Digital Scanner

BC250D

Owner's Manual(Draft)

Contents

Introduction

The BC250D is a state-of-the-art Digital Capable radio with TrunkTracking™ and automatic scanning capabilities. It can store frequencies such as police, fire/emergency, marine, railroad, air, amateur, and other communications into 10 banks of 100 channels, or a total of 1000 channels.

With the optional BCi25D, 25 Digital Card installed you can monitor Public Safety Organizations who currently use an APCO 25 system.

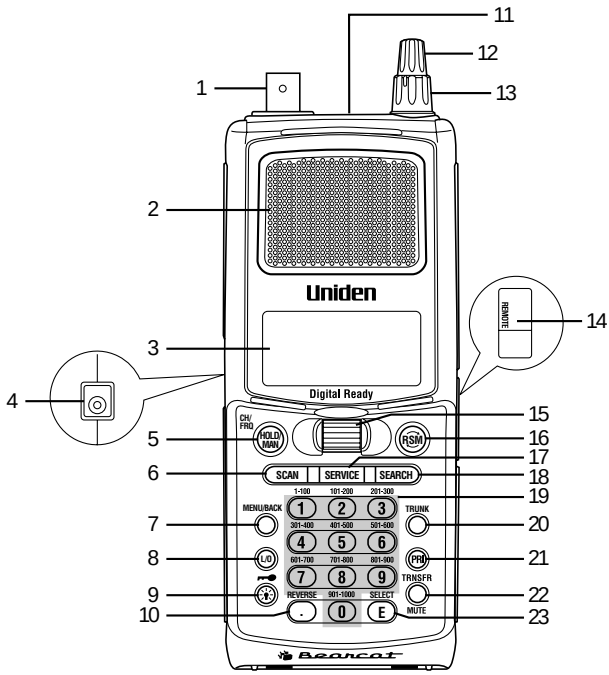
Use your new scanner to monitor:

- Police and Fire Departments (including rescue and paramedics)
- VHF High Band, UHF, 800/Type II 900 MHz Trunked Public Safety Systems
- Trunking for Motorola Type, EDACS and LTR Systems
- NOAA Weather Broadcasts
- Business/Industrial Radio
- Utilities
- Marine and Amateur (ham radio) Bands
- Air Band
- And much more...

The chart below identifies the scanner band numbers, the frequency range, the modulation mode and the default step size settings.

Band No.	Frequency Range (MHz)	Mode	Step (kHz)	Band No.	Frequency Range (MHz)	Mode	Step (kHz)
1	25.0000 - 26.9600	AM	5	15	162.0000 - 173.9875	FM	12.5
2	26.9650 - 27.4050	AM	5	16	174.0000 - 215.9500	WFM	50
3	27.4100 - 27.9950	AM	5	17	216.0000 - 224.9950	FM	5
4	28.0000 - 29.6900	FM	10	18	225.0000 - 399.9500	AM	50
5	29.7000 - 49.9900	FM	10	19	400.0000 - 405.9875	NFM	12.5
6	50.0000 - 53.9900	FM	10	20	406.0000 - 419.9875	NFM	12.5
7	54.0000 - 71.9500	WFM	50	21	420.0000 - 449.9875	NFM	12.5
8	72.0000 - 75.9950	FM	5	22	450.0000 - 469.9875	NFM	12.5
9	76.0000 - 87.9500	WFM	50	23	470.0000 - 512.0000	NFM	12.5
10	88.0000 - 107.9000	WFM	100	24	806.0000 - 823.9875	NFM	12.5
11	108.0000 - 136.9750	AM	25	25	849.0125 - 868.9875	NFM	12.5
12	137.0000 - 143.9950	FM	5	26	894.0125 - 956.0000	NFM	12.5
13	144.0000 - 147.9950	FM	5	27	1240.0000 - 1300.0000	NFM	12.5
14	148.0000 - 161.9950	FM	5				

Front View



1. Antenna Connector
2. Speaker
3. Display
4. DC Power Jack
5. Hold/Manual/Channel/Frequency Key (**HOLD/MAN**)
6. Scan Key (**SCAN**)
7. Menu/Back Key (**MENU/BACK**)
8. Lockout Key (**L/O**)
9. Light/Keypad Lock Key **(** ☼ **/** 🔑)
10. Decimal/Reverse Key (⬭)
11. Earphone Jack
12. Volume/Switch Control
13. Squelch Level Control
14. Remote Jack
15. VFO Control
16. Resume Key (RSM)
17. Service Key (**SERVICE**)
18. Search Key (**SEARCH**)
19. Numeric Keypad
20. Trunk Key (**TRUNK**)
21. Priority Key (**PRI**)
22. Transfer/Mute Key (**TRNSFR/MUTE**)
23. Enter/Select Key (**E**)

Top View and Icon Display

ICON	DESCRIPTION
P	Priority Channel Indicator
C	Conventional/Channel Mode Indicator
L/O	Lock Out Mode Indicator
	Scan/Search Direction Indicator
SRCH	Chain Search Mode Indicator
SRVC	Service Search Mode Indicator
SCAN	Scan Mode Indicator
ID SCAN	ID Scan Mode Indicator
ID SEARCH	ID Search Mode Indicator
M,L E ENC	Trunk Type M: Morola Tracking Mode L: LTR Tracking Mode E: EDACS Tracking Mode ENC: EDACS SCAT Tracking Mode
AM,FM WFM,NFM	Receiving Mode Indicators
	Signal Meter
	Battery Indicator

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TrunkTracker is a proprietary trademark of Uniden America Corporation.

BC250D SHORTCUTS

To reduce the amount of information that is shown on the display, set up "Screen Mask".
Press MENU/BACK + 3 + 2 + 1.

To silence the keypad from sounding acknowledgement tones after each press, turn off the "Key Beep".
Press MENU/BACK + 3 + 3 + 2.

To increase the backlight of the display, set "Dimmer" to HIGH.
Press MENU/BACK + 3 + 1 + 1 + 1.

To decrease the backlight of the display, set "Dimmer" to MEDIUM.
Press MENU/BACK + 3 + 1 + 1 + 2.

To prevent accidental reprogramming of frequencies or talkgroups, lock out the keypad.
Press MENU/BACK + 3 + 4 + 1.

To assign an alphanumeric text tag to a bank, choose the bank number;
(for example; bank number 1)
Press MENU/BACK + 3 + 9 + 1
then by rotating the VFO control to enter the text and using **RSM** or **HOLD/MAN** to move cursor.
After the text is entered, press E.

To replace frequencies on a channel that had been already set;

(for example; replace the frequency on channel 5 to 155.000)
Press SCAN + HOLD/MAN + 5 + HOLD/MAN + 1 + 5 + 5 + · + E.

To receive an alert for activity on specific IDs while trunk tracking, turn on "Beep Alert" for that ID.
Press MENU/BACK + 2 + 2 + *select bank* + E + 3 + *select ID MEMORY* + E + 1 + *enter ID No.* + E + 3 + 1.

To receive an alert for activity on specific channel, turn on "Beep Alert" for that channel.
Press MENU/BACK + 2 + 1 + *select channel* + E + 4 + 1.

***This shortcut card is designed to assist you in getting through the menu screens using the direct entry mode for commonly used features. Please read the manual thoroughly before using this card. Be sure to back out of the menu screen after each shortcut by repeatedly pressing* MENU/BACK.**

BC250D SHORTCUTS

To automatically store frequencies while searching, turn on "Auto Store" after setting up search range.

Press MENU/BACK + 1 + CHAIN SERCH + 6 + 1 + select bank + SEARCH.

To set up a system for trunk tracking, select a bank, then enter trunk type

Press MENU/BACK + 2 + 2 + select bank + E + 1.

Then enter the trunk type you want to track.

To search a specific range of frequencies, set up the "Edit Range".

Press MENU/BACK + 1 + select CHAIN SEARCH + E + 2 + select range + 1 + E.

Then enter the lower and upper ranges and press SEARCH.

To change the alpha tag on the specific range of frequencies that you set, do the following:

Press MENU/BACK + 1 + CHAIN SERCH + 2 + select range + E + 1.

Then enter the lower and upper ranges and press 4. Rotate the **VFO** control to enter the tag and use RSM or HOLD/MAN to move cursor and then press E.

To attenuate a specific channel that you set, do the following:

Press MENU/BACK + 2 + 1 + select channel + E + 5 + 1.

To change the alpha tag on a specific channel, do the following:

Press MENU/BACK + 2 + 1 + select channel + E + 1 + E.

