form and other forms

If any items are missing or damaged, contact your place of purchase immediately.

Complete and mail your Registration Form immediately.

Please read this Operating Guide thoroughly before operating the scanner.

Optional Accessories

The following optional accessories for your BC 890XLT are available from your local Uniden Dealer or through the Uniden Customer Service Center by calling: (317) 842-2483, 8:00 AM to 5:00 PM EST, Monday through Friday.

DC Power Cord (PS002) — Enables permanent operation from your vehicle's fuse box.

Cigarette Lighter Power Cord (PS001) — Use for temporary operation from your vehicle's cigarette lighter.

Mobile Mounting Bracket with Hardware (MB001) — Use to install the scanner in your vehicle.

Betty Bearcat Frequency Directory/Local Directories — Lists all known frequencies throughout the U.S. or just for your area.

BC-002 CTCSS Board (BC002) — This internal tone board allows squelch to be broken only when a CTCSS tone is received. For information on board installation, see "CTCSS Operation" later in this manual.

Feature Highlights

■ **Turbo Scan** — This lightning-fast technology enables the BC 890XLT to scan and search up to 100 channels per second or 100 steps per second. Because the frequency coverage is so large (see "Technical Specifications" section for band listing), a very fast scanning system is essential. That is why we combined our latest technology — Turbo Scan — into the BC 890XLT.

■ **VFO Control** — (Variable Frequency Oscillator) Turn the large Rotary Tuner to select the desired frequency or channel.

■ **200 Channels** — You can program each of these memory channels to store one frequency.

■ **10 Banks** — Each bank contains 20 channels, useful for storing similar frequencies in order to maintain faster scanning cycles.

■ **29 - 956 MHz** — Indicates the range of frequencies that can be searched within the bands of your scanner. (**Note:** *The frequency coverage is not totally continuous from 29.0 to 956 MHz.*)

■ **10 Priority Channels** — You can assign one Priority channel for each of the 10 banks. This allows you to keep track of activity on your most important channel(s) while monitoring other channels for transmissions.

■ **Weather Alert** — Lets your scanner function as a severe weather warning radio.

■ **Auto Store** — Automatically stores all active frequencies within the specified bank(s).

■ **Auto Sorting** — Programmed frequencies are automatically sorted within each bank for faster scanning.

■ **Auto Recording** — This feature lets you record channel activity from the scanner onto a tape recorder.

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Installing the BC 890XLT

For Home Use (Desktop Installation)

1. Insert the DC plug end of the AC Adapter into the DC 13.8V jack on the rear panel.

2. Plug the AC Adapter into a standard 120V AC wall outlet.

3. Plug the Telescoping Antenna into the "ANT" connector. Extend the antenna to its full height. For frequencies higher than 406 MHz, shortening the antenna may improve the reception.

4. If you need a better viewing angle, flip the folding legs down to raise the front of the scanner.

For use with an optional external speaker:

Plug the external speaker into the "EXT SP" jack located on the front of the scanner.

For use with an optional tape recorder:

Connect a cable from the "LINE" jack on the front of the scanner to the microphone input of a tape recorder. Connect a cable from the RCA-type "AUX" jack on the back of the scanner to the recorder's "REMOTE" jack. (For instructions on how to set up channel recording, see "Tape Recording Channel Communication" later in this manual.)

For use with an optional CTCSS Tone Board:

Refer to "CTCSS Installation", located near the end of this manual.

Helpful Hints

■   If strong interference or electrical noise is received, relocate the scanner or its antenna away from the source.

■   If you are operating the scanner in a fringe area or need to improve reception, use an optional antenna designed for multi-band coverage. (You can purchase this type of antenna at a local electronics store.)

■   If the optional antenna has no cable, use 50-70 ohm coaxial cable for lead-in. A mating plug may be necessary for the optional antennas.

For Mobile Use (In-Car Installation)

Note: *You will need to order Optional Accessories for Mobile use. See the list on page 3.*

Mounting the Radio

1. Select an ideal location in your vehicle to mount the BC 890XLT. Avoid a location that could interfere with your driving. In a passenger car, the ideal location is underneath the dashboard on the passenger side.

2. Use the BC 890XLT mounting bracket as a template for marking the location of the mounting screws. (Note: *If there are screws already holding the dashboard, you can use the same screw holes to mount the bracket.*)

3. Drill the necessary holes and secure the mounting bracket in place using the screws provided.

4. Mount the radio to the bracket only after the wiring has been connected to the rear panel.

Connecting the Antenna Plug

Connect the mobile antenna plug (optional) into the "ANT" connector on the rear panel. (For more information on antenna installation, please refer to the instruction guide that came with your antenna.)

Connecting the DC Power Cord

Note: *If you are not experienced in connecting accessories to the vehicle fuse box, please see your automotive dealer for advice on proper installation.*

Permanent Installation:

1. Check the vehicle battery connections to determine which battery terminal (positive or negative) is grounded to the engine block or chassis. Most of today's vehicles use a negative ground.

2. Connect the RED wire of the optional DC power cord to the accessory contact in your vehicle's +13.8 VDC fuse box.

3. Connect the BLACK wire of the DC power cord to the negative side of the vehicle (usually the chassis).

> **Note:** *In vehicles with a positive ground, the RED wire connects to the chassis and the BLACK wire connects to the accessory contact in the fuse box.*

4. Insert the DC plug into the DC 13.8V jack on the back of the scanner.

Temporary Installation:

Use the optional Cigarette Lighter Power Cord for easy, temporary installation.

> **Warning:** *Do **not** use the cigarette lighter power cord in a positive ground vehicle.*

Plug one end of the Cigarette Lighter Power Cord into the cigarette lighter jack, and the other end into the DC 13.8V jack on the back of the scanner.

Controls and Functions

Front Panel
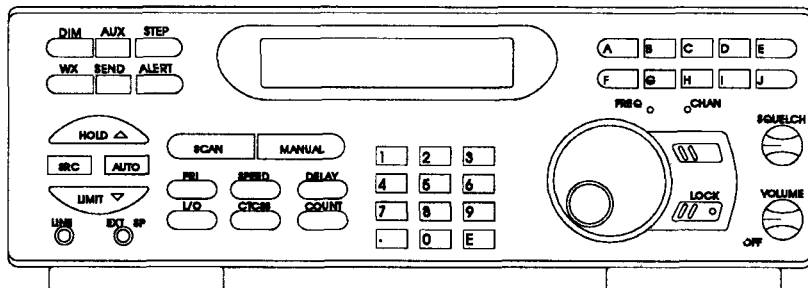
DIM KEY   Use **[DIM]** to illuminate the LCD Display at night, or under dim conditions. Press once for each brightness control setting: HIGH, LOW, OFF.

