

Uniden®

BC 898T

OWNER'S

MANUAL

OWNER'S MANUAL

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Precautions

Before you use this scanner, please read and observe the following.

IMPORTANT!

This scanning radio has been manufactured so that it will not tune to the radio frequencies assigned by the FCC for cellular telephone usage. The Electronic Communications Privacy Act of 1986, as amended, makes it a federal crime to intentionally intercept cellular or cordless telephone transmissions or to market this radio when altered to receive them. 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 jurisdictions. Your local law enforcement officials should be able to provide you with information regarding the laws in your community.

Changes or modifications to this product not expressly approved by Uniden, or operation of this product in any way other than as detailed by this Operating Guide, could void your authority to operate this product.

EARPHONE WARNING!

Be sure to use only a monaural earphone with this scanner. You can also use an optional 32 Ω stereo headset. Use of an incorrect earphone or stereo headset might be potentially hazardous to your hearing. The output of the phone jack is monaural.

Set the volume to a comfortable audio level coming from the speaker before plugging in the monaural earphone or a stereo headset of the proper impedance (32 Ω). Otherwise, you might experience some discomfort or possible hearing damage if the volume suddenly becomes too loud because of the volume control or squelch control setting. This might be particularly true of the type of earphone that is placed in the ear canal.

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.

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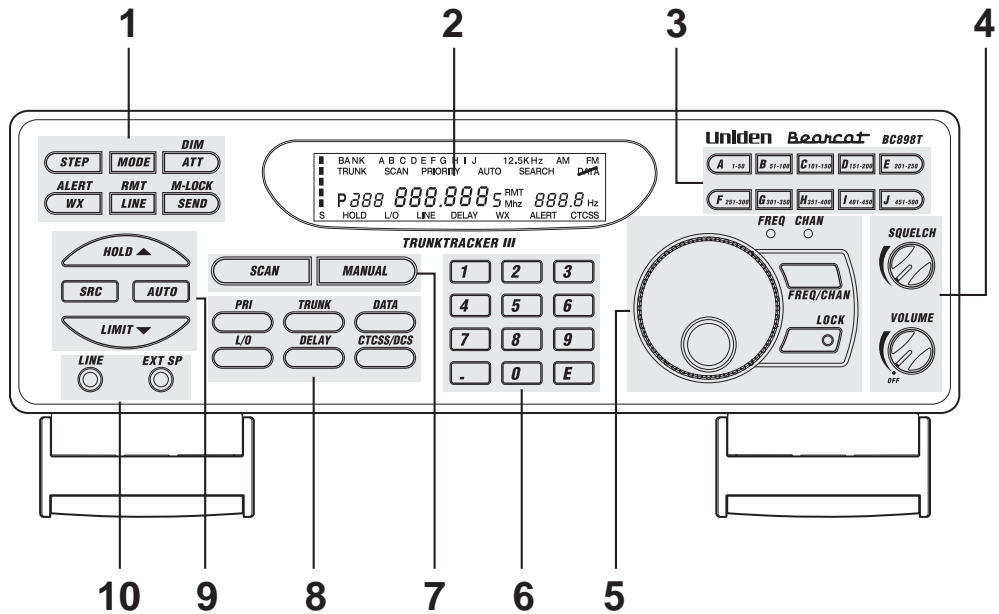
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BC898T Controls and Display



1. Programming and Status Keys

2. Display

3. Bank Keys

4. Squelch/Volume Controls

5. Rotary Tuner

6. Numeric Keypad

7. Scan/Manual Keys

8. Mode Keys

9. Search Keys

10. Line/External Speaker Jacks

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The FCC Wants You to Know

This scanner has been tested and found to comply with the limits for a scanning receiver, pursuant to Part 15 of the *FCC Rules*. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This scanner generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this scanner does cause harmful interference to radio or television reception, which can be determined by turning the scanner on and off, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the scanner and the receiver

This device complies with Part 15 of the *FCC Rules*. Operation is subject to the following two conditions: 1) This device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation.

Scanning Legally

Your scanner covers frequencies used by many different groups, including police and fire departments, ambulance services, government agencies, private companies, amateur radio services, military operations, pager services, and wireline (telephone and telegraph) service providers. It is legal to listen to almost every transmission your scanner can receive. However, there are some transmissions that you should never intentionally listen to. These include:

- Telephone conversations (cellular, cordless, or other private means of telephone signal transmission)
- Pager transmissions
- Any scrambled or encrypted transmissions

According to the Electronic Communications Privacy Act (ECPA), you are subject to fines and possible imprisonment for intentionally listening to, using, or divulging the contents of such a conversation unless you have the consent of a party to the conversation (unless such activity is otherwise illegal). This scanner has been designed to prevent the reception of cellular telephone transmissions and the decoding of scrambled transmissions. This is done to comply with the legal requirement that scanners be manufactured so they are not easy to modify to pick up these transmissions. Do not open your scanner's case to make any modifications that could allow it to pick up transmissions that are illegal to monitor. Modifying or tampering with your scanner's internal components or using it in a way other than as described in this manual could invalidate your warranty and void your FCC authorization to operate it.

In some areas, mobile use of this scanner is unlawful or requires a permit. Check the laws in your area. It is also illegal in many areas (and a bad idea everywhere) to interfere with the duties of public safety officials by traveling to the scene of an incident without authorization.

Introduction

Your BC898T scanner is a state-of-the-art scanner radio with TrunkTracking™ and automatic scanning capabilities. You can store frequencies such as police, fire/emergency, marine, air, amateur, and other communications into 10 banks of 50 channels each. Use it at home as a base unit, or install it in your vehicle as a mobile unit.

You can use the scanner's rotary tuner to quickly select channels and frequencies, and you can automatically program channels in an available bank using the AutoStore feature.

Use your scanner to monitor:

- 800 MHz trunked public safety systems
- Police and fire departments (including rescue and paramedics)
- NOAA weather transmissions
- Business/Industrial radio
- Utilities
- Marine and amateur (ham radio) bands
- Air band

This table lists the frequency ranges, default frequency step, default mode (AM, FM, or Narrowband FM), and type of transmissions you can hear for each range.

Frequency Range	Steps	Mode	Transmission
25.0-27.995 MHz	5 kHz	AM	Citizens Band/Business Band
28.0-29.995 MHz	5 kHz	FM	10 Meter Amateur Band
30.0-49.995 MHz	5 kHz	FM	VHF Low Band
50.0-54.0 MHz	5 kHz	FM	6 Meter Amateur Band
108.0-136.9875 MHz	12.5 kHz	AM	Aircraft Band
137.0-143.995 MHz	5 kHz	FM	Military Band
144.0-147.995 MHz	5 kHz	FM	2 Meter Amateur Band
148.0-161.995 MHz	5 kHz	FM	VHF High Band
162.0-174.0 MHz	12.5 kHz	FM	VHF High Band
216.0-224.9875 MHz	12.5 kHz	FM	VHF High Band
225.0-399.9875 MHz	12.5 kHz	AM	UHF Aircraft Band
400.0-419.9875 MHz	12.5 kHz	NFM	Federal Land Mobile
420.0-449.9875 MHz	12.5 kHz	NFM	70cm Amateur Band
450.0-469.9875 MHz	12.5 kHz	NFM	UHF Standard Band
470.0-512.0 MHz	12.5 kHz	NFM	UHF TV Band
806.0-823.9875 MHz	12.5 kHz	NFM	Public Service "800" Band
849.0125-868.9875 MHz	12.5 kHz	NFM	Public Service "800" Band
894.0125-956 MHz	12.5 kHz	NFM	Public Service "800" Band

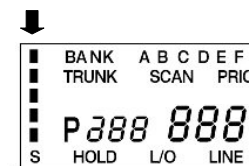
Feature Highlights

Trunk Tracker™ III Operation – Follows conversations on analog Motorola, EDACS, and LTR trunked radio systems.

500 Channels – Program one frequency into each channel. You must have at least one channel programmed to use the scan mode.

10 Banks – Each bank contains 50 channels, large enough for even the largest trunked systems or useful for storing similar frequencies to maintain faster scanning cycles.

Signal Strength Meter – Your scanner's signal strength meter displays the relative strength of an active transmission, using up to five separate indicators.



CTCSS and DCS Squelch Modes – prevent interference from stations not using the mode you select.

Subaudible Tone Search – Lets the scanner search for and identify agencies transmitting CTCSS or DCS tones. You can identify up to 50 CTCSS tones and 104 DCS tones. This helps you find stations using these tones.

17 Bands – Includes 17 bands, with Aircraft and 800 MHz.

25 MHz-956 MHz – Your scanner covers an extensive frequency range so you can monitor most of the transmissions in your area.

Note: The scanner's frequency coverage is not continuous and does not include the cellular telephone band.

10 Priority Channels – You can assign one priority channel in each bank. Assigning a priority channel lets you keep track of activity on your most important channel(s) while monitoring other channels for transmissions.

VFO (Variable Frequency Oscillator) Control – Turn the large rotary tuner to select a desired frequency or channel.

AutoStore – Automatically stores all active frequencies within the specified bank(s).

Weather Alert – Lets your scanner alert you when a SAME weather alert is transmitted on a NOAA weather channel. The scanner also displays information about the SAME alert. This helps you quickly find out about severe weather in your area and lets you avoid false alarms.

Weather Search – Lets your scanner receive your local NOAA weather transmission.

Chain Search – Lets your scanner search up to 10 ranges by selecting specific banks into which you have programmed search ranges.

Frequency Step – Lets you select a frequency step (5, 6.25, 12.5, or 25 kHz) for manual mode and chain search mode.

Unique Data Skip – Allows your scanner to skip unwanted data transmissions and reduces birdies.

Memory Backup – If power is lost or disconnected, the scanner retains the frequencies you programmed in its memory.

LCD Back Light – Makes the display easy to see in dim light. You can adjust the back light and even turn it off.

Auto Recording – Automatically record transmissions onto an optional tape recorder (not included).

Scan/Search Delay – You can set the scanner so it remains on a frequency two seconds after the last transmission to wait for a possible reply.

About This Manual

The screen displays used in this manual are representations of what might appear when you use your scanner. Since what you see depends on the frequencies and user ID's for your area and the settings you select, you might notice some differences between what is in this manual and what appears on your scanner.

To get the most from this manual, review the contents to become familiar with the basic functions available. If you are new to scanning or trunk tracking, be sure to read "Understanding Scanning" on Page 7 for a quick background on the technology behind the hobby. The first thing you'll need to do is plug the AC adapter into the scanner. Then you need to connect the included antenna to the scanner. See "Installing Your Scanner" on Page 15 if you need any help doing this.

In addition to the information in this manual, the help file included with the free demo software includes more instructions and programming planning worksheets that are very useful for organizing the information you need to program your scanner. Download this software from <http://www.uniden.com>.

Understanding Scanning

This section provides you with background on how scanning works. You don't really need to know all of this to use your scanner, but some background knowledge will help you get the most from your BC898T.

Understanding Banks and Channels

The memory in your scanner is organized into 10 banks of 50 channels each. Each bank can contain conventional channels as well as 1 trunking system. For each trunking system, each bank can also store 10 groups of 10 talk group ID's (100 per bank).

What is Scanning?