Rotate the **VFO** control to enter the tag and use **RSM** or **HOLD/MAN** to move cursor and then press E.

To silence the scanner's audio output, set the scanner to "Mute On".

Press and hold MUTE.

To record either of channel, bank, ID memory and search bank.
In each mode, do the following:

Press MUTE + 3 + 5 + select speed

*If you need any assistance with this product, please call our Customer Service Hotline at **1-800-297-1023**. A Uniden representative will be happy to help you with any matters regarding the operation of this unit, available accessories, or any other related matters.*
Hours: M-F 8:00 a.m. to 5:00 p.m., Central time.

*Also please check out our website at **scanner.uniden.com***

Important Notice

- This scanning radio has been manufactured so that it will not tune 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. These violations could void your authority to operate this product.
- The screen displays used in this manual are representations of what might appear when you use your scanner.

Terminology

What is Scanning?

Unlike standard AM or FM radio stations, most two-way communications do not transmit continuously. The BC250D scans the channels you program until it finds an active frequency.

Scanning stops on an active frequency and remains on that channel as long as the transmission continues. When the transmission ends, the scanning cycle resumes until another transmission is received.

What is Searching?

The BC250D can search each of its 17 bands to find active frequencies. This is different from scanning because you are searching for frequencies that have not been programmed into your scanner. The scanner automatically chooses between two speeds while searching.
Turbo Search, can search the VHF FM bands at up to 300 steps per second.

What is Trunk Tracking?

Conventional scanning is a simple concept. You enter a radio frequency in your scanner's memory which is used by someone you want to monitor. For example, the police in your area may broadcast 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.

As the demand for public communications has increased, many public radio users don't have enough frequencies to meet their needs, and this has created a serious problem. Trunking radio systems solve this problem.

In a trunked radio system, which contains up to 28 different frequencies, radio users are divided into groups, often called talkgroups, and these talkgroups are assigned specific IDs. When someone in a talkgroup uses their radio, a brief burst of data is broadcasted before each transmission. The trunking system computer uses this data to temporarily assign each radio in a talkgroup to an available frequency. If the group using a frequency stops broadcasting or pauses between

replies for a few seconds, they are removed from the frequency so another talkgroup can use it.

Sharing of the available public service frequencies, or trunking, allows cities, counties, or other agencies to accommodate hundreds of users with relatively few frequencies. Following a conversation on a trunked system using a scanner is difficult, if not impossible. Because when there's a short break during the conversation you're monitoring, it's possible that the talkgroup will be assigned to a completely different frequency in the trunked system. This type of scanning is difficult and frustrating.

TrunkTrack changes this! Not only does your new BC250D scan channels like a conventional scanner, it actually follows the users of a trunked radio system. Once you know a talkgroups ID, you won't miss any of the action.

If you're a new scanner enthusiast, you may 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 its terminology will make trunk tracking much easier. A glossary of other commonly used terms is provided in the back. (Refer to the "Glossary of Terms" section.) But if you're already an experienced scanner operator, you may want to skip to Trunked System on page 50.

What is APCO Project 25 Digital Communications?

APCO Project 25 is a modulation process where Voice communications are converted into digital communications. This conversion is similar to the technology used with digital mobile phones. There are several types of project 25 systems available!

- Conventional – One frequency with digital voice.
- Trunked with analog control channel and digital voice – many frequencies shared by many departments and the control channel is analog with digital voice. Control channel operates at 3600 Band.

Feature Highlights

- **Trunk Tracking** – Follow UHF High Band UHF 800/900MHz trunked public safety and public service systems just as if conventional two-way communications were used.
- **Digital Capable** – With the APCO 25 Digital card (BCi25D) installed, you can monitor project 25 systems.
- **Multi-Track** – Track more than one trunking system at a time. Scan conventional and trunked systems at the same time.
- **1000 Channels** – Program one frequency into each channel. You must have at least one channel programmed to use the Scan mode.
- **17 Bands, 10 Banks** – Includes 17 bands, with Aircraft and 800 MHz.10 banks with 100 channels each are useful for storing similar frequencies to maintain faster scanning cycles or for storing all the frequencies of a trunked system.
- **25 MHz-1300 MHz** – Indicates the range of frequencies that can be searched within the bands of your scanner.

  Note: The frequency coverage is not continuous and excludes the cellular band, 512-806MHz.
- **10 Priority Channels** – You can assign one priority channel in each bank. Assigning a priority channel allows you to keep track of activity on your most important channel(s) while monitoring other channels for transmissions. You can also assign trunking priority talkgroups.
- **Priority Plus Scan** – You can keep only priority channels you assigned in the selected bank.
- **Preprogrammed Service (SVC) Search** – Allows you to toggle through preprogrammed public safety, news media, TV broadcast audio, Ham, CB, FRS, special low power, railroad, aircraft, marine, racing, and weather frequencies.
- **Unique Data Skip** – Allows your scanner to skip unwanted data transmissions and reduces birdies.
- **Memory Backup** – If power is disconnected, the frequencies programmed in your scanner are retained in memory.
- **Direct Channel Access** – Go directly to any channel without entering the menu mode.
- **Attenuator** – Reduces the signal strength on a per frequency basis.

- **PC Programmable** – Allows you to easily program all frequencies and Trunking Talk Groups into your BC250D through third party software running on your PC.
- **Turbo Search** – Increases the search speed to 300 steps per second. This applies only to transmission bands with 5 kHz steps.
- **Text Tags** – You can customize your scanner by storing text tags (up to 16 characters).
- **Auto Store** – The scanner automatically arranges a memory store for searched frequencies.
- **CTCSS/DCS** – The scanner can receive and search for subaudible tones.
- **NWR-SAME Alert** – The scanner is compatible with warning siren and message transmissions.
- **FIPS Code** – Six digit FIPS Code (emergency and geographic area code) programmable.
- **LCD Back-Light** – LCD lights when you press the **Light** key. You can select the lighting length of time in the menu mode.
- **Battery Save** – In Scan hold mode and no transmission, your Scanner automatically reduces its power requirements to extend the battery life

Where to Obtain More Information

Before using your scanner, you must program frequencies into available channels. The Betty Bearcat Frequency Guide lists typical frequencies used around the U.S.A. and Canada that you may program into your new scanner.

To obtain another copy of the frequency guide, contact one of the following:

- Uniden Parts Department
  (800) 554-3988 (Hours are from 7:00 a.m. to 5:00 p.m. Central Time Monday through Friday.)
- Local Dealer

  To obtain additional frequency information for your area, contact one of the following:
- Bearcat Frequency Hotline
  (937) 299-0414 (Hours are from 9:00 a.m. to 5:00 p.m. Eastern Time Monday through Friday.)
- Bearcat Radio Club
  (800) 423-1331 (Hours are from 8:00 a.m. to 5:00 p.m. Eastern Time Monday through Friday.)
- Scanner Master
  (800) 722-6701 (Hours are from 10:00 a.m. to 5:00 p.m. Eastern Time Monday through Friday.)

Information on the Internet

If you have access to the internet, you may want to visit one of the following websites for additional information:

scanner.uniden.com
www.bearcat1.com

Included with Your Scanner Package

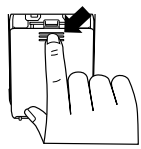
If any of these items are missing or damaged, immediately contact your place of purchase or Uniden Customer Service at: (800) 297-1023, 8:00 a.m. to 5:00 p.m., Central Time, Monday through Friday.

- AC Adapter (AD-600U)
- Ni-MH Battery
- Rubber Antenna
- Remote Cable
- Beltclip
- Operating Guide
- Trunk Tracker Frequency Guide and Other Printed Material

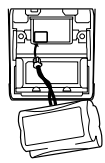
Setup

Installing the Battery Pack

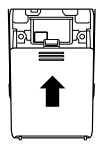
1. Open the cover.



2. Insert the battery pack connector with the correct polarity.

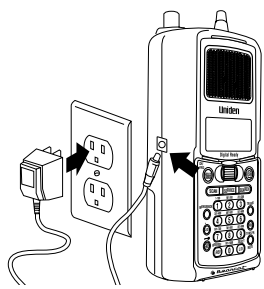


3. Replace the cover and press down until it clicks into place.



Charging the Battery Pack

Use the AC Adapter/Charger to power the BC250D from an AC outlet.



Use only the supplied AC Adapter

You can use your scanner while the battery charges. To fully charge the battery, leave the AC Adapter/Charger connected for 14 — 16 hours.