AUX KEY   Press **[AUX]** to program a channel so that it can be tape recorded when scanning stops on its channel. ("**LINE**" is displayed on each assigned channel.)

STEP KEY   Use **[STEP]** to change the step increment when accessing frequencies. Press **[STEP]** to change the factory preset auto step to another value (5kHz, 12.5kHz, 25kHz, depending on the frequency range), or back to default. (The selected step setting appears on the display.) Press **[.]** twice to return to the factory preset step. (Manually selected steps are erased when you turn off the power.)

WX KEY   Seven NOAA frequencies are programmed into the Weather (WX) bank. Press **[WX]** to find your local weather channel. ("**WX**" appears on the display in Weather Mode.)

SEND KEY   Press **[SEND]** to transfer a programmed frequency to any open (empty) bank channel. When the bank indicators start flashing, press the letter of the selected bank. If all the channels in that bank are programmed, the display will show "**FULL**". Select another bank. Then press **[E]** to complete the transfer.

You can also send a programmed frequency to another programmed channel. Press **[SEND]** and use the numeric keys to select a channel. If the channel is empty, the display will show "**ERROR**". Select another channel. If the channel is programmed,

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the display will alternate between the programmed frequency and the one you want to send. The press [MANUAL] and [E] to complete the transfer.

ALERT KEY   Use [ALERT] to alert you to severe weather warnings. Weather Alert can be activated only while you are listening to a local weather channel. Press [WX] to find your local weather channel. Then press [ALERT] to activate the Weather Alert Mode. This mutes the normal weather broadcast audio, and will sound a loud siren when a severe weather emergency tone signal is received. ("**WX ALERT**" and "**HOLD**" appear on the display in this mode.)

LCD DISPLAY   The liquid crystal display (LCD) shows the current channel and frequency. It also displays the mode, status, and bank indicators.

BANK KEYS   (The set of 10 letter keys) Each bank contains 20 channels in which you can store frequencies. During Scan Mode, press any of these keys to select or deselect a bank. (Only the selected bank indicator(s) appear on the display.)

Bank	Channel Number
A	1 - 20
B	21 - 40
C	41 - 60
D	61 - 80
E	81 - 100
F	101 - 120
G	121 - 140
H	141 - 160
I	161 - 180
J	181 - 200

HOLD KEY   Press [HOLD] in Search Mode to stop searching. ("HOLD" appears on the display.) Press [HOLD] again to step up one channel. Press and *hold* [HOLD] for more than 1 second to rapidly move through the frequencies. In Hold Mode, press [LIMIT] to STEP DOWN to the next lower frequency. To resume the search, press [SRC].
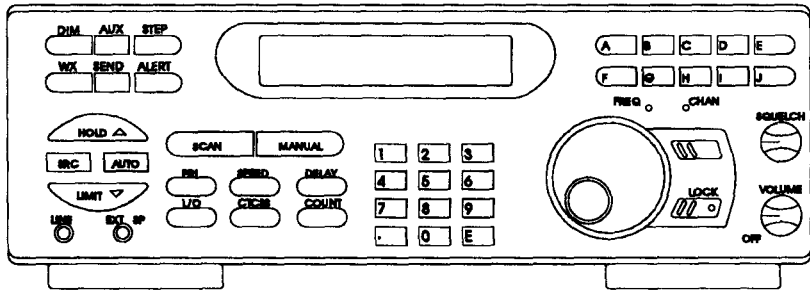
SEARCH KEY   Press [SRC] to start searching for active frequencies within preset ranges of any band. The scanner will automatically start searching upward from the lowest frequency of its band. ("SEARCH" appears on the display in Search Mode.) During Search, you can press [LIMIT] to hold the displayed frequency, and press [LIMIT] again to manually step down a frequency, or press [HOLD] to manually step up a frequency. Press and *hold* [LIMIT] or [HOLD] to rapidly step through the frequencies.

AUTO KEY   Use [AUTO] to automatically store active frequencies into *open* (empty) channels of specified banks. To use Auto Store, first set the upper and lower limits of the band to be searched. In Search Mode, press [AUTO] to activate the Auto Store feature. Press the letter key(s) of the bank(s) to store the frequencies. Then press [AUTO] to start Auto Store. ("AUTO" appears on the display when Auto Store is activated.) To stop Auto Store, press [HOLD], [MANUAL], or [AUTO].

LIMIT KEY   This key has two functions in Search Mode: (a) to step down a frequency; and (b) to set the search band limits. *To manually step down,* press and *hold* [LIMIT]. Press and *hold* for more than one second to rapidly move down the frequencies. *To set the lower and upper limits of the search band,* first enter the number for the lower limit and press [LIMIT]. Then enter the number for the upper limit and press [LIMIT].

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SCAN KEY   Press [SCAN] to start scanning all programmed channels that are not locked out. ("SCAN" appears on the display during scanning.)

MANUAL KEY   In Scan or Search Mode, press [MANUAL] to stop scanning or searching, and to select a channel. After you stop the scanner, press [MANUAL] again to STEP UP a channel. Press and *hold* to rapidly step through the channels. Use the numeric keypad to enter a channel number, and then press [MANUAL] to access the channel.

PRI KEY   You can assign "priority" to *one* channel of each selected bank. Priority is scanned from the lowest bank to the highest bank. To assign priority, first select a channel, and then press and *hold* [PRIORITY] for more than 2 seconds. A "**P**" appears on the display beside the Priority Channel. In Priority Mode, the scanner monitors the Priority Channel(s) every 2 seconds, except in Weather Alert. If activity is detected, the scanner monitors that channel until no signal is present. ("**PRI**" appears on the display.)

SPEED KEY   Press [SPEED] to select the scanning speed, normal or TURBO SCAN. (In Turbo Scan Mode, "**TURBO**" appears next to "**SCAN**" on the display.) At normal speed, the scanner scans 16 to 20 channels per second. In Turbo speed, the scanner scans up to 100 channels per second.

DELAY KEY   Use [DELAY] to turn ON or OFF the automatic 2-second delay during scanning or searching for active frequencies. (In Delay Mode, "**DELAY**" appears on the display.) In this mode, when the scanner monitors an active frequency, searching or scanning will not resume until transmission stops for 2 seconds.