Unlike standard AM or FM radio stations, most two-way communications do not transmit continuously. Your BC898T scans programmed channels until it finds an active frequency, then stops on that frequency and remains on that channel as long as the transmission continues. When the transmission ends, the scanning cycle resumes until the scanner receives another transmission.

What is Searching?

The BC898T can search each of its 17 bands and up to ten bands together to find active frequencies. This is different from scanning because you are searching for frequencies that have not been programmed into the scanner. When you select frequency bands to search, the scanner searches for any active frequency within the lower and upper limits you specify. When the scanner finds an active frequency, it stops on that frequency as long as the transmission lasts. If you think the frequency is interesting, you can program it into one of the banks. If not, you can continue to search.

What is CTCSS/DCS?

Your scanner can monitor systems using a Continuous Tone Control Squelch (CTCSS) and Digital Coded Squelch (DCS) system, which allow squelch to open only when the tone you have programmed with a specific frequency is received along with a transmission.

CTCSS and DCS are subaudible tone signaling systems sometimes referred to as PL (Motorola's trademarked term for Private Line). CTCSS and DCS are used only for FM signals and are usually associated with both amateur and commercial two-way repeaters. These systems make use of a special subaudible tone that accompanies a transmitted signal.

CTCSS and DCS are used for many purposes. In many cases, CTCSS and DCS are used to restrict access to a commercial repeater, so that only those units, which transmit the correct tone along with their signal can "talk to the repeater."

CTCSS and DCS are also used in areas that receive interference where there are several stations with output frequencies close to each other. When this occurs, you might hear multiple communications at the same time. The stations might even interfere with each

other to the point where it is impossible to clearly receive any of the stations. A scanner equipped with CTCSS and DCS (like your scanner) can code each received frequency with a specific CTCSS or DCS frequency. Then, when you receive multiple signals, you only hear the transmission with the CTCSS or DCS tone you programmed. If you do not receive the correct tone with a signal, the scanner's squelch remains closed and you hear nothing.

Local frequency allocation groups set cooperative standards to establish the CTCSS and DCS tone for each transmitter (or repeater).

You can search for the following CTCSS frequencies and DCS codes.

CTCSS Frequencies (Hz)

67.0	69.3	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	159.8	162.2	165.5	167.9
171.3	173.8	177.3	179.9	183.5	186.2	189.9	192.8	196.6	199.5
203.5	206.5	210.7	218.1	225.7	229.1	233.6	241.8	250.3	254.1

DCS Codes (Octal)

023	025	026	031	032	036	043	047	051	053
054	065	071	072	073	074	114	115	116	122
125	131	132	134	143	145	152	155	156	162
165	172	174	205	212	223	225	226	243	244
245	246	251	252	255	261	263	265	266	271
274	306	311	315	325	331	332	343	346	351
356	364	365	371	411	412	413	423	431	432
445	446	452	454	455	462	464	465	466	503
506	516	523	526	532	546	565	606	612	624
627	631	632	654	662	664	703	712	723	731
			732	734	743	754			

Conventional Scanning

Conventional scanning is a relatively simple concept. Each group of users in a conventional system is assigned a single frequency (for simplex systems) or two frequencies (for repeater systems). Any time one of them transmits, their transmission always goes out on the same frequency. Up until the late 1980's this was the primary way that radio systems operated.

Even today, there are many 2-way radio users who operate using a conventional system:

-
-
- Aircraft
 - Amateur radio
 - FRS/GMRS users
 - Broadcast AM/FM/TV stations
 - Many business radio users

When you want to store a conventional system, all you need to know is the frequencies they operate on. When you are scanning a conventional system, the scanner stops very briefly on each channel to see if there is activity. If there isn't, the scanner quickly moves to the next channel. If there is, then the scanner pauses on the transmission until it is over.

Simplex Operation

Simplex systems use a single frequency for both transmit and receive. Most radios using this type of operation are limited to line-of-sight operation. This type of radio is frequently used at construction job sites, and with inexpensive consumer radios such as GMRS/FRS radios. The range is typically 1-8 miles, depending upon the terrain and many other factors.

Repeater Operation

Repeater systems use two frequencies: one transmits from the radio to a central repeater; the other transmits from the repeater to other radios in the system. With a repeater-based system, the repeater is located on top of a tall building or on a radio tower that provides great visibility to the area of operation. When a user transmits (on an input frequency), the signal is picked up by the repeater and retransmitted (on an output frequency). The user's radios always listen for activity on the output frequency and transmit on the input frequency. Since the repeater is located very high, there is a very large line of sight. Typical repeater systems provide coverage out to about a 25-mile radius from the repeater location.

What is Trunk Tracking?

Your BC898T is designed to track the following types of trunking systems.

- Motorola Type I, Type II, Type III, hybrid, SMARTNET, and PRIVACYPLUS analog trunking systems, which are extensively used in 800 MHz communication systems.
- LTR trunking systems
- EDACS trunking systems

When tracking these types of systems, you might want to remember these important points:

- Your scanner defaults to monitor Type II systems; however, you can change this if the system in your area is different. (The types of systems are discussed below.)
- Your scanner can track more than one trunking system at a time and scan conventional and trunked systems at the same time.

-
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- The frequencies for many of the 800 MHz public safety systems are listed in the *National Public Safety Trunked System Frequency Guide* included with your BC898T scanner.

Conventional scanning is a simple concept. You enter a frequency used by someone you want to monitor into your scanner's memory. For example, the police in your area might transmit on 460.500 MHz, the fire department on 154.445 MHz, the highway department on 37.900 MHz, etc. So when your scanner stops on a frequency, you usually know who it is, and more importantly, you can stop on a channel and listen to an entire conversation. This type of scanning is easy and fun.

However, as the demand for public communications has increased, many public radio users do not have enough frequencies to meet their needs, creating a serious problem. Trunking radio systems help solve this problem.

Trunked Scanning

While conventional scanning worked great while there were only a few groups wanting to use the frequencies, with the advent of smaller, lower-cost radios more and more agencies and businesses wanted to take advantage of the utility of 2-way radio. As a result, the bands that were used most became full, so new users were not able to take advantage of the technology as quickly as they wanted.

Trunking solved this frequency shortage by allowing multiple groups to use the same set of frequencies in a very efficient way. While each type of trunking system operates a little differently (see the next few sections), they all work on the same basic premise: even in a system with a lot of users, only a few users are ever transmitting at any one time.

Instead of being assigned a frequency, as with conventional systems, each group is assigned a talk group ID. A central computer controls the frequency each group operates on...and this frequency selection is made each time a user transmits. So, while on a conventional system queries, replies, and follow-ups are all on a single frequency, they could each be on completely different frequencies on a trunked system. This semi-random frequency assignment made monitoring such a system impossible prior to Uniden's invention of the Trunktracking scanner.

Not only does your BC898T scan channels like a conventional scanner, it actually follows the users of a trunked radio system. Once you know a talk group's ID, you won't miss any of the action.

If you are a new scanner enthusiast, you might want to read the first part of this manual and use your scanner in conventional mode before you begin trunk tracking. Understanding scanning fundamentals and terminology will make trunk tracking much easier. If you are already an experienced scanner operator, you might want to go to "Programming Trunked Systems" on Page 42 now.

Types of Trunking Systems

Trunking systems divide a few frequencies among many different users, but the way that each system does this is slightly different. This section describes some of the technical data behind Motorola, EDACS, and LTR trunked radio systems.

Motorola Trunking

While there are different types of Motorola trunking systems, they all use the same basic trunking method. The system consists of one control channel plus one or more voice channels (typically 10, 20, or 30 total channels). When a user presses Push To Talk (PTT) to transmit, their radio first sends their talk group information to the control channel. The computer then assigns that talk group to a specific voice channel and transmits that data over the control channel. All radios in that talk group switch over to the assigned voice channel and the user can begin speaking. This all typically takes place in about a second...the person transmitting hears a beep from their radio when the channel is assigned and then it is OK to start talking.

The systems in use are:

Motorola Type I – the radios send the radio ID, the fleet and subfleet talk group ID to the control channel each time they transmit. To program a Type I system, you need to know the system's *fleet map*. The most common fleet maps are included at the back of this manual. You can also find fleet map resources on the web.

Motorola Type II – the radios only send the radio ID and radio channel code to the control channel. The central computer keeps a database of radio ID's and which talk group is assigned to which channel code for each radio, so with this system the user's radio sends only about $\frac{1}{3}$ the data as a Type I system with each transmission. Type II systems do not use Fleet-subfleet talk groups; instead they use a 5-digit ID for each talk group.

Type III Hybrid — these systems support a mix of both Type I and Type II users. Like Type I systems, you must know the system's fleet map to ensure proper tracking.

EDACS Trunking

EDACS trunking works in much the same way as Motorola trunking with a couple of major differences. In an EDACS system, each frequency used by the system is assigned a Logical Channel Number (LCN) so that less data needs to be transmitted by the control channel. Also, talk groups are assigned in an Agency-Fleet-Subfleet (AFS) hierarchy. Also, there is one variation of EDACS called SCAT that your BC898T can monitor.

Logical Channel Numbers – each frequency used by the system is assigned an LCN. This information is programmed into each user radio. When a user presses PTT, their radio sends their AFS information to the control channel. The computer then assigns that talk group to a channel and sends the LCN so that all other radios in that talk group will switch to the correct channel. To program an EDACS system in your scanner, you will need to

know both the frequencies used by the system and the LCN for each frequency so that you can program the frequencies in LCN order.

Agency-Fleet-Subfleet – talk group ID's for EDACS systems are assigned in a way that makes it easy to see at a glance the affiliation of the user. Each radio is assigned a 2-digit agency identifier from 00 – 15. For example, 01 might be used by the police, 02 by ambulance service, 03 by the fire department, and so on. Each agency is then subdivided up to 16 times to provide fleet identification, and then 8 more times to identify subfleets.

For example, the complete AFS for the Police Department West District's dispatch channel might be 01-062. 01 identifies the agency as the police department, 06 identifies the fleet as the West district, and 2 identifies the subfleet as the dispatch channel. While these assignments are somewhat arbitrary and vary from system to system, there are many resources on the web for finding the assignments for most systems. Because of the logical hierarchy of the AFS system, your BC898T lets you assign wildcard ID's that let you, for example, use only one ID memory to identify all units in either an agency or a fleet.

EDACS SCAT – EDACS SCAT (Single Channel Autonomous Trunking) systems operate on a single channel and alternate control data with analog voice traffic. While your BC898T cannot track ID's in this system, it can eliminate the control data so that all you hear is the voice transmissions when you monitor this type of system.

LTR Trunking

LTR (Logic Trunked Radio) systems are trunking systems used primarily by business or private communications service providers, such as taxicabs, delivery trucks, and repair services. These systems encode all control information as digital subaudible data that accompanies each transmission, so there is no separate control channel. Users on an LTR system are assigned to specific talk groups, which are identified by the radio as six digit numbers.

These numbers are in the form AHHUUU, where:

A = Area code (0 or 1)

H = Home repeater (01 through 20)

U = User ID (000 through 254)

When the scanner receives a transmission on a channel set to the LTR mode, it first decodes the LTR data included with the transmission. In the ID search mode, the scanner stops on the transmission and displays the talk group ID on the display. In the ID scan mode, the scanner only stops on the transmission if the LTR data matches a talk group ID that you have stored in the bank's talk group ID list and have not locked out. LTR systems are frequently programmed so that each radio has a unique user ID. LTR systems also need to be programmed into your scanner in channel order.