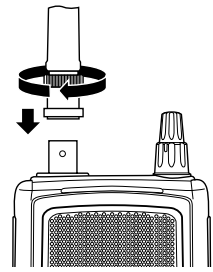
Note: Disconnect the AC Adapter/Charger from the unit when charging is complete.

Low Battery Indicator

When the Battery Pack is low and needs to be charged, icon appears on the display. You will also hear a beep every 15 seconds as an audible alert.

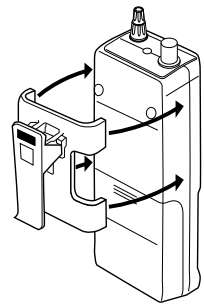
Flexible Antenna

Attach the flexible antenna to the BNC connector.



Beltclip

1. Snap the tab out of the beltclip notch on the back side of the scanner.
2. Slide the clip into the tab slot. The beltclip is designed to fit snugly into the scanner, as shown on the right.



Listening Safely

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

- **Do not use the earphone to listen to the WX alert siren test. The 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 the **VOLUME** to the lowest setting before you begin listening. After you begin listening, adjust the **VOLUME** to a comfortable level.
- Once you set the **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.

Connecting the REMOTE Cable

You can transfer the programmed data to and from another BC250D or BC785D scanner using an remote cable. See "Clone Mode" on page 79. You can also upload or download the programmed data to or from a PC using third party software. See "PC control MODE" on page 78.

Basic Operation

Note: See the Controls and Indicators on page 2 while reading this guide.

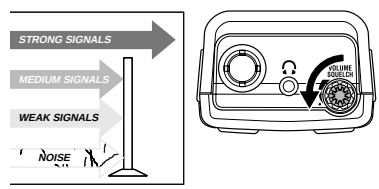
Turn the Scanner On

Turn the **VOLUME** inside control clockwise out of the detent position. The scanner automatically starts scanning. Since there are no frequencies programmed in your scanner initially, you may not receive any signals. Once you set the squelch and program some frequencies, you will be hearing conversations regularly.

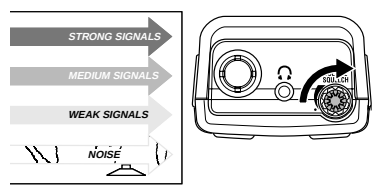
Setting the Squelch

To set the squelch, you must be in the hold mode, and you should not be receiving a signal on your scanner.

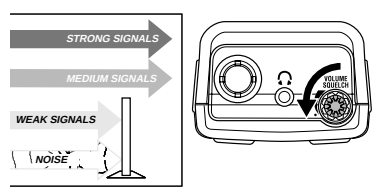
1. Press **HOLD/MAN** until you do not hear a signal.
2. Make sure that the **VOLUME** is set to a comfortable listening level.
3. Think of the Squelch Control as a gate. Turn **SQUELCH** outside control fully counter-clockwise. This raises the "Squelch Gate" so high that only very strong signals can get through.



4. Turn **SQUELCH** fully clockwise until you hear a hiss. This lowers the "Squelch Gate" so that everything gets through – noise, weak signals, medium signals and strong signals.



5. Turn **SQUELCH** back counter-clockwise just until the hiss stops. Now the "Squelch Gate" allows only clear signals through.



Next you must program some frequencies (Page 26). It is recommended that you read the next part "Understanding the Menu System" because it will assist you in accessing and understanding many of the features. Later in a section called "Additional Features", you will find explanations on how to disable the keypad acknowledgement tones, how to mute the audio, how to change the appearance of the display and other general features.

Understanding the Menu System

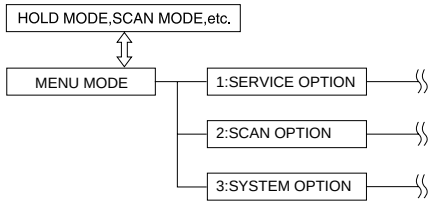
It is very important for you to understand the Menu screen. To navigate through the Menu screen is really quite simple. Many of the features of this scanner, can only be accessed by the menu screens. There are several ways to get through the screens. First of all, press **MENU/BACK** to get started. Any time you want to exit this mode or simply quit from where you are, repeatedly press **MENU/BACK** until the scanner returns to the original state. Anytime you are in the Menu mode, the audio will be muted.

To assist you in understanding the Menu screen, flow charts are provided towards the back of the manual so you can follow along. Two things to remember are *rotate the* through the menu and *execute* the command. For simplicity, we have chosen to rotate the **VFO** key up or down in order to *scroll* through the menu and the **E** key for *entering* or *executing* a command. Once you have pressed the **E** key and executed the final choice (for instance, ON or OFF), the display backs up to the previous level of options.

Also direct entry of the numbers in the flow chart will get you through the screens, but the other screen options are not visible. This method should be used only after you have gone through the manual at least once. A tearout shortcut card (see page 4) is provided to assist you in the direct entry method for commonly used features.

Next page is the first level of the Menu screen. These levels are then expanded from 100 to 102 page of the manual. You will find a description section to explain the meanings of these functions on the next pages. Then, you will be walked through all the steps of programming, scanning, searching, and trunktracking.

☞**Hint**: You can check the options you programmed on the display when you press and hold **MENU/BACK** for 2 seconds in the following modes.
- Scan mode/Scan hold mode (as well as Trank mode).
- Chain Search mode/Chain Search hold mode
- ID Search mode/ID Search hold mode



Menu Description and Numeric Keypad Equivalents

Below are the menu screens and a brief description or purpose of the feature.

1:SERVICE OPTION

The followings are Service Search and Chain Search features. Service Search menu are preprogrammed services used around the U.S.

1:WEATHER

1:MONITOR
When you select this mode, the preprogrammed NOAA weather channel begins to activate.

2:ALERT
You can set NWR-SAME weather alert to ON or OFF. With ALERT ON you enter the mode to program your FIPS code.

2:PUBLIC SAFETY

3:NEWS

4:TV BROADCAST

5:HAM RADIO

6:MARINE

7:RAILROAD

8:AIR

9:CB RADIO

0:FRS

:RACING

:SPECIAL

:CHAIN SEARCH

You can program up to 10 search ranges. The first time you program a range you will need to do so through the Menu. After the first time you can program a range as you do on most any other scanner, using the numeric keypad.
Use this Menu item to select the search range that

you want to program. You can program range 1 through 10, one at a time. For each of the ranges, the following options can be modified.

1:CHAIN SEARCH
When you turn chain search setting to ON, you can use chain search.

2:SEARCH RANGE

1:RANGE
Enter the upper and lower frequency limits of the SEARCH range.

2:STEPS
You can assign a variety of step sizes to the search range.
Note: The default step is usually acceptable and is listed on page 1.

3:MODE
You can change the default receive mode with this menu item.

4:ALPHA TAG
You can enter an alpha tag for any or all of the search ranges.

5:TRUNK
During chain search mode, when the scanner finds any active frequency, trunking system will be active. 4 frequency plans apply to the Control Channel Only feature (For details on page 73).

3:DELAY
Set the delay for the search ranges to ON or OFF. This applies to each range for chain search mode, and each service group for service search mode (See SCAN OPTION-CONVENTIONAL-DELAY for details).

4:ATTENUATOR
Set attenuation for all search ranges. (See SCAN OPTION-CONVENTIONAL-ATTENUATOR for details).

5:TONE DATA
The default mode is OFF. This means that you will receive all transmissions on any frequencies that are active within your search range(s). By selecting CTCSS or DCS you can set the radio to receive only a particular subaudible tone to be received during your

search. You can also lockout a particular CTCSS or DCS tone.
You may wish to do this if you want to search a range but not hear transmissions on any frequency that has a particular subaudible tone.

Note: Through the System Menu you can set the radio to operate in Tone Search mode during Search as well. In this mode, the radio will automatically determine the active subaudible tone on any frequency received during the search.

6:AUTO STORE

You can automatically store active frequencies found during a search into the memory.
You can select which bank you want to program the found frequencies. Note that the audio will be muted during Auto Store.

2:SCAN OPTION

1:CONVENTIONAL

Choose the channel number. The following options are available for the selected channel only. Repeat using a different channel number, if necessary.

1:FREQUENCY.

Allows you to edit or enter a frequency in each channel you select.
Also you can set an alphanumeric text tag for each programmed frequency.

2:DELAY

The delay for all programmed channels is 2 seconds. At the end of any transmission the scanner will remain on the frequency for 2 seconds before resuming scanning. This will allow you to catch most replies.