L/O KEY   Press [L/O] to "lock out" or prevent scanning of the displayed channel, including Priority Channels. ("**L/O**" appears on the display.) To unlock a channel, press [L/O] again. Press and *hold* [L/O] for more than 2 seconds to clear all locked out channels in the current bank. [L/O] can be used in Manual Mode, Hold Mode, or Scan Stop Mode. To display locked out channels, turn the Rotary Tuner, or press [HOLD], [LIMIT], or [MANUAL] to manually step through all channels. (**Note:** *Locking out a channel will not erase the programmed frequency.*)
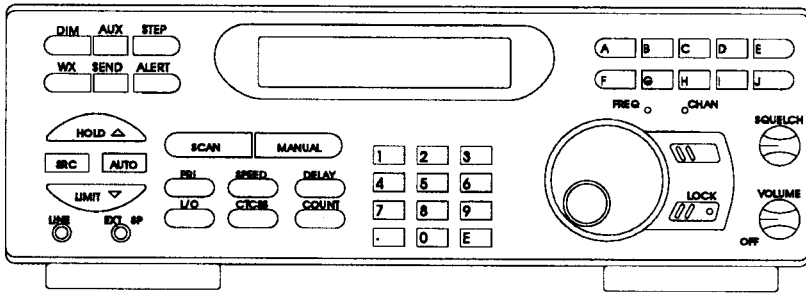
CTCSS KEY (Used only if an optional CTCSS Tone Board is installed.) This key enables CTCSS operation, and for programming channels to receive CTCSS tone frequencies. Squelch is opened only when a CTCSS tone is received. (When this mode is active, "**CTCSS**" appears on the display.) (For more information, see "CTCSS Operation" toward the end of this manual.)

COUNT KEY Use [**COUNT**] to indicate the number of times the scanner stopped on a channel during its last scan. First press [**MANUAL**] to stop scanning. Then press [**COUNT**]. (In Count Mode, "**COUNT**" appears on the display.) Turn the Rotary Tuner or press [**MANUAL**] to display each channel and number count.

NUMERIC Use these keys to program a channel for scanning. Also use to
KEYPAD access a channel directly with [**MANUAL**].

ENTER KEY (Within the numeric keypad) Press [**E**] to store a displayed frequency into any displayed channel. (**Note:** *If you try to store the same frequency into another channel, the display will indicate the original channel for that frequency. To store the same frequency into the selected channel, press* [**E**] *again.*

VFO CONTROL Use the Rotary Tuner to tune through channels or frequencies,
(ROTARY TUN.) depending on the setting of the [**FREQ/CHAN**] key. Turn the control *clockwise* to STEP UP, or *counterclockwise* to STEP DOWN.

FREQ/CHAN Press the [**FREQ/CHAN**] key to alternate between channel or
KEY frequency mode. When the CHAN LED (green) is on, you can tune through channels with the Rotary Tuner. When the FREQ LED (red) is on, you can tune through frequencies with the Rotary Tuner.

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LOCK KEY	Press the **[LOCK]** key to enable or disable the Rotary Tuner. When "Lock" mode is on, the LOCK LED (green) lights, and you cannot tune with the Rotary Tuner. Lock the Rotary Tuner to prevent accidentally changing the displayed channel and frequency when monitoring a broadcast.
SQUELCH CONTROL	Adjust **[SQUELCH]** to set the scan threshold. When monitoring a single channel in Manual Mode, adjust **[SQUELCH]** to eliminate the background rushing noise heard in the absence of an incoming signal.
ON-OFF/VOL. CONTROL	This control turns the scanner on or off, and also adjusts the volume.
LINE INPUT JACK	Use to connect a microphone input cable from a tape recorder to the scanner for recording frequency communication.
EXT. SP.	When using an optional External Speaker system, connect the External Speaker plug here.

Rear Panel
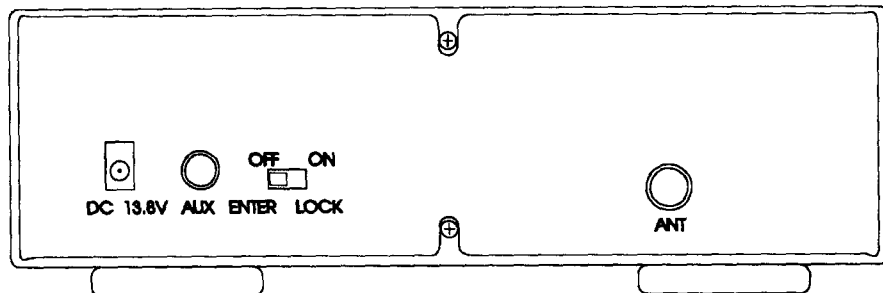
DC 13.8V Power Connector

Connect the DC power cable here. **Note:** *Use only the specified AC Adapter or DC power cord.*

AUX

Connect an RCA-type cable from a remote controlled tape recorder to the "**AUX**" jacl on the back of the scanner for audio frequency recording. If the channel display indicates "**LINE**", the output from "**AUX**" will turn the tape recorder on.
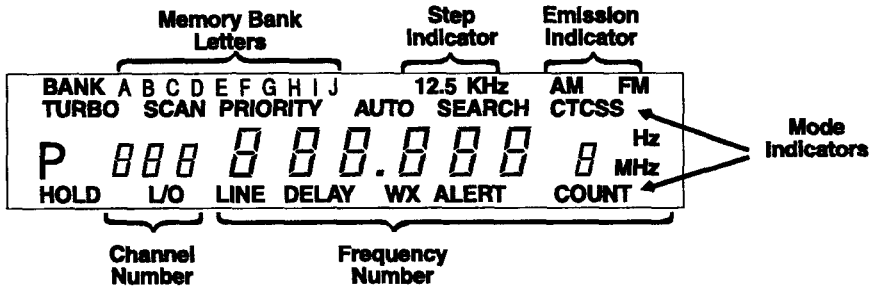
ENTER LOCK Switch

In the ON position, the Enter key ([E]) and [AUTO] are disabled. This prevents any unauthorized programming or accidental entries. When programming is disabled, pressing [E] or [AUTO] displays "**E-Loc**".

ANT. (Antenna) Connector

Plug in your telescopic antenna here.

LCD Display Features

Memory Bank Letters

You can select or deselect any memory bank during scanning operation. When you *select* a bank, its letter indicator appears on the display. When you *deselect* a bank, its letter indicator disappears from the display. If a bank is not selected, it will not be scanned.

Step Indicator

Indicates the frequency step for each band. If you change the step from the factory preset, the new step flashes.

Emission Indicator

Displays the type of emission (**AM** or **FM**) being received.