Since many LTR systems use only odd-numbered channel slots, you would program these systems using only the corresponding odd-numbered channels in a bank (for example,

you would program a system with channels at 1, 3, 5, and 9 into Trunk 2 channels 51, 53, 55, and 59).

Where To Obtain More Information

By itself, this manual really only provides part of what you need to know to have fun scanning – how to program and use the scanner. The two included conventional and trunking frequency guides will give you a good head start on the other part of what you need to know – what frequencies have interesting content.

Information On The Internet

The Internet is a great source for current frequencies and information about scanning. Many web sites have lists of frequencies for your area. You can use a search engine to find and use them.

Make a list of the agencies you want to listen to, then look up the frequencies and systems used by those agencies. Here are a few useful sites:

- <http://www.scannermaster.com> * - frequency resources and home of Police Call.
You can also call them at 1 800 SCANNER (hours are from 10:00 a.m. to 5:00 p.m. Eastern Time Monday through Friday).
- <http://www.radioreference.com> * - the Internet's premier source for user-supported radio system information.
- <http://www.bearcat1.com> - frequency information from National Communications.
- svartifoss2.fcc.gov/reports/index.cfm * - conventional frequency information on file with the US Government

* - *This web site is not affiliated with Uniden Corporation.*

To purchase another copy of the conventional or trunking frequency guide, contact your local dealer or:

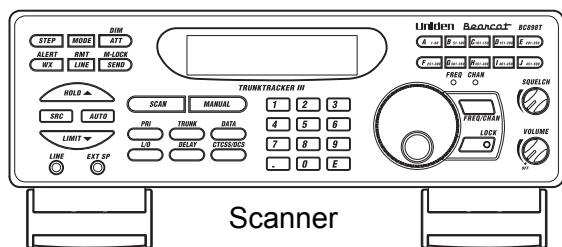
Uniden Parts Department
(800) 554-3988
(Hours are from 8:00 a.m. to 5:00 p.m. Central Time Monday through Friday.)

For more information about Uniden and our other products, visit <http://www.uniden.com>.

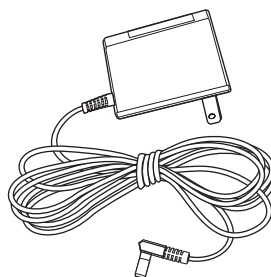
Using a Computer to Control Your BC898T

You can operate your scanner using software and a personal computer and cable (not included). Free demo software is available at <http://www.uniden.com>. You can also purchase a registration key to upgrade the demo software to full functionality.

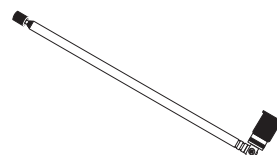
Included With Your Scanner



Scanner



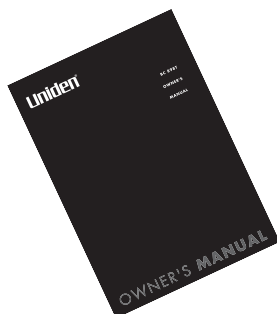
AC Adapter



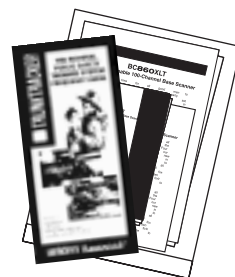
Antenna



Frequency Guide



Owners Manual



National Public Safety
Trunked System
Frequency Guide

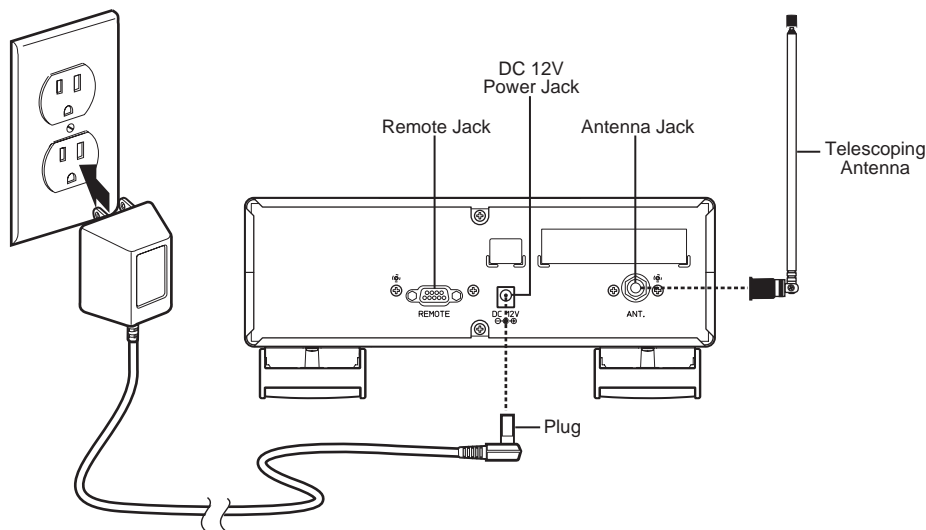
If any of these items are missing or damaged, immediately contact your place of purchase or Uniden Customer Service at: (800) 297-1023, 8:00 a.m. to 5:00 p.m., Central, Monday through Friday.

Installing Your Scanner

These guidelines will help you install and use your new scanner:

- If your scanner receives interference or electrical noise, move the scanner or its antenna away from the source. You might also try changing the height or angle of the telescoping antenna.
- To improve the scanner's reception, use an optional external 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 might be necessary for the optional antennas.
- Use an optional earphone or stereo headset with proper impedance for private listening. Read the precautions on the inside front cover of this Owners Manual.
- Do not use the scanner in high-moisture environments such as the kitchen or bathroom.
- Avoid placing the scanner in direct sunlight or near heating elements or vents.

For Home Use (Desktop Installation)



1. Insert the DC plug end of the included AC adapter into the DC 12V jack on the back of the scanner.
2. Plug the other end of the AC adapter into a standard 120V AC wall outlet.
3. Plug the included telescoping antenna into the ANT connector on the back of the scanner. Then extend the antenna to its full height.

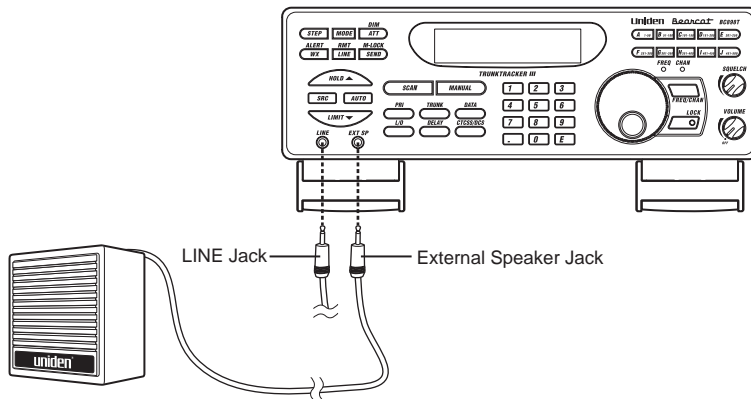
Note: For frequencies higher than 406 MHz, shortening the antenna might improve the reception.

4. Use the scanner's desktop stand for a better viewing and operating angle.

Adapter Safety Feature

The AC adapter included with the scanner might be equipped with a polarized line plug — a plug with one blade wider than the other. This plug fits into a power outlet only one way. If you are unable to insert the adapter's plug into an AC outlet, try reversing the plug.

Using An Optional External Speaker/Earphone/Headphone



For private listening or for listening in a noisy area, you can plug a 1/8-inch (3.5mm) mini-plug earphone's or headphone's or monitor speaker's (not included) cable into the EXT SP jack on the front of the scanner. This automatically disconnects the scanner's internal speaker.

Listening Safely

To protect your hearing, follow these guidelines when you use an earphone or headphones.

- Do not use an earphone to listen to the WX alert siren or when in SAME alert mode. The alert tone's volume is not adjustable and damage to your hearing could occur.
- Do not listen at extremely high volume levels. Extended high-volume listening can lead to permanent hearing loss.
- Set **VOLUME** to the lowest setting before you begin listening. After you begin listening, adjust **VOLUME** to a comfortable level.
- Once you set **VOLUME**, do not increase it. Over time, your ears adapt to the volume level, so a volume level that does not cause discomfort might still damage your hearing.

Using An Optional Tape Recorder

You can use a standard tape recorder or a VOX (Voice Operated Control) tape recorder with the scanner. The tape recorder you use must have a remote jack. You need a cable with a 1/8-inch (3.5 mm) plug (not included) to connect the tape recorder to the scanner. You can get a cable from your local electronics store.

Connect one end of the cable to the tape recorder's remote jack, then connect the other end of the cable to LINE on the front of the scanner.

Remember! You must program a channel for tape recording before you can record it. See "Recording Transmissions" on Page 38 for more information.

Using the Demo Software

You can operate your scanner using a personal computer and the free demo software available at <http://www.uniden.com>.

If you have installed the software and it is running, select **Help** by right clicking anywhere on the opening screen. A selection popup appears. Move the cursor to **Help**. **BC898TSS Help** appears. Then click on **BC898TSS Help**.



To turn on the computer control feature and set the baud rate, hold down **RMT** on the front of the scanner until you hear two short beeps, turn the rotary tuner until the baud rate you want to select appears, then press **E**.

To cancel computer control, hold down **RMT** until you hear two short beeps, turn the rotary tuner until OFF appears, then press **E**.

Installing The Software

Download the software, then double-click on the install package to begin installation. The BC898T SS Install program installs the software. You must install the software to use the scanner with your computer.

After you install the BC898T SS Install program, start it by double clicking on the desktop icon or by selecting it in the Start Programs list.

You can upgrade the included software to a full version by purchasing a registration key at <http://www.uniden.com>.

Installing The Scanner In a Vehicle

Mounting the Scanner

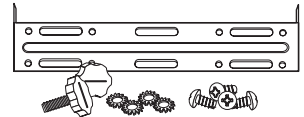
1. Select a location in your vehicle to mount the scanner. Avoid a location that could interfere with your driving. In a passenger car, the ideal location is underneath the dashboard on the passenger side.

Warning: Make sure there are no obstructions such as wires or an air bag behind the mounting location you select. Use the shortest mounting screws that will securely hold the mounting bracket on the mounting location you select. If you are not sure if the mounting location is safe and free of obstructions, check with your vehicle's dealer.

2. Use an optional mounting bracket as a template for marking the location for 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 with the bracket.
4. Mount the scanner to the bracket only after the wiring has been connected to the scanner's rear panel.



Connecting the Antenna Plug

Connect an optional mobile antenna plug into the ANT connector on the back of the scanner. (For more information on antenna installation, please refer to the instruction guide that came with your antenna.)

Connecting the DC Power Cord

If you are not experienced in connecting accessories to your vehicle's fuse box, please consult your vehicle's dealer for advice on proper installation before completing the steps below.

Installing a Temporary Power Cord

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

Use an optional cigarette lighter power cord for an easy, temporary installation.

Plug one end of the cigarette lighter power cord into your vehicle's cigarette lighter jack, then plug the other end into the DC 12V jack on the back of the scanner.