3:TONE DATA

You can set a CTCSS (analog) or DCS (digital) sub-audible tone for a frequency. To do so you must have the SQ Mode in the System Menu set to Tone SQ. You can also program a subaudible tone easily by pressing the **E** key in scan hold mode after programming a frequency. This will bring up the Tone Data menu without your having to navigate the Menu. By doing this you will

receive all transmissions on the frequency, regardless of the subaudible tone, except the one which you have locked.
Any transmissions with that tone will not be received.

4:BEEP ALERT

You can set a Beep Alert on a per-channel basis to alert you when specific frequencies are active. For example, you may wish to be alerted anytime a mutual aid fire frequency is active. With beep alert, you will hear three beeps at the start of each transmission that you have flagged as such. You will also notice that as you scroll pass the flagged channel(s), you will hear three beeps.

5:ATTENUATOR

The BC250D comes with an RF Attenuation feature. If you are near an unusually strong signal source, the signal may overload the scanner. The scanner may stop repeatedly on that signal and miss other transmissions. The RF Attenuation feature works in all modes and attenuates (reduces) the incoming signal strength to prevent stronger signals from overloading the scanner.

6:STEPS

Your BC250D is programmed with default step sizes for each frequency range (see page 1). Steps are important if you are interested in using the **VFO** to tune off-frequency from a frequency programmed into memory or if you wish to program a frequency that the default step size will not accept.
For example, in VHF Hi-band mode, the default step size between 148 and 162 MHz is 5 KHz. However, the FCC has recently instituted 7.5 KHz channel intervals. If you wish to enter 155.4075 into the scanner without changing the default step, the scanner will change the programmed frequency to 155.4100. Use the menu to change the default step size to 7.5 KHz and then you will be able to enter 155.4075.

7:MODE

Default receive modes are also programmed into memory. AM for aircraft and CB bands, for example. All frequencies (other than TV broadcast audio) above 400 MHz are

received in NFM mode which helps prevent adjacent channel interference.
You can change the default settings on a per-channel basis with this Menu item.

2:TRUNK

Choose the Trunk bank. The following options are available for the selected trunk bank only. Repeat using a different trunk bank, if necessary.

1:TRUNK TYPE

You will need to assign the correct trunking type for the bank you are about to program. If you want to listen to a Motorola Type I system, you will need to use this menu option to assign the same. If you do not know the type of trunking system you are about to monitor, refer to the guide included with the scanner or check out **www.trunktracker.com**.

Note: Some trunking systems require that you know the channel order. In these cases you will also need to start programming the trunked system at the start of the bank. The scanner defaults to the most common type of trunking system, Motorola Type II 800.

2:TRUNK CHANNEL

1:FREQUENCY

To use Trunk tracking, you need to program a frequency for at least one channel.
Also you can enter an alpha tag for each channel in this menu.

2:STEPS

You can assign a variety of step sizes to the channel.

3: MODE

You can change the receive mode in this menu.

3:TALK GROUP SET

You can program IDs into the Scan List memory either during Trunk Scan or Search without going into the Menu. However, you can also use the Menu to program IDs. This is particularly helpful when you are not near the trunked system you wish to later monitor. You can set it up and have it ready to go at some later time.

After you have selected the Scan List location (1-10), you can then do the following:

1. Program ID number
2. Set an alpha tag
3. Assign a Beep Alert to the ID. Whenever that ID is active, you will hear three beeps at the start of the transmission.

4:DELAY

You can set a Delay for a trunk system on a bank by bank basis. The delay time is 5 seconds, and this setting can not be changed.

5:ID LIST TAG

Assign an alphanumeric tag to any or all of the 10 Scan Lists for the system. During ID Scan Mode, you will see the ID List Tag (on the bottom text line) along with any alpha tag you may have set for an ID. In Search mode, you will see any Bank Tag you have set.

6:L/O ID REVIEW

Use this menu item to review the IDs that you have locked out during Search and Scan. Rotate the **VFO** up or down to view the IDs that have been locked out. To leave the lockout IDs unchanged, press **MENU/BACK** to back out of the menu. To unlock an ID, press the **L/O** key. To unlock all the IDs that have been locked out, press and hold **L/O** key for about 2 seconds.

7: ACTIVITY ID

Set ACTIVITY ID to ON, when your scanner finds any other active ID during your scanner receives any transmissions on the ID, the active ID appears every 0.5 seconds.

8:I-CALL (MOTOROLA/EDACS)

Most communications within a trunked system are group calls where one unit (such as a dispatcher) communicates with all the units within his/her group (all the patrol vehicles on the east side of town, for example). The units within this group comprise what is typically known as a talkgroup. There are some communications which are direct unit-to-unit conversations where one individual converses with another individual. The call is initiated by a radio and is directed to another single radio. Within the system, no one outside of these two users hears the conversation.
Your BC250D defaults to I-CALL OFF mode.

You can hear these conversations by using this Menu item to turn the I-CALL function to ON. In Search mode, with I-CALL ON, you will hear both talkgroup calls and I-CALLs. You can also set I-CALLs to I-CALL ONLY during which you will monitor only I-CALLs in Search mode. You can also program I-CALL IDs into Scan List memory.

OR

8:ID SCAN LIST (LTR)

When scanning an LTR system you can only turn Scan Lists OFF and ON when an LTR talk group that you have entered into memory is active. To provide you with another method to turn Scan Lists on and off, you can use this Menu item which only appears when you have selected LTR in Trunk Type.

9:EMERGENCY ALT (EDACS)

In EDACS trunked systems, you can set an alert for an EDASC transmission received. Set EMERGENCY ALERT to ON, and EMERGENCY flashes on the display and you will hear beep alerts when you receive an EDASC emergency transmission.

9:STATUS BIT

OR

9:STATUS BIT (MOTOROLA)

On Type 2 trunking systems there is a method by which specialized types of communications utilize unique talkgroup numbers. An emergency call will occur on a unique talkgroup from its primary assignment, for example. Because the BC250D defaults to Status-Bit On mode, you never need to worry about missing these transmissions. If you've programmed talkgroup 33264 into Scan List memory, for example, and there is an emergency call within the group, you will hear it on 33264.

0:EDACS ID FORM (EDACS)

You can change to display the talkgroups in decimal mode, but this mode does not provide you with the flexibility that you get with AFS. The BC250D defaults to show the talkgroup number in AFS mode (Agency-Fleet-Subfleet). For details on AFS see pages

65~67.

OR

0:END CODE (MOTOROLA)

When this function is disabled, the radio looks for squelch before returning to the control channel instead of waiting for the disconnect tone. Only in rare instances will you need to adjust the default settings. The condition to return to control channels depends on whether signal is present or not.

:CNTRL CH ONLY (TYPE 1/TYPE 2 800, 900)

With this mode you will be able to track Motorola Type I and II 800 and 900 MHz trunked systems by simply entering the control channel which manages the trunked system. You will not have to program the voice channels. There are 4 channel plans which you can select from.

3:SYSTEM OPTION

1:DIMMER

Allows you to change the brightness of the display. Also you can change the lighting length of time.

2:SCREEN MASK

Screen Mask allows you to limit what appears on the display to the alpha tags that you have set for a channel along with a few function icons. Screen Mask removes the frequency, receiving mode tone data and signal strength bars. This mode is particularly useful in public safety vehicles where "information overload" is already a problem. Screen Mask does not work in Search mode.

3:KEY BEEP

Use this function to turn OFF the keypad acknowledgement beep. The default setting is ON.

4:ENTER LOCK

Use Enter Lock to prevent accidental re-programming of channels, tone (CTCSS/DCS) and talkgroups entered into memory. The default setting is OFF.

5:PC CONTROL

Use this function to set the transfer speed (baud rate) at which your personal computer (PC) communicates with the scanner when downloading information into your scanner using the Uniden national database or third party software. See page 78 for details.

6:CLONE

You can clone all the programming, including frequencies, talkgroups and alpha tags as well as bank settings and other parameters from one BC250D to another.

7:DATA SKIP

A scanner will normally stop on any transmission it receives. This means the BC250D will occasionally stop on data signals and unmodulated transmissions. You can automatically skip many of these types of transmissions during search.