Mode Indicators

Indicate the current mode(s) of operation (**TURBO, SCAN, PRIORITY, AUTO, SEARCH, CTCSS, HOLD, L/O, LINE, DELAY, WX, ALERT, COUNT**). Each of these modes is described in the "Front Panel Features" section, in the related key description. These modes are also explained, as appropriate, in the rest of this Guide.

P

Indicates a Priority Channel. "**P**" displays for each of the first channel in each bank, whether a frequency is programmed or not.

Channel Number

Indicates the current channel that the scanner is on.

Frequency Number

Indicates the frequency being received by the scanner. (The small character displays 5kHz, as appropriate.)

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Scanning Overview

The BC 890XLT has 200 memory channels, each of which can be programmed to store one frequency. The channels are divided into ten 20-channel banks, useful for storing similar frequencies in order to maintain faster scanning cycles.

You can monitor communication in one of two ways:

- **Bank SCAN** If you have programmed channels, you can scan all programmed channels in the selected bank(s), except locked out channels. When scanning stops on an active frequency, it remains on that channel as long as the transmission continues. If DELAY is on, the scanner remains on the same channel for 2 more seconds, waiting for a responding transmission. If there is no responding transmission within 2 seconds, the scanning cycle resumes.

- **Band SEARCH** The Search function is *different* from Scan. When you select a frequency band to search, the scanner searches for any active frequency within the lower and upper limits of the band. When an active frequency is found, the scanner stops on that frequency as long as the transmission lasts.   If DELAY is on, the scanner remains on the same channel for 2 more seconds, waiting for a responding transmission. If there is no responding transmission within 2 seconds, the scanning cycle resumes.

Getting Started

1. Before turning on the scanner, rotate the Squelch Control fully clockwise.

2. Power on the scanner by turning the On-Off/Volume Control clockwise.

   First you will hear a "rushing" noise, and see the current mode and status indicators appear on the LCD display.

3. Adjust the volume to a comfortable listening level.

4. Set the squelch at the scanning threshold by turning the Squelch control counterclockwise *just* until the rushing noise disappears.

   At the squelch threshold, any incoming signal just slightly stronger than the noise will open the squelch.

   Note: *When squelch is open, you can hear the broadcast (scanning is stopped). If squelch is set too tight, that is, too far counterclockwise from the threshold point, a stronger signal is required to open the squelch.*

   If squelch is set on a point clockwise from the threshold, you will hear a constant sound (noise, if no signal is present.) The scanner will not scan.

Programming Channels

Before you can scan, you must program the channels within a bank. You can store one frequency per channel, up to 200 channels.

Note: *If you try to store the same frequency into another channel, the display will indicate the original channel for that frequency. To store the same frequency into the selected channel, press [E] again.*

Each time you store a frequency, the list of scanning frequencies in the bank is automatically sorted by frequency number. This unique Auto Sort feature enables faster scanning. When you manually step through a bank, however, frequencies are sorted according to channel number.

With the BC 890XLT, there are a number of ways to program a channel:

- Manually selecting a channel and frequency, using the numeric keypad
- Using the Rotary Tuner to select a channel and frequency
- Searching a band to find active frequencies, and then storing them into channels
- Using the Auto Store feature to automatically program channels
- Transfer a programmed frequency from another channel

Try each of the following programming methods, and then use the one that's right for *you!*

A. Programming By Manual Entry

1. Select a frequency from your Betty Bearcat Directory or regional/local directory.

   Example: Program 460.150 MHz into Channel 23.

2. Press [MANUAL] to stop scanning.

3. Press [2] [3].

4. Then, press [MANUAL].

5. Enter the frequency number using the numeric keypad. (**Note:** *It is not necessary to include the decimal point.*)

   [4] [6] [0] [.] [1] [5] [0]

   If you make a mistake and want to clear the entry, press [.] twice.

6. Press [E] to store the entry.

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■ *Any frequency already stored in a channel is automatically replaced by the new one.*

■ *An "**Error**" message appears on the display for two seconds if an error is made during programming, or if the frequency is out of range. If this happens, enter a valid channel or frequency number.*

To program another channel, repeat the above procedures.

B. Programming With the Rotary Tuner

1. If the BC 890XLT is scanning, press [MANUAL] to stop scanning.

2. If the LOCK LED (green) is on, press [LOCK] to unlock the Rotary Tuner. This will enable channel and frequency selection using the Rotary Tuner.

3. To select a channel for programming, the CHAN LED (green) must be ON. If it is not on, press the [FREQ/CHAN] key to turn it on.

4. Turn the Rotary Tuner to display the desired channel. (Rotate the control *clockwise* to step up a channel, or *counterclockwise* to step down a channel.)

5. To select the frequency to be stored, the FREQ LED (red) must be ON. If it is not on, press the [FREQ/CHAN] key to turn it on.

6. Turn the Rotary Tuner to display the desired frequency. (Rotate the control *clockwise* to step up a frequency, or *counterclockwise* to step down a frequency.)

   Note: *When you rotate the Rotary Tuner, the channel selection flashes on the display. This means that the frequency displayed is not programmed in that channel.*

7. To store the displayed frequency into **the current channel,** continue with Step 8

   — OR —

   To store the displayed frequency into **another bank's open (empty) channel,** skip to Step 9.

8. Press [E]. The frequency is now programmed into the current channel.

   You are finished, and may now skip to the next section.

9. Press [SEND].

10. Press the letter key of the selected bank.

    The bank flashes on the display, ready to be programmed. The frequency will automatically be stored in the bank's *lowest* open channel.

11. Press [E] to complete programming.

The frequency is stored, and the new bank channel now appears on the display. (The old channel will retain its original frequency.)

C. Programming With SEARCH

The Search feature enables you to rapidly search for active frequencies within the specified band limits. When an interesting frequency is found, you can store it into a channel using the procedure below.

1. Press [MANUAL] to stop scanning.

2. Use the numeric keypad to enter the *lower limit* and *upper limit* of the band to be searched. (See "Technical Specifications" for a list of search bands.)

Example: Set search limits of 137.000 to 144.000 MHz.

First enter the lower limit by pressing:

[1] [3] [7] [0] [0] [0].

Press [LIMIT].

Then enter the upper limit by pressing:

[1] [4] [4] [0] [0] [0].

Press [LIMIT].

The search limits of the selected band are now set, and remain in effect even when you turn off the scanner.