Installing a Permanent Power Cord

1. Check the vehicle's 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. If your vehicle has a negative ground, follow the steps below. Otherwise, consult your vehicle's dealer for advice on installing negative ground accessories in your vehicle.
2. Connect an optional DC power cord's RED wire to the accessory contact in your vehicle's +12 VDC fuse box.
3. Connect the DC power cord's BLACK wire to the negative side of the vehicle (usually the chassis).
4. Insert the DC plug into the DC 12V jack on the back of the scanner.

Basic Operation

Turning On the Scanner

Turn **VOLUME** clockwise to turn on the scanner, or counterclockwise until it clicks to turn it off.

Setting the Squelch

Your scanner's squelch control acts like a gate to reduce or eliminate noise from received signals. Turning **SQUELCH** clockwise raises the gate so high that only very strong signals can get through, while turning **SQUELCH** counterclockwise lowers the gate so that everything can get through — noise, weak signals, and strong signals.

To set the squelch, you must first set the scanner to its manual mode and the scanner must not be receiving a signal.

Follow these steps to set the scanner's squelch.

1. Adjust **VOLUME** to a comfortable listening level.
2. Repeatedly press **MANUAL** until you do not hear a signal.
3. Turn **SQUELCH** fully clockwise.
4. Turn **SQUELCH** counterclockwise until you hear a hiss.
5. Turn **SQUELCH** back clockwise just until the hiss stops. This sets the squelch so that only clearer signals can get through.

You can change the squelch setting, if necessary, to provide better performance in your area.

Using the Rotary Tuner

Use the rotary tuner to:

- Rapidly and precisely select frequencies or channels in the conventional or trunking mode.
- Select a CTCSS tone during CTCSS programming in the conventional or trunking mode.
- Scroll through scan and lockout lists in the trunking mode.

To use the rotary tuner, press **MANUAL** to stop scanning if necessary. Then, if the green LOCK LED is on, press **LOCK** to unlock the rotary tuner. Then turn the rotary tuner to select frequencies, channels, or CTCSS tones, or scroll through scan and lockout lists.

To program a channel, repeatedly press **FREQ/CHAN** until the CHAN LED lights. Then turn the rotary tuner to select the channel. To program a frequency, repeatedly press **FREQ/CHAN** until the FREQ LED lights. Then turn the rotary tuner to select the frequency.

Note: You can also use the keypad to enter a frequency.

Press **E** to program the frequency into the channel you selected.

Using the Frequency/Channel Mode Selector

Repeatedly press **FREQ/CHAN** to switch between channel and frequency mode. When the CHAN LED is on, you can use the rotary tuner to step rapidly through channels. When the FREQ LED is on, you can use the rotary tuner to tune frequencies quickly and accurately.

Using the Lock Key/LED

Press **LOCK** to enable or disable the rotary tuner. When the LOCK LED is on, the rotary tuner is locked. This prevents accidentally changing the displayed channel and frequency while monitoring a transmission.

Manually Selecting a Channel

To manually select a channel, press **MANUAL**, enter the channel's number using the keypad, then press **MANUAL** again. The channel's number and any frequency stored in the channel appears.

Scanning Programmed Channels

Before you start to scan, you must first program channels. See "Programming" on Page 35 and "Programming Conventional Channels" on Page 39 (for conventional channels) or "Programming Trunked Systems" on Page 41 (for trunking systems) for complete instructions.

To begin scanning, simply turn on the scanner or, if the scanner is not currently scanning, press **SCAN**.

The scanner checks each system you have programmed that is not locked out and stops if there is activity. SCAN scrolls across the display, right to left.

When the scanner receives a signal on a programmed channel, it stops on that channel and displays the channel information.

The bank indicators A – J selected for scanning appear, and the bank you are currently monitoring flashes. You can deselect banks from active scanning by pressing that bank's key (**A-J**). The indicator for each deselected bank turns off, and the scanner does not scan that bank's channels.

Note: One bank must always be active. You cannot deselect all ten banks at the same time. If you try to turn off all the banks, the scanner automatically selects the first bank.

To restore a bank to active scanning, press the bank's letter. The bank's indicator appears.

Press **MANUAL** to stop on a channel while scanning. Press **SCAN** to resume scanning.

Locking/Unlocking Banks

When you are scanning conventional banks, the scanner displays the digit corresponding to all unlocked banks. To lock out a bank so that the scanner does not scan its channels, press the letter that corresponds to the bank. The bank's letter disappears from the display.

To unlock locked-out banks, simply press that bank's letter again. The bank's letter appears on the display and the scanner includes that bank when scanning.

Note: You cannot lock out all banks. One bank must be unlocked at all times.

Locking/Unlocking Channels

To lock out a channel so that the scanner does not stop on it while scanning, press **L/O** when the scanner is stopped on that channel, or manually select the channel and press **L/O**.

To unlock the channel, manually select it and press **L/O** again.

Restoring All Locked Out Channels

You can restore all locked-out channels in a bank only when the bank is selected for scan. Follow these steps to restore all locked-out channels in a bank.

1. If you de-selected the bank, press **SCAN** then press the bank's letter.
2. Press **MANUAL**.
3. Hold down **L/O** for about 2 seconds. The scanner beeps twice and unlocks all channels.

Priority Scanning

When priority scan is turned on, the scanner checks the priority channels in the unlocked banks every 2 seconds between transmissions. If a signal is present on a priority channel, the scanner switches to monitor that transmission, even if it had been stopped on another channel. One channel in each bank is designated as the priority channel.

To turn priority scan on or off, press **PRI**. **PRIORITY** appears (if priority scan is on) or disappears (if priority scan is off).

Note: If all priority channels in unlocked banks are locked out, **P CH LOC0UT** appears when you try to turn on the priority scan mode.

Changing the Priority Channel

You cannot eliminate the priority channel, but you can change it to any of the 50 available channels in each bank. Follow these steps to change the priority channel.

1. Press **MANUAL**.
2. Use the keypad to enter the channel number for the new priority channel.
3. Press **MANUAL**.
4. Hold down **PRI** for about 2 seconds.

The scanner beeps twice and the priority channel changes to the one you selected.

Using the Dimmer

Hold down **DIM** for about two seconds to change the display's brightness.

Trunk Scanning Options

When you are scanning a trunked system, there are several trunking-only options available to you. This section outlines these options.

Searching for Active Talk Groups (ID Search)

If you want to hear all activity on a trunked system, use the ID search mode by pressing **SCAN** then **SRC**. **SEARCH** appears and the BC898T stops on every active talk group, regardless of whether you have programmed it into your scanner. This makes it easy to find unknown talk groups.

Note: If you have not yet programmed any talk group ID's into the scanner, this is the only trunk scanning mode available.

Searching Only Stored Talk Groups (ID Scan)

To scan only those talk groups you have stored into your scanner, press **SCAN**. When one of the talk groups you have stored becomes active, the scanner switches to that transmission and displays the ID number for that talk group.

Note: You must store at least 2 talk group ID's in the system for ID scanning to work.

Monitoring Talk Group ID's

To see all the talk group ID's that are active on the system, while monitoring a trunked system press **SCAN**. The scanner stops trunking the system and instead holds on the system's control channel. You hear the control data and the scanner displays every talk group ID as it becomes active in the system. To resume trunk tracking, press **SCAN** again.

Holding On a Single Talk Group

To hold on an active talk group when scanning or searching, press **HOLD** Δ . The BC898T stops scanning and holds on the current trunking system. It only receives transmissions on the talk group that was active when you pressed **HOLD** Δ .

To select a talk group to hold on when that group is not active, while ID scanning or ID searching the system, press **HOLD** Δ . Then, either enter the ID or (if you have stored the ID) scroll to the ID you want to hold on.

Locking Out Talk Groups

Like conventional scanning, you can lock out unwanted talk group traffic on trunking systems. This is particularly important if you are ID searching a trunking system, as many systems share both voice traffic (that you usually want to hear) with some data traffic from water meter systems, door alarms, traffic signals and other data sources that you don't want to hear. You can lock out up to 200 talk group ID's at the same time.

To lock out a talk group, press **L/O** when the scanner stops on that group. Or, if you have stored the talk group in an ID list, select that ID and press **L/O**.

Reviewing Locked Out Talk Group ID's

You can confirm which talk group ID's are locked out in the scanner.

To review locked out talk group ID's, hold down **L/O** for about 2 seconds. The locked-out talk group ID's appear.

Restoring All Locked Out Talk Group ID's

To restore all locked out talk group ID's, hold down **L/O** for about 2 seconds.

EDACS Blockout

This is a powerful form of lockout that is only available for EDACS systems. EDACS Blockout lets you lock out entire agencies or fleets, not just individual talk groups.

To use blockout, while scanning an EDACS system, press **HOLD** Δ .

Setting the Attenuator

If you are near a very strong signal source, the signal can overload the scanner's RF front end, causing poor audio quality or missed reception. Repeatedly press **ATT** until **ATT** appears (to turn the attenuator on) or until **ATT** disappears (to turn the attenuator off).

ID Lockout

Like conventional scanning, it's possible to lock out unwanted traffic. This is particularly important in trunked systems because in many areas water meters, door alarms, traffic signals, and other mechanical devices are assigned ID's just like other users. Also some

departments scramble or encrypt their communications, and you might want to lock out these unintelligible transmissions.

To lock out an ID, press **L/O** when the ID appears. The ID is locked out, and the next active ID appears. You can lock out up to 200 ID's.

Note: If you lock out an ID in search mode, it is also locked out in scan list mode. Conversely, if you lock out an ID while in scan list mode, it is locked out in search mode.

Restoring a Single ID

Follow these steps to unlock a single ID.

1. Hold down **L/O** until you hear two short beeps.
2. Use either the rotary tuner or **HOLD** Δ or **LIMIT** ∇ to select the ID you want to unlock.
3. Press **L/O**. The ID is unlocked and the next locked ID appears.
4. Press **SRC** to return to the search mode.

Restoring All ID's

Follow these steps to unlock all locked out ID's at once:

1. Hold down **L/O** until you hear two short beeps.
2. Hold down **L/O** for about 2 seconds to unlock all the ID's at once.

Note: If you unlock all the ID's, **Non** appears. Press **SCAN** to scan the ID's stored in your scan lists or press **SRC** to return to the search mode.

3. Press **SRC** to return to the search mode.

Searching Tips

ID Delay Mode

Use the **DELAY** key to select the delay mode if it's not active. This mode holds an ID for 2 seconds while you wait for a reply. In a trunked system, you can set a delay for each bank. Other groups might use the system, but your scanner will only look for the ID in the display.

Note: If you consistently miss responses while in ID delay mode, you might need to change the default system type or change the fleet map you are using.

ID Hold Mode

Press **HOLD** Δ to hold on a particular ID in the display. This is where the trunk tracking effect is really noticeable. You can hold a specific talk group, such as fire department on-scene operations, no matter which frequency the group uses.

ID Monitor Mode

To enter manual mode for a conventional system in a bank selected for a trunked system, press **MANUAL**. All active talk group ID's appear in succession.

Note: Locked out ID's appear during ID monitor mode.

Scan Lists

You can program conventional or trunking frequencies into any of your scanner's banks. When you designate a bank as a trunk tracking bank, your scanner sets up 10 scan lists (A –J), which are simply lists used to store your favorite ID's. Each list can contain up to 10 ID's, so you can store a total of 100 ID's for each trunk tracking bank (1000 if you use all banks as trunking banks!). Scan lists help you organize the trunking system users into categories. For example, you might use List A for police ID's, List B for fire department ID's, List C for emergency medical service ID's, etc. Once ID's are stored in lists, you can scan them like you scan conventional frequencies. You can program your scan lists either manually or during trunking search mode.