8:SQ MODE

The SQ Mode allows you to set at your option, whether the scanner will stop on all active transmissions on a particular frequency or it will only respond to transmissions with a pre-set subaudible tone. This applies to both conventional search and scan modes. The options are as follows:

1. CSQ - The default setting is CSQ (carrier squelch). In this mode the scanner will stop on any transmission on a programmed frequency (Squelch mode does not apply to trunking).
2. TONE SQ - In Tone Squelch mode, if you have set a subaudible tone (CTCSS or DCS) for a frequency, the scanner will only stop on that frequency if the transmission includes the prescribed tone.
3. TONE SEARCH - In this mode, as soon as the scanner stops on any (non-trunked) channel, the scanner will begin to search for any subaudible tone that is being used on a transmitted frequency. The scanner will check each CTCSS tone sequentially and it will find DCS tones instantly.

9:BANK TAG

Allows you to set an alphanumeric text tag for individual banks in the scanner (1-10).(The "0" key represents Bank number 10.) For example, you may wish to set the Bank one text tag as Law Enforcement, the second bank as Fire, etc.

10:BATTERY SAVE

When you set BATTERY SAVE to on in this menu, BATTERY SAVE is active in Scan hold mode(except priority scan mode).

:APCO Card

When you set optional card (Bci25D) and select ENABLE in this mode, you can activate Digital Communications. See page 76 for details.

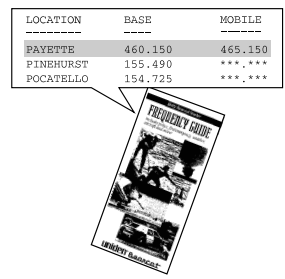
Programming

Before the BC250D can begin conventional scanning, you must program a frequency into at least one channel.

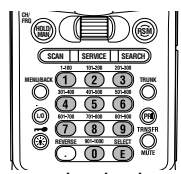
Repeat this procedure for each channel you want to program.

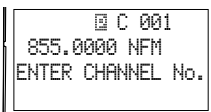
Storing Frequencies into Channels in Menu Mode

1. Select frequencies you received from your dealer, from various sources on the internet, or from one of the guides listed on page X.
   Here is a list of sample frequencies you should try:
   156.800 Marine Calling channel
   155.340 Ambulance operations
   155.280 Ambulance operations
   155.160 Ambulance operations
   462.950 Ambulance operations
   462.5625 Family Radio Services (channel one)

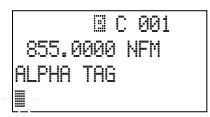


2. Press **MENU/BACK**.
3. Select SCAN OPTION-CONVENTIONAL by rotating the **VFO** and pressing **E.**
4. Select a channel.
   a. Enter the channel number using the keypad.

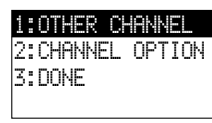




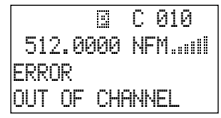
   Note: If you press **SCAN** for 2 seconds, the lowest empty channel appears on the display.
   b. Then press **E**.
5. Select FREQUENCY, and enter the frequency.
   a. Enter the frequency number using the keypad.
   b. Then press **E**.



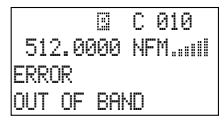
6. Enter the alpha tag.
   (See page 28.)
7. The following display appears, you select a location you want.



Note: • To clear a mistake while entering the frequency, press ⊙ (decimal key) repeatedly until the display is cleared.



• If you enter a channel or frequency which is out of the scanner's range, a beep will sound and ERROR appears on the display.

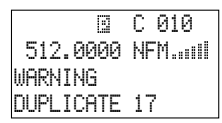


• You can change a channel or frequency by using VFO. To switch the setting for **VFO** control, press and hold **HOLD/MAN** for 2 seconds to toggle between ROTARY: CHANNEL or ROTARY: FREQUENCY on the display.

• After programming frequencies for each bank, you can also change the step size or the mode.(See page 101)

Editing a Stored Frequency

1. Press **MENU/BACK**.
2. Select SCAN OPTION-CONVENTIONAL by rotating the **VFO** and pressing **E**.
3. Select the channel number by rotating the **VFO** and pressing **E**.
4. Edit the frequency by using ⊙ (decimal key) or the keypad and pressing **E**.



Duplicate Frequency Alert

If you enter a frequency which has been stored in another channel, you will hear a beep and the channel stored displays WARNING.

Press ⊙ (decimal key) to clear and start again.

—— OR ——

Press **E** again to store the frequency in both channels.

Transfer Frequencies

You can transfer a frequency that has been stored in a channel to another channel.

1. Press **HOLD/MAN**.

2. Press **TRANSFR**, and the smallest empty channel number along with the frequency will flash on the display.
3. Press **E** and the frequency can be stored in this channel.
4. If you want to enter it into another channel, select another channel that the same frequency has not been stored by rotating the **VFO** and pressing **E**.

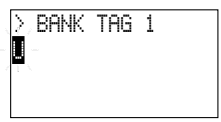
Note: When the frequency is transferred, channel data along with the frequency is also transferred.

Storing Text Tags

You can customize your scanner by storing text tags for easy identification of banks, channel transmissions, trunking talkgroup IDs, etc. The text tags can be set at the menu mode. (Refer to Understanding the Menu System)

Assigning a Bank Tag to a Bank

1. Press **MENU/BACK**.
2. Select SYSTEM OPTION -BANK TAG by rotating the **VFO** and pressing **E**.
3. Select the bank number by rotating the **VFO** and then press **E**.
4. The cursor appears on the display. Scroll **VFO** to change letters, and then press **HOLD/MAN** or **RSM** to move right or left. Both capital and lower case letters are available, as well as numbers and punctuation marks.

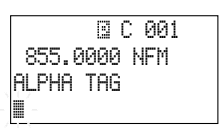


5. After entering the desired text, press **E**.

☞ Remember! To clear a mistake while entering the frequency, press ⊖ (decimal key) repeatedly until the display is cleared.

Assigning a Text Tag to a Channel

1. Press **MENU/BACK**.
2. Select SCAN OPTION -CONVENTIONAL by rotating the **VFO** and pressing **E**.
3. Select the channel number by rotating the **VFO** and pressing **E**. You can also enter the channel number by using the keypad and then press **E**.
4. Select FREQUENCY and ALPHA TAG by rotating the **VFO** and then pressing **E**.



5. The cursor appears on the display. Rotate the **VFO** to change letters, and press **HOLD/MAN** or **RSM** to move right or left. Both capital and lower case letters are available, as well as numbers and punctuation marks.
6. After entering the desired text, press **E**.

Beep Alert

The scanner can alert you with three beeps at the beginning of a transmission on an assigned frequency.

Assigning the beep alert to a channel

This alert can be set ON/OFF to every channel for Conventional mode or to every ID memory for Trunking mode.

In conventional mode -

1. Press **MENU/BACK**.
2. Select SCAN OPTION -CONVENTIONAL by rotating the **VFO** and pressing **E**.
3. Select the channel number by rotating the **VFO** and then press **E**. (You can also enter the channel number by using the keypad and then press **E**.)
4. Rotate the **VFO** to select BEEP ALERT and then press **E**.
5. Rotate the **VFO** to select ON or OFF and then pressing **E**.

Note: If NOT REGISTERED appears, make sure a frequency is stored in the channel.

Programming Tips

- Do not program a weather frequency into one of the channels, since weather channels transmit continuously. Use the Weather Search feature to select the weather information band.
- Group similar services into a bank. For example, program police frequencies in channels 1 through 10 and fire/emergency into channels 51 through 60, and so on.
- Put the frequency that 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, rotate the **VFO** up to go to the next higher channel.
- Write down your programmed channels and frequencies

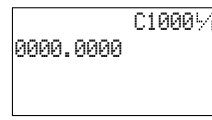
and put them in a convenient place in case of accidental reprogramming.

- Frequencies are rounded off according to the step of each channel.
- When you are overwriting a tagged channel with a new frequency, the previous alpha tag will be deleted. You must re-enter the alpha tag.
- When programming frequencies, a 2 second delay is set automatically and can not be changed.

Deleting a Stored Frequency

To delete a stored frequency:

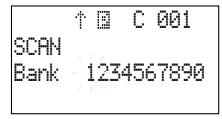
a. Select a channel.
b. Press **0**.
c. Then press **E**.



Note: Channels with no frequencies are automatically locked out.

Scanning

1. After programming frequencies, simply press **SCAN** to begin scanning. During scanning, when you rotate the **VFO**, you can select the direction (↑ or ↓) you want to scan.