3. Press [SRC] to start the search.

Note: *During the search, you can manually change the step increment, if desired. To change the step, press* [HOLD] *to stop the search. Then, press* [STEP] *one time for each selection: 5kHz, 12.5kHz, or 25kHz.*

4. When Search stops on an interesting frequency, press [HOLD] to stay on that frequency.

Note: *If you press* [HOLD] *again, you step up a frequency. If you press* [LIMIT], *you step down a frequency. Press and hold either key to rapidly step through the frequencies.*

5. To store the frequency into the currently displayed channel, press [E]

— OR —

To store the frequency into an open channel of another bank:

a. Press [SEND]. (All bank indicators start flashing, waiting for your selection.)

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b. Press the letter of the selected bank. (Only the selected bank indicator remains on the display, and the open channel appears flashing.)

c. Press [E] to complete programming.

To leave the Search Mode, press [MANUAL].

D. Programming With AUTO STORE

The Auto Store feature automatically stores all active frequencies into **open** (empty) channels of specified bank(s).

1. Press [MANUAL] to stop scanning.

2. Use the numeric keypad to set the *lower limit* and *upper limit* of the band to be searched. (See "Technical Specifications" for a list of search bands.)

   Example: Set search limits of 137.000 to 144.000 MHz.

   First enter the lower limit by pressing:

   [1] [3] [7] [0] [0] [0].

   Press [LIMIT].

   Then enter the upper limit by pressing:

   [1] [4] [4] [0] [0] [0].

   Press [LIMIT].

   The search limits of the selected band are now set, and remain in effect even when you turn off the scanner.

3. Press [AUTO] to activate the Auto Store feature.

   All bank letters begin flashing, and "**AUTO**" appears on the display.

4. Select the bank(s) to be programmed. The indicators of the selected banks stop flashing.

   Note: *If the selected bank is full, that is, all 20 channels are programmed, "FULL" appears on the display. In this case, select another bank.*

5. Press [SEARCH] to start programming.

   On the display, only the indicators of the selected banks remain. The indicator of the bank currently being programmed starts blinking. The channel currently being stored is also displayed.

   Note: *During Auto Store, you can manually change the step increment, if desired. To change the step, press [HOLD] to stop Auto Store. Then, press [STEP] one time for each selection: 5kHz, 12.5kHz, or 25kHz.*

Auto Store stops automatically when all available channels in the selected banks are stored. "**FULL**" appears, and the last channel stored is displayed.

To stop Auto Store manually, press [**HOLD**], [**MANUAL**], or [**AUTO**]. The last channel stored is displayed. ("**End**" also appears on the display.)

E. Transferring a Programmed Frequency to Other Channels

Transferring to an Open Channel

This feature allows you to reassign a stored frequency to another bank's open channel. (Note: You cannot transfer a frequency either into or out of a Priority channel.)

1. Press [**MANUAL**] to stop scanning.

2. Use the Rotary Tuner (or any other previously described method) to select a programmed channel.

3. Press [**SEND**] to activate the Transfer feature.

   All bank indicators start flashing on the display.

4. Press the letter key of the selected bank.

   Only the indicator of the selected bank remains on the display. The bank's *lowest* open channel flashes, waiting to be programmed.

   Note: If all the channels of that bank are already programmed, the display will show "FULL". In that case you can select another bank.

5. Press [**E**] to complete the transfer.

   The frequency is now stored in the new channel, and the old channel is empty.

   Note: If you do not want to transfer the programmed frequency, press [HOLD], [SEND], or [MANUAL] to stop the transfer.

Transferring to a Programmed Channel

1. Press [**MANUAL**] to stop scanning.

2. Use the Rotary Tuner (or any other previously described method) to select a programmed channel.

3. Press [**SEND**] to activate the Transfer feature.

   All bank indicators start flashing on the display.

4. Use the numeric keys to select the target channel.

   Note: If the target channel is empty, "Error" will appear on the display.

5. Press [HOLD]. The display will alternate between the frequency you want to transfer, and the frequency in the target channel.

6. Press [E] to complete the transfer.

    The frequency is now stored in the new channel, and the old channel is empty.

Note: If you do not want to transfer the programmed frequency, press [HOLD], [SEND], or [MANUAL] to stop the transfer.

Deleting a Stored Frequency

To delete a frequency from a channel:

1. Display the channel and frequency that is to be deleted.

2. Press [0] on the numeric keypad.

3. Press [E].

    The current channel is erased, and the display shows "000.000".

A Word About Memory Back-up

Your BC 890XLT has a lithium battery memory back-up. In the event of a power failure, the scanner will keep the programmed memory for more than 5 years.

Scanning

1. Turn on the power, or press [SCAN] to start scanning.

    Note: *When the scanner is turned on, it is automatically in Scan Mode.*

    The indicators for the selected banks (**A,B,C,D,E,F,G,H,I,J**) appear on the display. The indicator of the bank currently being monitored flashes.

    While the BC 890XLT is scanning, the *"SCAN"* message moves across the display. Scanning stops on any active channel automatically and displays its frequency, except those channels programmed with "L/O" (Lock Out). Scanning resumes automatically 2 seconds after the channel becomes inactive.

2. ***Deselect*** any banks from being scanned by pressing the appropriate bank key.

    The deselected bank indicator(s) disappear from the display, and its channels will not be scanned. This procedure helps to speed up the scanning cycle.

    Note: *One bank must always remain active. You cannot deactivate all 10 banks at the same time.*

    Note: *When you turn off the scanner and turn it back on, the previous bank selections will remain in effect.*

To restore any bank for scanning, just press its key again. Its indicator will appear on the display.

To stop scanning any time, press [MANUAL]. When you press [MANUAL] to stop scanning, you are out of Scan Mode. The scanner remains on the displayed channel. If you press [MANUAL] again, you will step up a channel. If you press [LIMIT], you will step down a channel. Press and *hold* either key to rapidly step through the channels.

Note: *You do not skip a locked out ("L/O") channel using any of these keys.*

To start scanning again, press [SCAN].

To directly access a specific channel:

1. Press [MANUAL].

2. Enter the channel number using the numeric keys.

3. Press [MANUAL] again.

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Weather Channel Scanning

The BC 890XLT allows you to search for your local NOAA weather channel.

Press [WX] to find the active weather channel in your area from 7 preprogrammed NOAA channels. "WX" appears on the display.

To exit Weather Mode, press [SRC], [SCAN], or [MANUAL]. ("WX" will disappear.)

It is possible that your area is covered by more than one weather station.

When you press [WX], the BC 890XLT will find an active broadcast immediately. If the broadcast sounds weak and distant, press [WX] again to look for a closer station.