You can use the rotary tuner to scroll through the ID's in your scan lists.

Searching

Chain Search

Your scanner's chain search feature lets you discover new active frequencies in your area.

To use chain search, first program one or more chain search ranges (see "Setting and Saving a Chain Search Range" below). Then, select one or more chain search ranges to search (see "Selecting Chain Search Ranges" below). Then press **SRC** (see "Using Chain Search" below). The scanner searches all frequencies within the chain search range or ranges you selected.

Setting and Saving a Chain Search Range

You can save up to 10 chain search ranges in your scanner.

1. Press **MANUAL** to stop scanning.
2. Press **SRC**.
3. Press **HOLD** Δ . **HOLD** appears.
4. Select the memory location where you want to save a chain search range by pressing its bank key (**A-J**). If there is a chain search range already stored in that memory location, the lower and upper frequencies of that chain search range flash.
5. Use the keypad to enter the lower frequency of the chain search range, then press **E** on the keypad or **LIMIT** ∇ . (Press **.** to enter the decimal point).
6. Use the keypad to enter the upper frequency of the chain search range, then press **E** on the keypad or **LIMIT** ∇ . (Press **.** to enter the decimal point).

Selecting Chain Search Ranges

By default, your scanner only searches one chain search range at a time. However, you can select more than one chain search range and the scanner will search each range you select. To select chain search ranges, press the bank keys (**A-J**) associated with the ranges you want to select. When you turn on chain search, each time you press a bank button, that chain search range is turned on or off and its letter appears or disappears from the display.

Using Chain Search

To use chain search, press **SRC** then press the bank keys (**A-J**) for the chain search range or ranges you want to search.

To change the step increment during a chain search, repeatedly press **STEP** to select the increment you want. The step increment you selected flashes. If you select the default step increment for that frequency, its indicator stops flashing.

Holding On An Active Frequency

To hold on the current frequency, press **HOLD** Δ . To resume searching, press **SRC**.

Setting Data Skip

The scanner normally stops on any frequency with activity, and remains there until either the activity stops or you press **SRC** to resume scanning. However, some signals are identifiable by the scanner as data signals, and you can set the scanner to automatically skip these channels.

Note: Even with this option turned on, the scanner might pause for a couple of seconds on data transmissions before resuming.

To turn on data skip, press **DATA**.

Skipping Frequencies

If a particular frequency continues to interrupt search scanning, you can set the scanner so it skips the frequency. To skip over a frequency, press **L/O** when the scanner is stopped on a frequency you want to skip.

Notes:

- You can program up to 100 skip frequencies. The 101st skip frequency entered causes the first skipped frequency to unlock.
- If all frequencies in the search range are set to skip, a beep sounds and it moves to search hold mode. To resume searching:
 - a. Unskip all skipped frequencies
 - OR —
 - b. Select a different search frequency range.

To unskip all skipped frequencies, hold down **L/O** for about 2 seconds in search hold mode.

Storing Found Frequencies

If you find a frequency you want to save into a channel, follow these steps.

1. Press **E** or **SEND** when the scanner is stopped on that frequency. All the bank indicators flash.
2. Select the bank where you want to send the frequency. The display alternates between the frequency you are sending and the lowest available channel in the bank. If there is no free channel in the bank, the scanner automatically selects the first channel in the bank you selected.
3. Press **E**.

Note: If you have already stored this frequency, the scanner displays a warning and the channel where the frequency is stored. To store the frequency anyway, press **E** again.

Automatically Storing Frequencies

During searching, you can have the scanner automatically store active frequencies into a bank you choose. Once the search begins, AutoStore will automatically program active frequencies into the available channels of the bank(s) you select. For more information about your scanner's search feature, see "Searching" on Page 27.

Note: You must program a chain search range for auto store to work.

1. Press **MANUAL** to stop scanning.
2. Press **AUTO**. All the bank letters flash and **AUTO** appears.
3. Press the bank keys (**A-J**) where you want to store the frequencies the scanner finds. The bank letter(s) you select stop flashing.

If the bank you selected has no empty channels, **FULL** appears for about 3 seconds and the scanner sounds an error tone. You must either delete frequencies in the bank or select another bank.

4. Press **SRC** to start AutoStore.

AutoStore stops automatically when all available channels in the selected bank(s) have been programmed.

5. Press **MANUAL** to exit AutoStore and return to the manual mode.

Notes:

- To exit AutoStore before all the available channels in the selected bank(s) are programmed, press **MANUAL** twice.
- To ensure that you catch most active frequencies for the band, you should allow AutoStore to continue through at least a few complete sweeps of the band. Depending on the types of services, some occasionally active frequencies might not have activity for minutes or hours at a time.

Setting Subaudible Tones for Searching

You can set the scanner to only stop on transmissions that either have no subaudible tone or include a specified CTCSS or DCS tone during searches. This setting affects all search ranges. For this feature to work, you need to turn on the tone mode (see "Setting the Squelch" on Page 20).

1. Press **PRI** to turn off priority scan.
2. Hold down **CTCSS/DCS** for about 2 seconds. **CTCSS** and **DCS** blink and the scanner searches for CTCSS or DCS tones. When the scanner finds a CTCSS or DCS tone, the frequency blinks.

Attenuating All Search Ranges

If you are near a strong RF source, you might need to attenuate the input signal in order to search properly. Repeatedly press **ATT** until **ATT** appears (to turn on attenuation) or until **ATT** disappears (to turn off attenuation).

Setting Delay For All Search Ranges

You can set the scanner to have a 2-second delay after the end of a transmission before searching resumes. This slows searching, but helps you prevent missing replies on a frequency. To turn on this option for all search ranges, select the channel where you want to add a delay then press **DELAY**.

Searching a Trunked Bank

Before you search a trunked bank with your scanner, consider the following:

- You can only trunk track one bank at a time.
- Repeatedly press **TRUNK** to toggle between the conventional and the trunk tracking modes.
- Press **DATA** while in the trunk tracking mode to review which bank is currently in use. The appropriate bank icon flashes at the top of the display. Press **DATA** again to turn off review.

If you have programmed frequencies for a trunked system in one or more of the 10 available banks and you are in conventional mode, follow these steps to begin trunk searching.

1. Press **TRUNK** then press **SCAN**.
2. Press a bank key (**A-J**) to select the trunked bank you want. For example, press **B**.
Note: You will see the frequencies appear quickly as your scanner looks for the data channel, which controls the system.
3. Once the data channel is acquired, the scanner starts to trunk track. Talk group ID's, which represent different service groups, appear.
4. Press **TRUNK** again to return to conventional mode.

While searching, you won't know exactly to whom the ID's are assigned until you listen awhile or until ID lists are available in frequency guides or on internet sites. However, it usually only takes a few minutes to figure out police, fire, and emergency medical personnel. Other ID's might take some time, but determining who each ID represents is half the fun of trunk scanning!

Searching for CTCSS/DCS Tones

You can use the CTCSS/DCS tone search mode to determine if the frequencies in your area are transmitted with associated tones. If the scanner finds a CTCSS or DCS tone, the type of tone and the frequency flash on the display. Then, if you store that frequency into a channel, the tone is also stored in the channel.

Notes:

- You can search for CTCSS/DCS tones in scan mode, manual mode, or chain search mode. You cannot search for CTCSS/DCS tones while the scanner is scanning a priority channel.
 - You might find frequencies that do not have a tone associated with them. This might be because CTCSS or DCS tones are not being transmitted.
1. If necessary, press **PRI** to turn off priority scan.
 2. Hold down **CTCSS/DCS** until you hear two short beeps. **CTCSS** and **DCS** appear and begin to flash. If there is a break before a tone is identified, your scanner searches where it left off when the transmission begins again. If a CTCSS or DCS tone is found, the type of tone (**CTCSS** or **DCS**) and the frequency flash.

To exit tone search, press **CTCSS/DCS**.

Using Weather Alert (SAME)

Important: Your scanner has been primarily designed to be a radio scanner. While it incorporates weather alert as one feature, we strongly recommend that you not use the scanner as your sole means for receiving emergency alerts. Your local electronics retailer carries several weather radios specifically designed for this function.

Your scanner allows you to either search for a local NOAA weather broadcast, or be set to alert when a SAME weather alert is broadcast on a NOAA channel.

Turning Weather Alert On/Off

In weather alert mode, your scanner 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 emits a loud siren and displays information about the weather alert whenever your local NOAA weather station transmits a severe weather emergency tone.

Follow these steps to turn on weather alert:

1. Press **WX** to find your local weather station.
2. Press **HOLD** Δ .
3. Hold down **ALERT** for about 2 seconds. **ALERT** appears.

The scanner's volume is muted until the warning tone sounds.

Your scanner now functions as a weather alert radio, waiting to receive a severe weather emergency tone. When your scanner receives the emergency tone and a SAME event code from your local NOAA weather station, it responds with a loud siren at maximum volume (regardless of the volume control setting) and displays information about the alert.

You might see any of the following information during a weather alert:

- L1 – Warning
- L2 – Watch
- L3 – Advisory
- TST – Test

The siren will continue until the emergency tone stops transmitting.

To cancel the siren, press **WX**. **ALERT** disappears.

Searching for a Weather Broadcast

You can use the BC898T to search for your local NOAA weather channel.

To search for a weather broadcast, press **WX** to find an active weather channel in your area. **WX** appears.

You might receive more than one weather station in your area. When you press **WX**, your scanner finds the first active transmission. If a transmission seems weak or distant, press **WX** again to find a clearer station.

Notes:

- Weather scan does not resume automatically. You must press **WX** again to start the weather scan again. In some parts of the country, you might not be able to monitor weather transmissions, such as in low-lying areas. Normally a higher location will improve the reception.
- NOAA broadcasts are continuous broadcasts. You will only lose reception if you move out of a coverage area. If the signal is lost, the scanner resumes searching for a weather transmission.

Programming a FIPS Code

SAME (Specific Area Message Encoding) was adopted late in the last century to replace the wide-area alerts previously used. Weather alerts today are preceded by a digital packet that identifies not only the type of alert, but also the geographic location for the alert. Thus, it is possible for a weather broadcast that can be received across many counties to be targeted to a single county. To specify a county, SAME uses a standard established by the US Census bureau, called *FIPS*.

The format of a FIPS code is:

DSSCCC

Where

D = area subdivision (0=entire area)

SS = State code (00=all states)

CCC = County code (000=all counties)

For example, the FIPS code for Tarrant County, Texas is: 048439
(48=Texas; 439=Tarrant County).

Some counties are further subdivided, in which cases, the first digit will be 0 for all subdivisions in the county and each subdivision will be labeled 1-9.

To program your scanner to alert you when the weather service issues an alert, you must set the scanner to the alert mode, and then leave the scanner monitoring the weather service. You cannot scan and monitor for weather alerts at the same time. To limit alerts to a specific area, you must also program in the FIPS code(s) for the area(s) you want to receive alerts for. The scanner can be set to either alert for all areas, or only the areas you have programmed.

You can get FIPS codes for your area by calling the National Weather Service at 1-888-NWR-SAME or visit their web site at <http://www.nws.noaa.gov/nwr/indexnw.htm>.