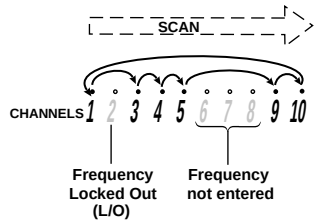


2. The bank indicators selected for scanning appear on the display, and the bank being currently monitored flashes. You can deselect banks from active scanning by pressing their number on your keypad. The indicator for each deselected bank turns off, and the bank's channels are not scanned.

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

To restore a bank to active scanning, press the banks number on your keypad.
The banks indicator will display again.

3. During normal scanning the scanner skips unprogrammed or locked out channels.
4. When a transmission is received, the scanner stops on that channel. When the transmission ends, scanning resumes automatically.



Scan Hold Feature

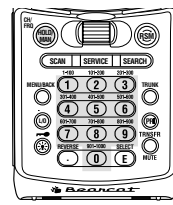
If you want to stop on a channel during scanning, press **HOLD/MAN**.

If you want to resume scanning, press **RSM**.

To directly access a specific channel:

There are several ways to access a specific channel quickly.

1. Press **HOLD/MAN**.
2. Using the keypad, enter the channel number.
3. Press **HOLD/MAN** again.



Another method is as follows:

1. Press **HOLD/MAN**.
2. While the setting for **VFO** is a channel, rotate the **VFO** until the desired channel is displayed. The scanner will automatically go to hold mode.

Storing Frequency

During Scanning

1. Press HOLD/MAN.
2. Press TRANSFER, and the empty channel number appears on the display.
3. Press E.

Note: If you want to change the channel, rotate **VFO**.

RF Attenuation Feature

The BC250D comes with an RF Attenuation feature. If you're near an unusually strong signal source, the signal may overload the scanner. The scanner may stop repeatedly on that signal and miss other transmissions.

The RF Attenuation feature works in all modes and attenuates (reduces) the incoming signal strength to prevent stronger signals from overloading the scanner.

The RF attenuation is set at the menu mode.

1. Press **MENU/BACK**.
2. For Search mode, select SERVICE OPTION - CHAIN SEARCH - ON - by rotating the **VFO** and pressing **E**.

   OR

   For Scan mode, select SCAN OPTION - CONVENTIONAL by rotating the **VFO** and pressing **E**. Then select the channel number by rotating the **VFO** and pressing **E**.
3. Select ATTENUATOR by rotating the **VFO** and pressing **E**.
4. Set to ON by rotating the **VFO** and then press **E**.

Note: Attenuation will only be active for the specified channel. In Search mode, it is applied to the search ranges.

Setting the Delay Mode for Frequency

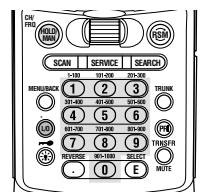
The delay of 2 seconds is automatically set for each frequency. To set the delay feature, enter into the menu mode.

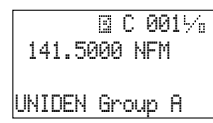
1. Press **MENU/BACK**.
2. For Scan mode, select SCAN OPTION - CONVENTIONAL by rotating the **VFO** and pressing **E**.
3. Select the channel number to be delayed by rotating the **VFO** and then press **E**.
4. Select DELAY and then press **E**.
5. Rotate the **VFO** to select ON or OFF and then press **E**.
6. For Search mode, select SERVICE OPTION - CHAIN SEARCH - DELAY by rotating the **VFO** and pressing **E**, then set to ON or OFF by the same way as the Scan mode setting.

Channel Lockout

You can lockout any channel so it is not checked during normal scanning. You can restore the channel to scanning when you wish.

Lockout in HOLD Mode





1. Press **HOLD/MAN**.
2. Select a channel.
   a. Enter the channel number using the keypad.
   b. Press **HOLD/MAN** again.

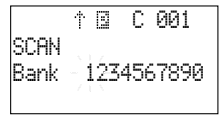
   —— OR ——

   Rotate the **VFO** up or down to change the channel.
3. Press **L/O** to lockout the channel. ***L/O*** icon appears on the display.

Lockout in Scanning Mode

If the scanner keeps stopping on a particular channel due to noise or too frequent transmissions, you may want to keep that channel from scanning.

1. Wait until the scanner stops at the channel.
2. Then press **L/O**.
3. The scanner immediately resumes scanning because the locked out channel is no longer in the scanning sequence.



Lockout Tips — Write down your locked-out channels and put in a convenient place in case you need to restore them.

Restoring a Locked-out Channel

1. Press **HOLD/MAN**.
2. Select a locked out channel.
   a. Enter the channel number using the keypad.
   b. Then press **HOLD/MAN** again.
3. Press **L/O** to unlock the channel. The L/O icon disappears.

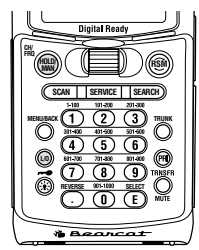
Restoring All Locked-out Channels

You can restore all locked-out channels in a bank only when a bank is selected for scan. If you have deselected a bank and you want to restore all of its locked-out channels using the steps below, you must press **SCAN** and then enter the number of the bank on your keypad.

1. Press **HOLD/MAN**.

Note: You must be in Hold mode before restoring all locked-out channels.

2. Press and hold **L/O** for about 2 seconds.
   You will hear a confirmation tone when all the channels have been restored.

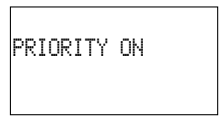


Priority Scan

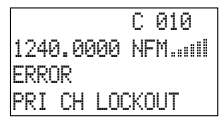
When Priority Scan is turned On, your scanner checks the priority channel in the banks you selected every 2 seconds for activity. If a signal is present on the priority channel, your scanner monitors the channel until the transmission ends, then resumes normal scanning. You can designate one channel in each bank as a Priority Channel. By default, the first channel in each bank is the Priority Channel, but you can change this.

To activate Priority Scan (in either the Hold or Scan Mode):

1. Press **PRI** to select PRIORITY:ON on the display.



Note: If you have locked out the priority channel, ERROR appears when you select Priority mode.



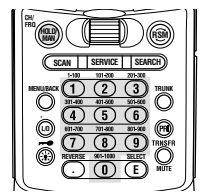
2. Press **PRI** to select PRIORITY:OFF on the display to deactivate Priority Scan.

If you want to resume normal scanning, when the scanner stops, press **RSM**.

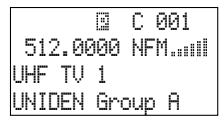
Changing the Priority Channel

You cannot eliminate the Priority Channel, but you can change it to any one of the 100 available channels in each bank.

1. Press **HOLD/MAN**.



2. Select a new Priority Channel:
   a. Enter the channel number using the keypad.
   b .Then press **HOLD/MAN** again.
3. Press and hold **PRI** for 2 seconds to designate this channel as your new Priority Channel.
   A confirmation tone indicates that the Priority Channel has been changed. The P icon appears on the display.



Note: • Priority in Trunking mode works just the same, except instead of setting priorities for channels, you set them for talkgroup IDs. The scanner only checks priority talkgroups between transmission, in 2 second intervals.

• Priority Scan is disabled while M, E or L (Trunking type) icons are illuminated (a beep will sound if you try to scan). To make it possible, turn Off each function M, E or L (Trunking type) icon then press **PRI** to select PRIORITY:ON on the display.

Priority Channel Plus Scan

You can scan only the Priority Channels (except for the lock out channels) in the banks you selected. To activate Priority Channel Plus

(Only in Scan mode):

1. Press **PRI** to select PRIORITY:PLUS on the display.
2. Press **PRI** to select PRIORITY:ON or PRIORITY:OFF on the display to deactivate Priority Channel Plus Scan.

Note: Priority Plus Scan is disabled while Search mode is selected.

Searching

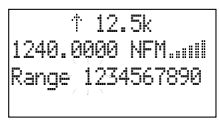
Setting a Search Range

Note: First you must set the search ranges through the menu screen prior to any searching.

The BC250D can search up to 10 separate frequency ranges to help you discover new stations in your area.

To set a Search Range, enter into the Menu mode.

1. Press **MENU/BACK**.
2. Select SERVICE OPTION - CHAIN SERCH - SEARCH RANGE - RANGE - by rotating the **VFO** and pressing **E**.
3. Enter the lowest frequency using the keypad and then press **E**, then repeat the same for the highest frequency.
   Then press **SEARCH**.



—— OR ——

Another method is as follows:

1. Press and hold **SEARCH** for 2 seconds.
2. Program the lowest and highest frequencies by the same way as step 3 above.