> **Note:** *All weather channels transmit continuous broadcasts. Once the Weather scan stops on a transmission, it will remain on that channel. Weather scan will not resume automatically. You must press [WX] again to reactivate scanning. In some parts of the country, you may not be able to monitor weather broadcasts, such as in low-lying areas. Normally a higher location will improve the reception.*

Weather Alert

In Weather Alert Mode, the BC 890XLT functions as a severe weather warning radio. This is especially useful when your area is expecting severe weather conditions late at night. When you set the scanner to Weather Alert Mode, it will emit a loud siren whenever your local NOAA weather station broadcasts a severe weather emergency tone.

To use Weather Alert:

1. Press [WX] a few times to find your best local weather broadcasting station.

2. Press [ALERT].

   The BC 890XLT now functions as a Weather Alert radio, waiting to receive a severe weather emergency tone.

When the BC 890XLT receives an emergency tone from your local NOAA weather station, it will respond with a loud siren at maximum volume (regardless of the volume control setting). The siren will continue until the emergency tone stops transmitting. When the siren stops you will hear the weather broadcast.

To stop the siren manually and exit Weather Alert Mode, press any of these keys:

[ALERT], [WX], [HOLD], [SRC], [LIMIT], [SCAN], or [MANUAL].

Testing the Weather Alert Siren

To test the weather alert siren to hear how it sounds, and to ensure that the circuitry is working:

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1. Press **[WX]**.

2. When the scanner stops on a weather channel, press **[HOLD]**.

3. Press **[ALERT]**.

   "**WX ALERT**" appears on the display and the BC 890XLT is silent.

4. Press and hold **[PRI]** for more than 2 seconds.

   The test siren sounds.

5. To stop the siren, press any of the following keys:

   [ALERT], **[WX]**, **[HOLD]**, **[SRC]**, **[LIMIT]**, **[SCAN]**, or **[MANUAL]**.

Customizing Scanner Operation

Setting the Scanning Speed

Press [SPEED] to select the scanning speed, normal or Turbo Scan. (In Turbo Scan Mode, "TURBO" appears on the display next to "SCAN".) In normal scanning, the BC 890XLT scans 16 to 20 channels per second. In Turbo scan, the unit scans up to 100 channels per second.

Setting the Delay Mode

In the normal default setting, when Search or Scan stops on an active frequency, searching or scanning will not resume until the transmission stops for 2 seconds. If no response is detected, the scanning cycle resumes until another transmission is received. To turn off the automatic 2-second delay, press [DELAY]. (The "DELAY" indicator disappears from the screen.)

To enable the 2-second delay again, press [DELAY]. (The "DELAY" indicator reappears.)

Setting the Step Size

Use [STEP] to change the step increment when moving between frequencies of a search band. Press one time each to change the factory preset auto step to 5kHz, 12.5kHz, 25kHz, or back to default. (The selected step is displayed during the search.) Manually selected steps are erased when you turn off the power.

Setting the LCD Display Light

To illuminate the LCD Display at night, or under dim conditions when it is difficult to view, use [DIM]. Press the key until you reach the desired brightness setting HIGH, LOW, or OFF.

Preventing Accidental Programming

The BC 890XLT has a Lock feature to prevent accidental programming entries. Simply set the ENTER LOCK Switch on the rear panel to "ON" to disable the Enter ([E]) or [AUTO] keys.

Locking the Rotary Tuner

You can lock the Rotary Tuner to prevent changing channels or frequencies accidentally while monitoring a broadcast. To disable the Rotary Tuner, press [LOCK]. The LOCK LED (green) lights to indicate that the Rotary Tuner is locked. To enable the Rotary Tuner, press [LOCK] again. (The LOCK LED goes out.)

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Channel Lock Out

You can lock out any programmed channels (including Priority Channels) so they will not be scanned, if desired.

> **Note:** *Locking out a programmed channel does not erase the frequency in the channel.*

This feature is active in Manual Mode, Hold Mode, or Scan Stop Mode (when squelch is open).

To lock out a channel:

Press [L/O] when the scanner is on a channel you do not want to hear.

"L/O" appears on the screen to indicate that the displayed channel is now locked out.

To restore a locked out channel:

1. Display the locked out channel, using one of the previously described methods.
2. Press [L/O].

   "L/O" disappears to indicate that the channel is now unlocked and restored for scanning.

To restore all locked out channels of a selected bank at one time:

1. Press [SCAN] to start scanning.

2. When the indicator of the selected bank starts flashing, press [MANUAL] to stop scanning.

3. Press and hold [L/O] for more than 2 seconds.

   You will hear 2 short beeps, indicating that all channels are unlocked and restored for scanning.

Searching for Locked Out Channels

During scanning, you will not see locked out channels. To look for locked out channels and display them on the screen, first press [MANUAL] to stop scanning. Then use the Rotary Tuner to step through the bank. "L/O" will appear on the screen to indicate the locked out channels.

Setting Up Priority Channels

When you assign "priority" to a bank channel, you designate one bank channel as your most important channel. During scanning the BC 890XLT works like a "dual watch" function. It starts "sampling" or keeping track of the activity on the Priority Channel while listening to other channels. Every 2 seconds, the scanner checks the Priority Channel for activity (except in Weather Alert Mode). If a signal is present, the Priority Channel will be monitored until the transmission ends. When the signal stops for more than 2 seconds, normal operation resumes.

You can assign *one* Priority Channel for each bank. In multi-Priority Channel operation, the *lower* channel number has higher priority.

> **Note:** *Priority settings are not erased when you turn off the scanner, or after a power failure.*

To set up a Priority Channel:

1. First program your most important frequency into a bank channel.

2. Press and hold **[PRIORITY]** for more than 2 seconds.

   A "**P**" appears on the display to indicate the designated channel.

   > **Note:** *Any previously assigned Priority Channel within the same bank is automatically deselected.*

To remove priority from a channel:

Press **[PRIORITY]** at the displayed channel. (The "**P**" disappears from the display.)

Using COUNT to Monitor Channel Activity

To determine the amount of channel activity during a scanning session, use the Count feature. It counts the number of times scanning stops on an active channel.

To activate the Count feature:

1. Press **[SCAN]**, and allow the scanner to scan for about 5 to 10 minutes, or longer if desired.

2. Press **[MANUAL]** to stop scanning.

3. Press **[COUNT]**.

   "**COUNT**" appears on the display.

4. Turn the Rotary Tuner or press **[MANUAL]** to display each channel and the number count.

To exit Count Mode, press **[COUNT]**.

Tape Recording Channel Communication

The Auto Recording feature allows you to automatically tape record activity from the assigned channel of your scanner. When scanning stops on the assigned channel, the recorder records the broadcast.