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1. Hold down **WX** for about 2 seconds to turn on weather alert.
 2. Hold down **E** for about 2 seconds.

If the scanner has not been set to alert for any FIPS code, ---- appears. If the scanner is set to alert for all FIPS codes, ALLFIPS appears. If the scanner is set to alert only for the area you programmed, F1 appears.

3. Turn the rotary tuner or repeatedly press **HOLD** Δ or **LIMIT** ∇ to enter a FIPS code (1 through 15). Then enter the FIPS code and press **E**.

To set the scanner so it sounds an alert tone when it receives any FIPS code, turn the rotary tuner or repeatedly press **HOLD** Δ or **LIMIT** ∇ to move **ALLFIPS** to F1. To set the scanner so it sounds an alert tone when it receives only one of the FIPS codes you programmed, turn the rotary tuner or repeatedly press **HOLD** Δ or **LIMIT** ∇ to select F1 to F15. Then press **E**.

4. When you finish entering FIPS codes, press **E**.

Programming

The BC898T has 500 memory channels, each of which can be programmed to store one frequency. The channels are divided into ten 50-channel banks, useful for storing similar frequencies in order to maintain faster scanning cycles.

You can use the keypad and rotary tuner to program your scanner. You can also use the scanner's AutoStore feature to automatically program channels, and transfer a frequency you already programmed from another channel to a channel you select.

Notes:

- The information in this section covers basic steps for programming frequencies and channels. For specific information about programming conventional channels, see "Programming Conventional Channels" on Page 39. For specific information about programming trunked systems, see "Programming Trunked Systems" on Page 41.
- Before you start to program your scanner, we recommend you download the demo software and use the worksheets in the software's help files to help you organize the information you want to program.

Transferring a Programmed Frequency

You can send any frequency to another channel. To transfer a frequency, select a channel with the frequency you want to assign to a different channel. Then press **SEND**. All the bank indicators flash. If you have programmed CTCSS or DCS tones, they also appear when you press **SEND**.

Transferring a Frequency to the First Available Channel In a Bank

1. Select the bank where you want to send the frequency. For example, press **D**. The display alternates between the frequency you are transferring and the bank's lowest available channel.
2. Press **E** on the keypad to transfer the frequency to the new channel. The scanner moves the frequency from the old channel to the new channel.
3. To cancel the transfer before it is complete, press **SEND**.

Transferring a Frequency to a Specific Channel

1. Use the keypad to enter the channel where you want to send the frequency. (For example, press **9** and **4** on the keypad to send the frequency to Channel 94).
2. Press **HOLD** Δ .
The display alternates between the frequency you are transferring and the frequency in the new channel.
3. Press **E** to complete the transfer.
The frequency is now stored in the new channel, and the old channel is empty.
4. To cancel the transfer before it is complete, press **SEND**.

Duplicate Frequency Alert

If you enter a frequency already stored in another channel, the scanner beeps and the other channel appears. Press **.** on the keypad to start again or press **E** again to store the frequency in both channels.

Deleting a Stored Frequency

To delete a stored frequency, press **0** then press **E**. Channels with no frequencies are automatically locked out.

Programming a Channel With a CTCSS/DCS Tone

1. Press **MANUAL**.
2. Press **CTCSS/DCS**.
3. Select the channel you want to program then press **E**. If you have already programmed a CTCSS or DCS tone, the frequency for the tone blinks. Otherwise, *000.0 Hz* blinks.
4. Enter a CTCSS tone.
 - a. Use the keypad, rotary tuner, or **HOLD** \triangle or **LIMIT** ∇ to select the tone.
 - b. Then press **E**.

Notes:

- If you make a mistake while entering a tone with the keypad, press **.** on the keypad twice and enter the tone again.
 - Make sure **FREQ** is lit before turning the rotary tuner to select a frequency.
5. To cancel CTCSS mode, press **CTCSS/DCS** or **MANUAL**. The CTCSS indicator and displayed tones are turned off but not deleted.

Programming Tips

- Since weather transmissions are continuous, do not program a weather frequency into any of the scanner's channels. To listen to a weather transmission, press **WX** to select the weather information band instead.
- Group similar frequencies into adjacent channels. For example, program police frequencies in channels 1 through 50 and fire/emergency into channels 51 through 100, and so on.
- Put the frequency you listen to the most or the most important frequency into a priority channel.
- To quickly program a series of channels, start with the lowest number channel. For example, when you are programming five new frequencies into Channels 4 through 8, start with Channel 4. After you finish programming a channel, press **MANUAL** or **HOLD** Δ to go to the next higher channel.
- Record channels and frequencies in some convenient place in case the scanner's memory is lost.

Setting the Delay Mode

A delay can be set for each programmed channel so that when scan or search stops on a channel there is a brief pause before the scanning cycle resumes. Delay must be set for each programmed channel, and it can be set when your scanner pauses during a scan or when manual mode is selected.

Setting Delay in Scan or Search Mode

1. Press **SCAN** or set a search range then press **SRC**.
2. When your scanner stops on a channel, press **DELAY**. **DELAY** appears. Scanning resumes two seconds after the transmission ends.

Setting Delay in Manual Mode

1. Press **MANUAL**.
2. Use the keypad or rotary tuner to select a channel.
3. Press **DELAY**. **DELAY** appears. The scanner pauses on the channel when a transmission is received.

Recording Transmissions

You can set any channel for recording while scanning. Then, if your scanner stops on a channel you have designated for recording, the connected tape recorder begins to record the audio.

However, before you can use this feature, you must connect a tape recorder to your scanner. For information about attaching a recorder to your scanner, see "Using An Optional Tape Recorder" on Page 16.

To program a channel for tape recording:

1. Use the keypad or rotary tuner to select the channel you want to record.
2. Press **LINE**. **LINE** appears indicating that the channel will be recorded if you connected a tape recorder to your scanner.
3. Repeat these steps to select other channels for recording.

To record a channel, press **SCAN**. When your scanner stops on a channel and **LINE** appears, the channel is recorded.

To turn the record feature off for a channel:

1. Use the keypad or rotary tuner to select the channel you do not want to record anymore.
2. Press **LINE**. **LINE** turns off and the channel is not recorded.

Data Skip

A scanner will normally stop on any transmission it receives. This means the BC898T will stop on data signals and unmodulated transmissions. You can automatically skip many of these types of transmissions during searches. Repeatedly press **DATA** until **DATA** appears (to activate the data skip feature) or until **DATA** disappears (to deactivate the data skip feature).

When data skip is active, your scanner might pause momentarily on an unwanted signal but will resume searching in 2 or 3 seconds.

Frequency Skip

If a particular channel continues to interrupt search scanning, you can set your scanner so it skips the frequency. To skip a frequency, press **L/O**.

Note: You can program up to 100 skip frequencies. If you try to program more than 100 skip frequencies, additional frequencies you program cause the first skipped frequency to unlock.

Programming Conventional Channels

Each of the scanner's banks can hold a mix of conventional channels plus one trunked system. This section describes how to store known frequencies into conventional channels.

You might want to gather all information about the systems you want to monitor before you start to program the scanner. The "Conventional Scanning Worksheet" included in the help file included in the demo software (download at <http://www.uniden.com>) makes this easy.

The first few sections are intended to be performed in the order indicated if you are entering information the first time. If you are editing existing information, manually select the channel then follow the steps in the appropriate section to access the information you want to change.

Programming conventional channels is easy - just select a channel to program, enter the frequency, then press **E**.

<p>Important: Do not use this method to program trunked systems. They require additional information to scan correctly. See "Programming Trunked Systems" on Page 41 for more information.</p>

Changing the Frequency Step

The channel frequency step option controls the frequency step size used when you manually tune up or down from the frequency stored in the channel. Your BC898T is preprogrammed with the most common step sizes for each band, so you seldom need to change this setting. To change the frequency step, press **MANUAL** then repeatedly press **STEP** until the frequency step you want flashes.

Note: If you select a 6.25 kHz step for the 150.0000 through 161.9999 MHz frequency range, the scanner will actually use a 7.5 kHz frequency step to match the FCC band plan for this range. However, the scanner's display will show 6.25 kHz as the selected step.

Setting the Modulation Mode

Radio transmissions are modulated in several different ways.

The BC898T is able to demodulate the most common transmission types. Your scanner has the most common modulation mode preset for each band, so you seldom have to change this option. However there are occasional services that use a modulation mode that is not standard for that band.

To change the modulation mode, press **MANUAL** then repeatedly press **MODE** until the modulation mode you want flashes.

Setting Priority Channels

You can set one conventional channel in each bank as a priority channel. When you turn on the priority scan option (see “Priority Scanning” on Page 22), the scanner automatically checks these channels every 2 seconds to see if there is activity. If there is, the scanner immediately switches to the priority channel.

Note: The scanner does not check trunked channels, priority channels if the channel is locked out, or in locked-out banks.

By default, the first channel of each bank is set as priority. To change the priority channel, manually select the channel you want to set as the priority channel. Then hold down **PRI** for about 2 seconds. The scanner beeps twice and the new priority assignment is made.

Programming Trunked Systems

Before you start programming your scanner to track a trunked system, consider the following:

- You might want to gather all information about the systems you want to monitor before you start to program the scanner. The “Motorola Trunking Worksheet”, “LTR Trunking Worksheet”, and “EDACS Trunking Worksheet” included in the help file included with the demo software (download at <http://www.uniden.com>) make this easy.
- You can program only one trunked system per bank. For example, if you are programming Bank D, you can only select channels 151-200 with the rotary tuner or using the **HOLD** \triangle or **LIMIT** ∇ keys.

Note: To clear a mistake while entering a frequency, press . twice then enter the frequency again.

Setting the Scanner to Trunking Programming Mode

You must set the scanner to its trunking programming mode before you can program channels and enter trunking frequencies.

If you are in conventional scan mode:

1. Hold down **TRUNK**. The scanner beeps twice and **BANK** and **TRUNK** flash.
2. Select the trunking bank you want to program.

If you are in trunking scan mode:

1. Press **TRUNK** to return to conventional mode if you have been monitoring a trunking bank.
2. Hold down **TRUNK**. The scanner beeps twice and **BANK** and **TRUNK** flash.
3. Select the trunking bank you want to program.

Note: When you set the scanner to its trunking programming mode, you cannot select channels in other banks.

Programming Motorola Systems

Programming Channels and Entering Trunking Frequencies

1. Hold down **TRUNK** for about 2 seconds. The scanner beeps and **BANK**, **TRUNK**, and the bank letters A-J blink.
2. Press a bank key to select the bank where you want to store the frequencies.
3. Select Motorola scanning by turning the rotary tuner or repeatedly pressing **HOLD** \triangle or **LIMIT** ∇ to select one of the following Motorola scanning choices:
 - E2-800 (Motorola Type II 800 MHz)
 - E2-900 (Motorola Type II 900 MHz)
 - E2-HI (Motorola Type II VHF)
 - E2-UHF (Motorola Type II UHF)
 - E1 (Motorola Type I)

Then press **E** on the keypad.

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4. If necessary, repeatedly press **HOLD** Δ or **LIMIT** ∇ until PRO9 F appears. Then press **E** on the keypad.
 5. To enter trunking frequencies, use the keypad to enter the first frequency, then press **E** on the keypad. (Press **.** to enter the decimal point).