Note:
- The scanner can continuously search up to 10 ranges. (Chain Search)
- You can select or deselect the search range freely by pressing the corresponding number with the keypad.
- The scanner automatically increases its search speed from 100 to 300 steps per second for the bands having 5 kHz steps. (Turbo Search)
- After you have set the search range through the Menu at the first time for a range, you will be able to set new ranges for the same range by using the keypad and the standard direct entry method.
- Searching feature is applied to Control Channel Only mode (see page 73).

Caution: After you have entered the search range while still in the menu mode, you can set your alpha tag (see page 28), change the step size of the search, or change the mode. Once the lower and upper

parameters of your search are edited, the menu screen backs up one level to allow you to modify the step size, receive mode, and alpha tag. Select STEPS for your step size choices and then press E. Select MODE for the receiver mode choices and then press E. Select ALPHA TAG to enter an alpha tag using the **VFO** and then press E.

Starting Chain Search

1. After setting the search ranges, select SERVICE OPTION-CHAIN SEARCH-CHAIN SRCH by rotating the **VFO** and pressing **E**.
2. Set to ON by rotating the **VFO** and pressing **E**.
3. Press **SEARCH** to search up to 10 ranges continuously.

Note: • If CHAIN SRCH is OFF in the menu mode, only range 1 can be searched.

- When searching stops, press **RSM** to resume searching.
- When you rotate the **VFO** while searching, you can change the search direction to up or down.
- When searching in WFM, it will stop before reaching the desired frequency if the step is other than 50 kHz or 100 kHz.

Search Hold Feature

1. Press **HOLD/MAN** at anytime to stop the search.

Note: While Search Hold mode is On, you can change the search direction to up or down by rotating the **VFO**.

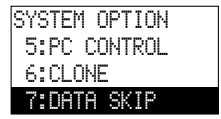
2. Press **RSM** or **SEARCH** to resume searching.

Data Skip

A scanner will normally stop on any transmission it receives. This means the BC250D will occasionally stop on data signals and unmodulated transmissions. You can automatically skip many of these types of transmissions during search. The Data Skip feature can be set per range. To activate the Data Skip feature, enter into the Menu mode.

1. Press **MENU/BACK**.

2. Select SYSTEM OPTION-DATA SKIP by rotating the **VFO** and pressing **E**.



3. Set to ON by rotating the **VFO** and then press **E**.

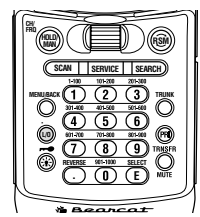
When Data Skip is active, your scanner may pause momentarily on an unwanted signal but will resume searching in 2 or 3 seconds.
The Data Skip feature is active as well as Scan mode and Service Search mode. Data Skip does not function during AM/WFM band Scan, Chain Search for AM/WFM band, or WX Search, Priority Scan, and Trunking mode.

Frequency Skip

If a particular frequency continues to interrupt search scanning, it is possible to set your scanner to skip the frequency.

To skip over a frequency, press **L/O** when stopping at the frequency you want to skip or when in Search Hold mode.

Note: • You can program up to 200 skip frequencies. The 201st 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, do as follows:

1) Cancel the Frequency Skip set.

—— OR ——

2) Reset the Search Frequency range.

To cancel all skipped frequencies, press and hold **L/O** for 2 seconds in Search Hold mode.

Storing Search Frequencies

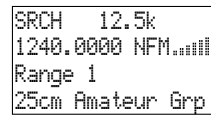
You can quickly store any frequency you find during Search.

Caution: You must select the channel in which you will store the frequency before entering the Search mode. Otherwise, you may erase a stored frequency that you want to keep.

1. During Search, press **HOLD/MAN** to store or when the

scanner stops on the frequency you want to store.

2. Press **TRNSFR** to store the frequency in the channel you selected. The smallest empty channel number flashes on the display. If necessary, you can also change the channel by scrolling the **VFO**.



3. Press **E**.

Note: • If the frequency you want to store exists already, WARNING appears on the display and you will hear a beep. (See Duplicate Frequency Alert on page 27.)

- After storing the frequency, it moves to the Search Hold mode.
- In case there is a not free channel, the frequency you want to store will automatically be stored in the previous channel before you entered into Chain search mode.

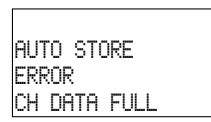
4. To store another frequency, select another channel for the new frequency by rotating the **VFO**.
5. Repeat steps 1, 2 and 3 after starting the search for all the Search Frequencies you want to store.

Auto Storing

The scanner automatically stores searched frequencies if its auto store feature is activated.
But the frequency already stored can not be stored.
To make use of this feature, set a search range first (see page 37), then enter into the menu mode. If you start this feature without setting a search range, NO LIMIT DATA appears on the display.

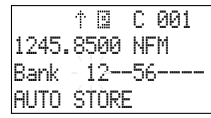
1. Press **MENU/BACK**.
2. Select SERVICE OPTION-CHAIN SEARCH-AUTO STORE by rotating the **VFO** and pressing **E**.
3. Set to ON by rotating the **VFO** and pressing **E**.
4. Select the bank number you want to use with the keypad. The selected bank number appears on the display.

Note: If the selected bank has no free channels to store, CH DATA FULL will appear on the display



and you will hear a beep.

6. Press **SEARCH** to start auto storing.



7. After the search has gone through the search range, press **HOLD/MAN** to stop this feature. STORE END appears on the display and the bank no. disappears. You may want to let it run through the search range again because during the first pass there may not have been any transmissions at that particular time.

Squelch (SQ) Mode

The scanner can be set to the following SQ modes.

- Carrier SQ mode (default setting)
  The scanner will stop on any transmission or squelch opening, regardless of whether any sub audible tone has been programmed for the channel or search range.
- Tone SQ mode
  The scanner will stop on any active frequency for which either no sub audible tone has been programmed or for which the user-programmed sub audible tone is also active.
- Tone Search mode
  During any transmission, the scanner will begin searching all possible sub audible tones, one of which may also be in use. The scanner counts up through the CTCSS tones and instantly determines any possible DCS tone. See Page XX for a listing of the tones that the BC250D decodes.

  Note: When Tone Search is active in Scan mode, once the CTCSS/DCS display flashes a tone repeatedly (meaning that it has found the tone match), you can press **E** to program that frequency with the captured tone. When you change the mode to Tone Squelch from Tone Search that frequency and tone will be programmed.
- Tone Lock (out) mode
  For either a Memory channel or a Search Range, you can lock a particular sub audible tone by pressing **L/O** after scrolling to the desired tone. The scanner will stop on any transmission except those which may be using the locked sub audible tone.

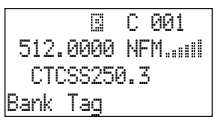
To set your scanner, enter into the Menu mode.

1. Press **MENU/BACK**.

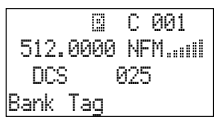
2. Select SYSTEM OPTION - SQ MODE by rotating the **VFO** and pressing **E**.
3. Rotate the **VFO** to select one type (CSQ, TONE SQ, TONE SEARCH) and then press **E**.
4. To set Tone Lock mode, do the following first, then select TONE SQ in step 3.
   1) For Scan mode, select SCAN OPTION - CONVENTIONAL - select the channel number - TONE DATA - CTCSS or DCS by rotating the **VFO** and pressing **E**. With CTCSS or DCS, Tone Lock ON is set by pressing **L/O**.
   2) For search mode, select SERVICE OPTION - CHAIN SEARCH - TONE DATA - CTCSS or DCS by rotating the **VFO** and pressing **E**. With CTCSS or DCS Tone Lock ON is set by pressing **L/O**.

   Note: To set Tone Lock OFF for either Scan mode or Search mode, press **E** instead of pressing **L/O** on step 1 or 2 above.

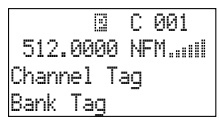
Note:
- CTCSS: Continuous Tone Coded Squelch System.
- DCS: Digital Coded Squelch.
- For example, the scanner shows the following displays. When Search mode and Tone Search are selected, the display shows the frequency and tone data alternately.