Before you can use this feature, you must first set up the tape recorder as described in the Installation section of this Manual.

To program a channel for tape recording:

Press [SCAN] to start scanning.

2. When scanning stops on the channel you want to record, press [MANUAL].

3. At the displayed channel, press [AUX].

"LINE" appears on the display to indicate that the channel is assigned for recording.

To select other channels for recording, repeat the above procedures.

To record transmissions:

1. Connect the REMOTE jack of your tape recorder to the AUX jack on the rear of the BC 890XLT. This can be used to start and stop your recorder.

2. Put a tape in your recorder, and put it in the Record mode.

3. Press [SCAN] to start scanning.

When scanning stops on a channel that displays "LINE", the channel will automatically be recorded.

To deselect a channel so that it is not recorded:

1. Display the assigned channel on your screen.

2. Press [AUX].

"LINE" disappears on the display to indicate that channel will not be recorded.

CTCSS Operation

This section applies only if you are installing and using an optional CTCSS Tone Board with your scanner.

Installing the Optional CTCSS Tone Board

Installing the CTCSS Tone Board (BC002) is a simple procedure, and requires only a few minutes following the steps below.

> **CAUTION: BE SURE TO TURN THE SCANNER OFF AND DISCONNECT THE POWER CORD BEFORE ATTEMPTING TO OPEN THE SCANNER!**

1. Take off the cover of your scanner by removing the side screws and the top screw on the rear panel.

2. Insert the board in the socket, and secure it with a screw as shown.
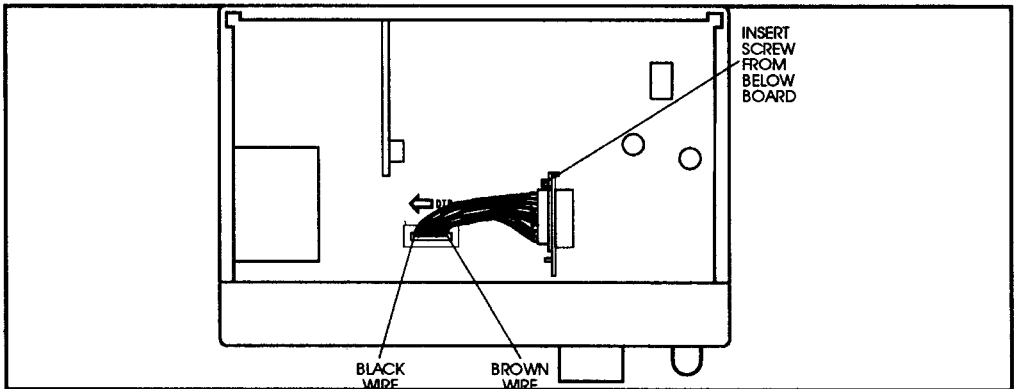
3. Carefully plug the multi-colored wire attachment onto the pins, as shown. Make sure the BLACK wire is next to Pin 1, as marked on the board. (The BROWN wire is on the opposite end, nearest the CTCSS Board.)

4. Replace the scanner cover, and re-insert the side screws and rear panel top screw.

Using CTCSS

The CTCSS (Continuous Tone Control Squelch System) feature allows squelch to be broken during scanning only when a CTCSS Tone is received.

To program a channel for CTCSS:

1. Press [CTCSS] to activate CTCSS Mode.

   The "CTCSS" Mode indicator appears on the display.

2. Display the channel number and frequency to be programmed.

3. Press [E].

   The frequency display changes to "000.0" and the "CTCSS" indicator flashes.

4. Enter a CTCSS tone frequency by using the numeric keys, or select the tone frequency with the Rotary Tuner. (See list of CTCSS tone frequencies at the end of this section.)

   Note: When using the Rotary Tuner, turn the control *clockwise* one click to step up a tone frequency. The display changes from "000.0" to "67.0". Turn the control *counterclockwise* one click to step down a tone frequency. The display changes from "000.0" to "250.3".

5. Press [E] to complete programming.

   The "CTCSS" indicator stops flashing.

   Note: In CTCSS Mode, when you display a CTCSS-programmed channel, the screen alternates between the frequency and the CTCSS tone frequency.

To change the CTCSS tone frequency on a programmed channel:

1. If you are not in CTCSS Mode, press [CTCSS] to activate that mode.

2. Display the CTCSS-programmed channel.

3. Press [E] to stop the screen from alternating.

   The channel number and tone frequency are displayed, and the "CTCSS" indicator starts flashing.

4. Enter the new CTCSS tone frequency by using the numeric keys, or select the tone frequency with the Rotary Tuner.

5. Press [E] to complete the change.

To erase a CTCSS tone frequency on a programmed channel:

1. If you are not in CTCSS Mode, press [CTCSS] to activate that mode.

2. Display the CTCSS-programmed channel.

3. Press [E] to stop the screen from alternating.

   The channel number and tone frequency are displayed, and the "**CTCSS**" indicator starts flashing.

4. Enter "**0**" on the display using the numeric keys, or by using the Rotary Tuner.

5. Press [E] to complete the change.

CTCSS Tone Frequencies (Hz)

000.0 ⇒	67.0	71.9	74.4	77.0	79.7	82.5	85.4	88.5	91.5
94.8	97.4	100.0	103.5	107.2	110.9	114.8	118.8	123.0	127.3	131.8
136.5	141.3	146.2	151.4	156.7	162.2	167.9	173.8	179.9	186.2	192.8
203.5	210.7	218.1	225.7	233.6	241.8	250.3 ⇐	000.0		

Helpful Hints

General Use

- Turn the scanner off before disconnecting the power.
- Always write down the programmed frequencies in the event of memory loss. If memory is lost, simply reprogram each channel.
- Always press each keypad button firmly until you hear the entry tone for that key entry.

Location

- If strong interference or electrical noise is received, relocate the scanner or its antenna away from the source of the noise. A higher elevation, if possible, may provide better reception. You might also try changing the height or angle of the telescoping antenna.
- Do not use the scanner in high-moisture environments such as the kitchen or bathroom.
- Avoid placing the unit in direct sunlight or near heating elements or vents.
- Do not plug the scanner into an outlet controlled by a wall switch as prolonged periods without power will cause scanner memory loss.

Cleaning

- Disconnect the power to the unit before cleaning.
- Clean the outside of the scanner with a mild detergent.
- To prevent scratches, do not use abrasive cleaners or solvents. Be careful not to rub the LCD window.
- Do not use excessive amounts of water.

Repairs

Do **not** attempt any repair. The scanner contains no serviceable parts. Contact the Uniden Customer Service Center or take it to a qualified repair technician.