Note: To clear a mistake while entering a frequency, press **.** twice then enter the frequency again.

6. For each additional frequency, select the next channel by turning the rotary tuner or pressing **HOLD** Δ . Then use the keypad to enter the next frequency, then press **E** on the keypad. (Press **.** to enter the decimal point).
7. If you selected E2-800, E2-900, or E1 in Step 3, stop here.
Otherwise, if you selected E2-HI or E2-UHF in Step 3, follow these steps to enter the band plan (base frequency, spacing frequency, and offset channel) for the system you want to scan.
 - a. Press **DATA**.
 - b. Turn the rotary tuner or repeatedly press **HOLD** Δ or **LIMIT** ∇ until BASE appears. Then press **E**.
 - c. Select the band plan by pressing **A**, **B**, or **C**.
 - d. Use the keypad to enter the base frequency, then press **E** and press **HOLD** Δ .
 - e. Use the keypad to enter the step frequency, then press **E** and press **HOLD** Δ .
 - f. Use the keypad to enter the channel offset, then press **E** and press **HOLD** Δ .
 - g. If the system uses more than one band plan, press **DATA** then repeat Steps c-f.

Programming Fleet Maps

If you programmed a trunk tracking bank and press **SRC**, talk group ID's appear. Since your scanner defaults to monitor Type II systems, most if not all ID's appear as even numbers. However, if you notice an even mix of odd and even talk group ID's, for example 6477, 2560, 6481, 6144, 1167, etc., then you are probably monitoring either a Type I or Hybrid system.

You might also notice that you are missing responses when you hold on an active ID. Unlike Type II systems, Type I/III systems require a fleet map that sets specific fleet-subfleet parameters. It's easy to select a fleet map for your scanner; what isn't always easy is selecting or programming a map that matches your particular area.

There are 16 preset fleet maps listed in the appendix that you can choose, and these are usually a good place to start when setting up a Type I/III trunk tracking bank. If you choose a preset map and still have difficulty following complete conversations, then you'll have to program your own fleet map.

Selecting a Preset Fleet Map

1. If you are still in the programming mode, press **DATA**. Otherwise, select the trunking programming mode and bank you want to change. Then, repeatedly press **HOLD** Δ or **LIMIT** ∇ until E1 appears, then press **E**.
2. Repeatedly press **HOLD** Δ or **LIMIT** ∇ until FLEET appears, then press **E**.
3. Repeatedly press **HOLD** Δ or **LIMIT** ∇ to select the fleet map you want. For example, E1P2.
4. Press **E** then press **SRC**.

The scanner exits the trunking programming mode, acquires the data channel, and begins searching using the preset fleet map you chose.

Note: You will now begin to see Type I Fleet-Subfleet ID's. For example, 100-12,100-9, 000-12, 400-8, etc. See "User Defined Fleet Maps" on Page 55 for more information about Type I ID's.

How do you know if the preset map is correct? You'll have to listen to see if you are following complete conversations. If not, try another preset fleet map.

Programming a Custom Fleet Map

You might want to read "User Defined Fleet Maps" in the Appendix and use the "Motorola Trunking Worksheet" included in the help file included with the free demo software (download at <http://www.uniden.com>) before programming a custom fleet map. "User Defined Fleet Maps" includes a detailed explanation of scanner fleet map programming, as well as a table listing the fleet map size codes.

1. If you are still in the programming mode, press **DATA**. Otherwise, select the trunking programming mode and bank you want to change.
2. Repeatedly press **HOLD** Δ or **LIMIT** ∇ until E1 appears.
3. Press **E**.
4. Repeatedly press **HOLD** Δ or **LIMIT** ∇ until FLEET appears, then press **E**.
5. Repeatedly press **HOLD** Δ or **LIMIT** ∇ to select USR.
6. Press **E**.
7. Enter the size code for the first block by repeatedly pressing **HOLD** Δ or **LIMIT** ∇ until the correct size code appears.
8. Press **E**. The next available block appears.
9. Repeat Steps 7 and 8 until you have selected a size code for each block.
For specifics about each size code, see "Size Code Restrictions" on Page 55.
10. Press **SRC**.

The scanner exits the trunking programming mode, acquires the data channel, and begins searching using the map you've programmed.

Programming Talk Group ID's

Enter the talk group ID for each group you entered:

1. If you are still in the programming mode, press **DATA**. Otherwise, hold **TRUNK** for 2 seconds, then select the bank and system type and press **E**.
2. Repeatedly press **HOLD** Δ or **LIMIT** ∇ until PRO9 ID appears. Then press **E**.
3. Repeatedly press **HOLD** Δ or **LIMIT** ∇ or rotate the dial to select the talkgroup ID channel you want to program.
4. Enter an ID. To enter the dash used in Type I ID's, use the . key.
5. Repeat Steps 3 and 4 for all ID's you want to program.

Programming a Hybrid System

A hybrid system is simply a Type I system with some blocks designated as Type II blocks. To program a Hybrid system, follow the steps listed in "Programming Motorola Systems" on Page 41. However, if you want a block to be Type II, select Size Code S-0.

When you begin searching a trunking bank with a hybrid fleet map, you will see both types of system ID's. That is, Type II ID's usually appear as an even number without a dash; Type I ID's appear as a three or four digit number, followed by a hyphen, followed by a one or two digit number.

Programming EDACS Systems

1. Hold down **TRUNK** for about 2 seconds. The scanner beeps and **BANK**, **TRUNK**, and the bank letters A-J blink.
2. Press a bank key to select the bank where you want to store the frequencies.
3. Select EDACS scanning by turning the rotary tuner or repeatedly pressing **HOLD** Δ or **LIMIT** ∇ to select one of the following EDACS scanning choices:
 - ED-HI (Wideband, 9600 bps)
 - ED-LO (Narrowband, 4800 bps)
 - ED-SCT (SCAT)

Then press **E** on the keypad.

4. If necessary, repeatedly press **HOLD** Δ or **LIMIT** ∇ until PRO9 F appears. Then press **E** on the keypad.
5. To enter the trunking frequencies for LCN1, use the keypad to enter the first frequency, then press **E** on the keypad. (Press . to enter the decimal point).

Note: To clear a mistake while entering a frequency, press . twice then enter the frequency again.

6. For each additional frequency, select the next channel by turning the rotary tuner or pressing **HOLD** Δ . Then use the keypad to enter the next frequency, then press **E** on the keypad. (Press . to enter the decimal point).

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7. If you selected ED-SCT in Step 3, stop here.

Otherwise, if you selected ED-HI or ED-LO in Step 3, follow these steps to enter the talk group ID (agency, fleet, and subfleet) for the system you want to scan.

- a. Press **DATA**.

- b. If necessary, turn the rotary tuner or repeatedly press **HOLD** Δ or **LIMIT** ∇ until PRO9 ID appears. Then press **E** on the keypad.

- c. Turn the rotary tuner or repeatedly press **HOLD** Δ or **LIMIT** ∇ until the talk group ID memory location where you want to store an ID appears.

- d. Use the keypad to enter the agency, fleet, and subfleet, then press **E**. (Press **.** to enter the hyphen).

- e. To enter additional IDs, repeat Steps c-d.

Programming LTR Systems

1. Hold down **TRUNK** for about 2 seconds. The scanner beeps and **BANK**, **TRUNK**, and the bank letters A-J blink.
2. Press a bank key to select the bank where you want to store the frequencies.
3. Select LTR scanning by turning the rotary tuner or repeatedly pressing **HOLD** Δ or **LIMIT** ∇ to select LT. Then press **E** on the keypad.
4. If necessary, repeatedly press **HOLD** Δ or **LIMIT** ∇ until PRO9 F appears. Then press **E** on the keypad.
5. To enter trunking frequencies, use the keypad to enter the first frequency, then press **E** on the keypad. (Press **.** to enter the decimal point).

Note: To clear a mistake while entering a frequency, press **.** twice then enter the frequency again.

6. For each additional frequency, select the next channel by turning the rotary tuner or pressing **HOLD** Δ . Then use the keypad to enter the next frequency, then press **E** on the keypad. (Press **.** to enter the decimal point).
7. Follow these steps to enter the talk group ID (agency, fleet, and subfleet) for the system you want to scan.
 - a. Press **DATA**.
 - b. If necessary, turn the rotary tuner or repeatedly press **HOLD** Δ or **LIMIT** ∇ until PRO9 ID appears. Then press **E** on the keypad.
 - c. Turn the rotary tuner or repeatedly press **HOLD** Δ or **LIMIT** ∇ until the talk group ID memory location where you want to store an ID appears.
 - d. Use the keypad to enter the agency, fleet, and subfleet, then press **E**. (Press **.** to enter the hyphen).
 - e. To enter additional IDs, repeat Steps c-d.

Care and Maintenance

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. The display shows 000.0000 in all channels when there has been a memory loss.
- Always press each button firmly until you hear the entry tone for that key entry.

Location

- 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.
- If the scanner receives strong interference or electrical noise, move it or its antenna away from the source of the noise. If possible, a higher elevation might provide better reception.
- Also try changing the height or angle of the antenna.

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 user serviceable parts. Contact the Uniden Customer Service Center or take it to a qualified repair technician.

Birdies

All radios can receive “birdies” (undesired signals). If your scanner stops during Scan mode and no sound is heard, it might be receiving a birdie. Birdies are internally generated signals inherent in the electronics of the receiver.

Press **L/O** to lock out the channel, then press **SCAN** to resume scanning.

Troubleshooting

If your BC898T is not performing properly, try the following steps.

Problem	Possible Cause	Suggestion
The scanner doesn't work.	The scanner might not be receiving any power.	Make sure the AC adapter is connected to an AC outlet and the scanner.
		If there is a wall switch that controls power to the AC outlet where you connected the AC adapter, make sure it is on.
Improper reception.	The scanner's antenna might need to be adjusted.	Check the antenna connection or move or reposition the antenna.
		Move the scanner.
		You might be in a remote area that could require an optional multi-band antenna. Check with your dealer or local electronics store.
Scan won't stop.	The squelch might need to be adjusted.	Adjust the squelch threshold. See "Setting the Squelch" on Page 20.
	The antenna might need to be adjusted.	Check the antenna connection.
	One or more channels might be locked out.	Make sure the channels you want to scan are not locked out.
	The channel's frequency might not be stored in memory.	Make sure the channel's frequency is stored in the scanner's memory.
	The channel might not be active.	Wait for a transmission on the channel.
Scan won't start.	You must press SCAN to scan.	Press SCAN .
	The squelch might need to be adjusted.	Adjust the squelch threshold. See "Setting the Squelch" on Page 20.
	One or more channels might be locked out.	Make sure the channels you want to scan are not locked out.

Scan won't start. <i>(continued)</i>	The antenna might need to be adjusted.	Check the antenna connection.
Weather scan doesn't work.	The squelch might need to be adjusted.	Adjust the squelch threshold. See "Setting the Squelch" on Page 20.
	The antenna might need to be adjusted.	Check the antenna connection.

If you experience difficulty while in TrunkTracker™ mode, try the following steps.