Birdies

All radios are subject to receiving undesired signals or birdies. If your scanner stops during Search Mode and no sound is heard, it may be receiving a birdie. Birdies are internally-generated signals inherent in the electronics of the receiver. If the interference is not severe, you might be able to turn **[SQUELCH]** counterclockwise to cut out the birdie. Or, press **[SRC]** to resume searching.

Troubleshooting

If your BC 890XLT is not performing properly, try the steps listed below.

PROBLEM	SOLUTION *Applies to mobile installation only*
SCANNER WON'T WORK.	Check the connections at both ends of the AC Adapter.
	Turn on the wall switch of your room. You could be using an outlet controlled by the wall switch. Move the AC Adapter to another wall outlet.
	Make sure the power switch is turned on.
	* *Check the connections at both ends of the DC cord or cigarette lighter cord.*
	* *Check to see if the fuse is blown. If the fuse is blown, replace with a new one.*
	* *Make sure the ignition key is at the Accessory position.*
IMPROPER RECEPTION.	Check the antenna and its connection.
	You may be in a fringe area. This may require an optional multi-band antenna. Check with your dealer or local electronics store.
SCAN WON'T STOP.	Adjust the Squelch Control.
	Check the antenna connection.
	It is possible that none of the programmed channels are active at the time. Try the band search.
SCAN WON'T START.	Press the bank key again.
	Make sure there are some programmed channels.
	Adjust the Squelch Control.
SEARCH WON'T START.	Adjust the Squelch Control.

If you still cannot get satisfactory results and want additional information, or to return the unit for service, please call or write the Uniden Parts and Service Division. The address and phone number are listed in the Warranty (at the end of this manual).

Technical Specifications

Banks:	Total 10 banks
WX:	7 programmed (All NOAA Weather Service)
Search Band:	Total 7 Search bands (All NFM or AM)

Frequency Coverage	Steps
29.000 to 54.000 MHz (NFM)	5/ 12.5/ 25kHz
108.000 to 136.975 MHz (AM)	5/ 12.5/ 25kHz
137.000 to 174.000 MHz (NFM)	5/ 12.5/ 25kHz
216.000 to 224.9875 MHz (NFM)	12.5/ 25kHz
225.000 to 399.9875 MHz (AM)	12.5/ 25kHz
400.000 to 512.000 MHz (NFM)	12.5/ 25kHz
806.0000 to 956.000 MHz (NFM)	12.5/ 25kHz

Scan Rate:	Up to 100 channels per second (Turbo Mode) Up to 20 channels per second (Normal Mode)
Scan Delay:	2 seconds
Audio Output:	Max 3W
Antenna:	50 ohms (Impedance)
Operating Temperature:	- 20°C (- 4°F) to + 60°C (+ 140°F)
Size: (mm)	267 (W) x 189.5 (D) x 85 (H)
Weight:	1.75Kg.

Certified in accordance with FCC Rules and Regulations Part 15 Subpart C as of date of manufacture.

Features, specifications, and availability of optional accessories are all subject to change without notice.

BC 890XLT
Auto Scanner

OPERATING GUIDE ADDENDUM

Note: The BC 890XLT Auto Scanner will not tune within the Cellular Telephone frequency band.

Birdies

Birdies are the products of internally-generated signals that make some frequencies difficult or impossible to receive. If you program one of these frequencies, you will hear only noise on that channel.

Frequencies found to have birdies on the BC 890XLT:

* 32.050 MHz	108.000 MHz	* 218.700 MHz	* 807.9875 MHz
32.400	110.000	* 239.400	* 815.9875
* 36.225	112.000	352.000	* 823.9875
* 40.050	114.400	353.700	851.9875
* 41.400	116.000	380.000	859.9875
46.575	122.000	384.000	* 867.9875
* 46.785	122.400	388.000	895.9875
* 46.800	128.000	392.000	897.5875
* 46.815	130.400	444.000	* 899.9875
48.000	136.000	452.000	907.9875
* 51.750	140.000	460.000	* 913.5875
	144.000	464.000	* 921.5875
	152.000	468.000	929.5875
	160.000	473.600	
		476.000	
		* 479.1625	
		479.175	
		481.600	

Note: For the frequencies marked with (*), birdies may exist even if you disconnect the antenna. For the other frequencies, an external (rooftop) antenna may help reduce the birdies effect.

One Year Limited Warranty

WARRANTOR: UNIDEN AMERICA CORPORATION ("Uniden")

ELEMENTS OF WARRANTY: Uniden warrants, for one year, to the original retail owner, this Uniden Product to be free from defects in materials and craftsmanship with only the limitations or exclusions set out below.

WARRANTY DURATION: This warranty to the original user shall terminate and be of no further effect 12 months after the date of original retail sale. The warranty is invalid if the Product is (A) damaged or not maintained as reasonable or necessary, (B) modified, altered, or used as part of any conversion kits, sub- assemblies, or any configurations not sold by Uniden, (C) improperly installed, (D) repaired by someone other than an authorized service center for a defect or malfunction covered by this warranty, (E) used in any conjunction with equip- ment or parts or as part of any system not manufactured by Uniden, or (F) installed, programmed, or serviced by anyone other than an authorized Uniden service center.

STATEMENT OF REMEDY: In the event that the product does not conform to this warranty at any time while this warranty is in effect, warrantor will repair the defect and return it to you without charge for parts, service, or any other cost (except shipping and handling) incurred by warrantor or its representatives in connection with the performance of this warranty. THE LIMITED WARRANTY SET FORTH ABOVE IS THE SOLE AND ENTIRE WARRANTY PERTAINING TO THE PRODUCT AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES OF ANY NATURE WHATSOEVER, WHETHER EXPRESS, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING, BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE. THIS WARRANTY DOES NOT COVER OR PROVIDE FOR THE REIMBURSEMENT OR PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow this exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you.

LEGAL REMEDIES: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This warranty is void outside the United States of America.

PROCEDURE FOR OBTAINING PERFORMANCE OF WARRANTY: If, after following the instructions in this Operating Guide you are certain that the Product is defective, pack the Product carefully (preferably in its original packaging) and include a note describing the defect that has caused you to return it, The Product should be shipped or delivered (by UPS or insured parcel post), freight prepaid to warrantor at:

Uniden America Corporation
Parts and Service Division
8707 North By Northeast Blvd.
P.O. Box 501368
Indianapolis, IN 46250
(317) 842-2483, 8 AM to 5 PM EST, Monday through Friday

with evidence of original purchase.

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