Problem	Possible Cause	Suggestion
Scanner won't track a trunked system.	The system might not be one your scanner can scan.	Scan another system.
	The data frequency might be missing.	Enter the data frequency.
	The scanner might need to be changed to a Type 1 scanner setup.	Change to a Type 1 scanner setup. Review "Programming Motorola Systems" on Page 41.
	The system you are trying to scan might be LTR or EDACS.	Set the scanner to scan LTR or EDACS systems. Review "Programming EDACS Systems" on Page 44 and "Programming LTR Systems" on Page 45.
Scanner won't stop scanning during Scan List mode.	No ID's have been programmed.	Program one or more ID's.
	The ID's you have stored are not active.	Wait for the ID's to become active or scan another system.
Scanner won't acquire the data channel.	The squelch might need to be adjusted.	Adjust the squelch threshold. See "Setting the Squelch" on Page 20.
	The frequency used for the data channel might be missing.	Check your frequency list for the data channel.
Missing replies to conversations.	The scanner might need to be changed to a Type 1 scanner setup.	Change to a Type 1 scanner setup. Review "Programming Motorola Systems" on Page 41.
	The fleet map might be incorrect.	Try another preset fleet map or program your own fleet map.

Missing replies to conversations. (continued)	One or more of the system's frequencies might not be entered.	Make sure all the system's frequencies have been entered.
	If the scanner is set to scan an EDACS system, the EDACS channels might not be in LCN (logical channel number) order.	Make sure the EDACS channels are programmed in LCN order. Review "Programming EDACS Systems" on Page 44.
	The system you are trying to scan might be LTR or EDACS.	Set the scanner to scan LTR or EDACS systems. Review "Programming EDACS Systems" on Page 44 and "Programming LTR Systems" on Page 45.

If you still cannot get satisfactory results while using your scanner or if you want additional information, 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. If you would like immediate assistance, please call Customer Service at (800) 297-1023.

If you have Internet access, you can visit <http://www.uniden.com> for additional information.

Specifications

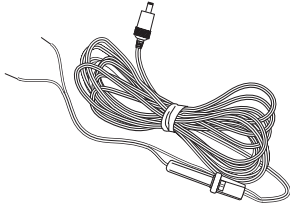
Certified in accordance with FCC Rules and Regulations Part 15, Subpart C, as of date of manufacture.

Channels:	500
Banks:	10 (50 channels each)
Frequency Range:	25.0-27.995 MHz Citizens Band/ Business Band 28.0–29.995 MHz 10 Meter Amateur Band 30.0–49.995 MHz VHF Low Band 50.0–54.0 MHz 6 Meter Amateur Band 137.0–143.995 MHz Military Land Mobile 144.0–147.995 MHz 2 Meter Amateur Band 148.0–161.995 MHz VHF High Band Above bands in 5 kHz steps 108.0–136.9875 MHz Aircraft Band 162.0–174.0 MHz VHF High Band 216.0-224.9875 MHz VHF High Band 225.0–399.9875 MHz UHF Air Band 400.0–419.9875 MHz Federal Land Mobile 420.0–449.9875 MHz 70 cm Amateur Band 450.0–469.9875 MHz UHF Standard Band 470.0–512.0 MHz UHF “TV” Band 806.0–823.9875 MHz “800” Band 849.0125-868.9875 MHz “800” Band 894.0125-956.0 MHz “800” Band Above bands in 12.5 kHz steps
Operating Temperature:	–20°C to +60°C
Scan Rate:	100 channels per second (conventional mode)
Search Rate:	300 steps per second (5 kHz step only)
Scan Delay:	2 seconds
Audio Output:	2W nominal into 8 ohm internal speaker
Power Requirements:	12 VDC 500mA (AD140U AC adapter)
Antenna:	50 ohms (Impedance)
External Jacks:	Antenna Jack BNC Type Ext. Speaker Jack 3.5mm Line Out Jack 3.5mm DC Power Jack 5.5mm Remote Jack D-sub9 Pins
Size:	10 ¹ / ₂ in. (W) x 7 ³ / ₈ in. (D) x 3 ¹ / ₂ in. (H)
Weight:	3.8 lbs

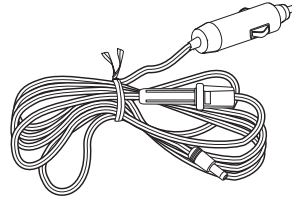
Features, specifications, and availability of optional accessories are all subject to change without notice.

Optional Accessories

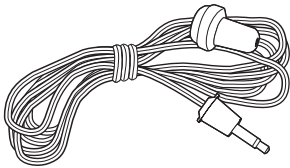
Contact your local Uniden Dealer or call the Uniden Parts Center at: (800)554-3988, 8:00AM to 5:00PM EST, Monday through Friday, for information about ordering these optional accessories.



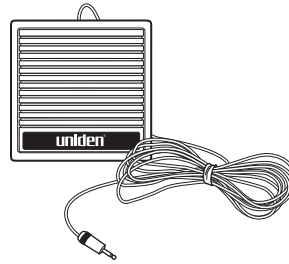
DC Power Cord



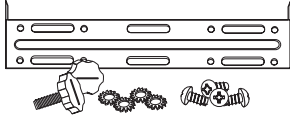
Cigarette Lighter Power Cord



Earphone



External Speaker



Mobile Mounting Bracket
with Hardware (MB001)



Betty Bearcat Frequency Directory/
Local Directories



PC Software (BC898T SS)
Available by download.

Appendix

Preset Fleet Maps

Preset Map 1

Block	Size Code
0	Size Code 11
1	Size Code 11
2	Size Code 11
3	Size Code 11
4	Size Code 11
5	Size Code 11
6	Size Code 11
7	Size Code 11

Preset Map 2

Block	Size Code
0	Size Code 4
1	Size Code 4
2	Size Code 4
3	Size Code 4
4	Size Code 4
5	Size Code 4
6	Size Code 4
7	Size Code 4

Preset Map 3

Block	Size Code
0	Size Code 4
1	Size Code 4
2	Size Code 4
3	Size Code 4
4	Size Code 4
5	Size Code 4
6	Size Code 12
7	(Size Code 12)

Preset Map 4

Block	Size Code
0	Size Code 12
1	(Size Code 12)
2	Size Code 4
3	Size Code 4
4	Size Code 4
5	Size Code 4
6	Size Code 4
7	Size Code 4

Preset Map 5

Block	Size Code
0	Size Code 4
1	Size Code 4
2	Size Code 12
3	(Size Code 12)
4	Size Code 4
5	Size Code 4
6	Size Code 4
7	Size Code 4

Preset Map 6

Block	Size Code
0	Size Code 3
1	Size Code 10
2	Size Code 4
3	Size Code 4
4	Size Code 12
5	(Size Code 12)
6	Size Code 12
7	(Size Code 12)

Preset Map 7

Block	Size Code
0	Size Code 10
1	Size Code 10
2	Size Code 11
3	Size Code 4
4	Size Code 4
5	Size Code 4
6	Size Code 4
7	Size Code 4

Preset Map 8

Block	Size Code
0	Size Code 1
1	Size Code 1
2	Size Code 2
3	Size Code 2
4	Size Code 3
5	Size Code 3
6	Size Code 4
7	Size Code 4

Preset Map 9

Block	Size Code
0	Size Code 4
1	Size Code 4
2	Size Code 0
3	Size Code 0
4	Size Code 0
5	Size Code 0
6	Size Code 0
7	Size Code 0

Preset Map 11

Block	Size Code
0	Size Code 4
1	Size Code 0
2	Size Code 0
3	Size Code 0
4	Size Code 0
5	Size Code 0
6	Size Code 0
7	Size Code 0

Preset Map 13

Block	Size Code
0	Size Code 3
1	Size Code 3
2	Size Code 11
3	Size Code 4
4	Size Code 4
5	Size Code 0
6	Size Code 0
7	Size Code 0

Preset Map 15

Block	Size Code
0	Size Code 4
1	Size Code 4
2	Size Code 4
3	Size Code 11
4	Size Code 11
5	Size Code 0
6	Size Code 12
7	(Size Code 12)

Preset Map 10

Block	Size Code
0	Size Code 0
1	Size Code 0
2	Size Code 0
3	Size Code 0
4	Size Code 0
5	Size Code 0
6	Size Code 4
7	Size Code 4

Preset Map 12

Block	Size Code
0	Size Code 0
1	Size Code 0
2	Size Code 0
3	Size Code 0
4	Size Code 0
5	Size Code 0
6	Size Code 0
7	Size Code 4

Preset Map 14

Block	Size Code
0	Size Code 4
1	Size Code 3
2	Size Code 10
3	Size Code 4
4	Size Code 4
5	Size Code 4
6	Size Code 12
7	(Size Code 12)

Preset Map 16

Block	Size Code
0	Size Code 3
1	Size Code 10
2	Size Code 10
3	Size Code 11
4	Size Code 0
5	Size Code 0
6	Size Code 12
7	(Size Code 12)

User Defined Fleet Maps

Type I Programming Information

When a Type I system is designed, the address information for all the ID's is divided into 8 equal sized blocks, numbered 0–7. When you program your scanner to track a Type I system, you must select a size code for each of these blocks. When you have assigned a size code to all 8 blocks, you'll have defined the fleet map for the system you are tracking. Each size code determines the number of fleets, subfleets, and ID's each block will have. For example, a size code of S-4 has one fleet, which is divided into 16 separate subfleets, and it has a total of 512 individual ID's.

When a block is assigned a size code, the fleet or fleets created within the block are assigned a Type I ID. The way these ID's display on your scanner depend on the block number and the block's size code. When a Type I ID appears, the leftmost digit represents the block which contains the ID.

The next two digits identify which fleet is active, and the last digit(s) identifies the subfleet.

The details concerning how the size codes are selected by a Type I System designer are highly dependent on the specific needs of the system's users. Some organizations might want many subfleets with only a few radios each, while another organization might want only a few subfleets with many radios each. Your task is to program your fleet map with the same size code assignments as the trunked system. If you do this accurately, you'll track all the Fleet-Subfleet combinations used by the system. In other words, you'll hear complete communications while monitoring a trunked system.

If you don't already know the size codes used, you'll have to guess at them. But since you don't have to figure out all the blocks at once, this isn't as hard as it seems. Select a size code for a block, and then press **SCAN**. Now listen to the communications. If you decide you are receiving most of the replies to the conversations with ID's assigned to the block you just programmed, then you've probably selected the right size code and can work on the next block of the map.

Finally, for most public safety systems there are some size codes which are more common. S-3 and S-4 are probably the most common, followed by S-10, S-11, and S-12.

Size Code Restrictions

If you select size code S-12, S-13, or S-14, there are some restrictions as to which blocks can be used for these codes.

S-12 can only be assigned to Blocks 0, 2, 4, or 6.

S-13 can only be assigned to Blocks 0 and 4.

S-14 can only be assigned to Block 0.

Since these size codes require multiple blocks, you will be prompted for the next available block when programming a fleet map. For example, if you assign Block 0 as an S-12, you will be prompted for b2, the next block available, instead of b1. And if you assign Block 0 as an S-14, you would not see another prompt because it uses all available blocks.

One Year Limited Warranty

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Uniden America Corporation
Parts and Service Division
4700 Amon Carter Boulevard
Fort Worth, TX 76155
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5,471,660	5,483,684	5,530,296	5,548,832	5,551,071	5,574,995
5,577,076	5,598,430	5,600,223	5,642,424	5,710,992	5,859,875
5,896,422	5,991,346	5,991,603	6,012,158	6,025,758	6,034,573
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