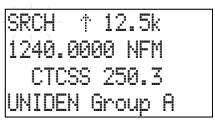
Tone SQ ON, CTCSS 250.3 Hz setting



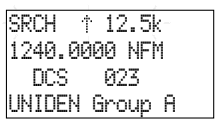
Tone SQ ON, DCS 025 setting



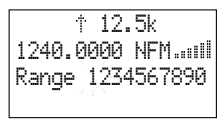
Tone SQ ON, CTCSS & DCS non-setting



Tone Search, CTCSS 250.3 Hz detecting



Tone Search, DCS 023 detecting



Tone Search, no signal received

- If the Delay feature has been set while in Tone Search mode, it resumes scanning after a 2 second delay.

Additional Menu Options for Searching

Each of these additional menu options applys to all search ranges entered. If there is a range that you do not want an option to apply, then simply enter the range number on the numerical keypad. You will see the range number that you have selected disappears from the display. (For more information on these options refer to the "Menu Descriptions" section and "Additional Features" section.)

Options:

ATTENUATOR (for more information see page XX)

1. Press **MENU/BACK**.
2. Select SERVICE OPTION - CHAIN SEARCH - ATTENUATOR by rotating the **VFO** and pressing **E**.
3. Set to ON by rotating the **VFO** and pressing **E**.

DELAY

Refer to page XX.

Service Search

The Service Search feature allows you to scroll through the following twelve preprogrammed services. The frequencies selected for these services are the most commonly used around the U.S.

- 1:WEATHER
- 2:PUBLIC SAFETY
- 3:NEWS
- 4:TV BROADCAST
- 5:HAM RADIO
- 6:MARINE
- 7:RAILROAD
- 8:AIR
- 9:CB RADIO
- 10:FRS
- RACING
- SPECIAL

1. Press **SERVICE**. The display indicates as illustrated.

   —— OR ——

   Another method is as follows:
   To set Service Search, enter into the Menu mode.

   1. Press **MENU/BACK**.
   2. Select SERVICE OPTION by rotating the **VFO** and pressing **E**.

2. Select one Service Search menu you want from the lists above by rotating the **VFO** or directly entering the number listed above, and then press **SERVICE**.
3. After a 3 second delay, searching begins for the selected service. If you want to start searching immediately, press **RSM**.
4. To change the searched service, rotate the **VFO** or directly enter the number listed above after pressing **SERVICE**.

Note:
- When you start searching RACING or SPECIAL , press **RSM** instead of **SERVICE**.
- You can not change such settings as Auto Delay, during a Service Search.
- You can enter one of the Service Search frequencies into Channel Memory by pressing **TRNSFR/MUTE** when holding on one of the frequencies.
- Special Frequencies are low-power, itinerant, FRS, "splinters" and other frequencies which are commonly used at special events and other locations and may or may not be licensed.
- When you rotate the **VFO** while the Service Search

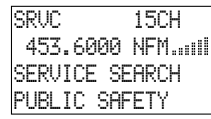
is active, you can change the search direction to up or down.

During the search of one of the preprogrammed services, the lowest display line will indicate the service that you are searching. To stop the search, press **HOLD/MAN**. Rotate the **VFO** to move up or down one programmed frequency when the FREQ icon is displayed, or press **RSM** to resume searching.

Service Search Skip

You can set the scanner to skip the frequencies unwanted during Service Search. 100 skipped frequencies are programmable.

1. To skip over a frequency, press **L/O** when stopping at the frequency you want to skip.
2. To cancel a skip during search, press **HOLD/MAN**, tune in the desired frequency by rotating the **VFO**, then press **L/O**.



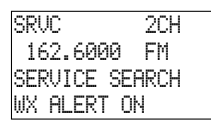
   To restore all skipped frequencies, press and hold **L/O** for 2 seconds.

Note: You can not set any skip frequency in WEATHER service mode.

NWR-SAME Alert

In addition to the conventional weather broadcasts, your BC250D is compatible with NWR-SAME weather alert. When the scanner receives NOAA's Specific Area Message Encoding (SAME) coded weather emergency signal, it sounds the alert siren with a specified message. You must program your FIPS code to identify the Specific Area where you are located.

1. Press **MENU/BACK**.
2. Select SERVICE OPTION - WEATHER - ALERT by rotating the **VFO** and pressing **E**.
3. Set to ON by rotating the **VFO** and pressing **E**. WX ALERT ON displays.



4. When the unit receives a warning signal, it shows a message with the alert siren defined. (For NWR-SAME EVENT CODE, see the table in the Appendix.)
5. To deactivate, just press any key or it is automatically canceled and the alert siren stops.

Testing the Alert Siren

To test and recognize the difference between the types of alert sirens, perform the following steps:

1. During WX hold mode and when the WX ALT is off, press and hold the **PRI** key for 2 seconds until you hear the statement alert siren. WX ALERT ON appears on the display and the statement, watch and warning sirens sound alternately.

Note: The samples of each alert siren only last for a few seconds. You may need to listen to each siren several times to be sure you recognize the different sirens. The sirens continue to sound rotating through the samples until you silence the test.

2. To stop the test, press any key.

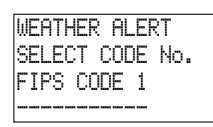
Make sure you can hear the siren in all areas that you would need to. If not, optional accessories can be purchased to ensure that you are alerted for emergency broadcasts. See your dealer or local electronics store for accessories.

DO NOT USE EARPHONES TO LISTEN TO THE TEST. DAMAGE TO YOUR HEARING COULD OCCUR.

Programming FIPS Code

The 6-digit Federal Information Processing System (FIPS) codes established by the National Weather Service (NWS) must be programmed in your scanner. These codes specify an emergency and the specific geographic area (such as county) affected by the emergency.

1. Press **MENU/BACK**.
2. Select SERVICE OPTION - WEATHER - ALERT by rotating the **VFO** and pressing **E**.



3. Set to ON by rotating the **VFO** and pressing **E**.
4. Select the desired memory number (F1-F15) by rotating the **VFO**.
5. Enter FIPS code using the keypad.
6. Press **E**.

—— OR ——

1. When you rotate the **VFO** to move up when F1 is displayed or **VFO** to move down when F15 is displayed, ALL FIPS appears on the display.
2. Press **E**. The scanner is now set for ALL FIPS mode.

3. To cancel the ALL FIPS mode, while an individual FIPS code is displayed, press **E**.

Note: • To cancel the entry, press ⊙ (decimal key).

• To obtain the FIPS code for your area, contact the NWS toll free at 1-888-697-7263.(1-888-NWR-SAME) or visit their web site **http://www.nws.noaa.gov/nwr/indexnw.htm**

Digital and Trunked Systems

Your BC250D is designed to digital communication system (using optional BCi25D) and track three major types of trunked radio systems. These systems are described here.

❖APCO Project 25 Systems - Digital systems which support the APCO Project 25 protocol developed by the Telecommunications Industry Association (TIA) and Electronic Industries Alliance (EIA). Systems can operate in conventional, trunked and mixed-modes (analog and digital) in any frequency band including UHF, VHF and 800 MHz.

❖MOTOROLA - Including Type I, Type II, Hybrid, SMARTNET, and Privacy Plus.
Motorola systems are widely used by public safety and business users. Most are on the 800 MHz band, and recent systems are appearing on other bands. (See page 69)

❖EDACS - Including "Wideband" 9600 baud, and "Narrowband" 4800 baud systems.
"Wideband" systems are mostly on the 800 MHz band, and are used by public safety, utilities, and business users. Some systems are used on the VHF and UHF bands.
"Narrowband" systems are used in the 935-940 MHz band, many by utilities.
(See page 64)

❖EDACS SCAT - These systems are mainly used in the Midwestern United States and are one-channel trunking sites using the EDACS format.

❖LTR - These systems are mostly for business users, and found on the UHF, 800 and 900 MHz bands. (See page 68)

For details on the operation and programming for all of these systems, see pages 48-77.

When tracking these types of systems, remember these important points:

- Your scanner defaults to monitor Motorola Type II systems; however, you can change this if the system in your area is different. (The types of systems are discussed below.)
- The frequencies for many of the trunked public safety systems are listed in the TrunkTracker National Public

Safety Trunked System Frequency Guide included with your BC250D scanner. Frequencies sometimes change, check with **www.bearcat1.com/free.htm**.

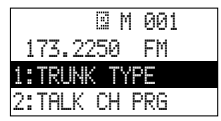
- If you have internet access, you can visit **scanner.uniden.com** or **www.bearcat1.com/free.htm** for additional information, for current news and frequency information, about Trunk Tracking Scanning.

* Motorola, SMARTNET, and PRIVACY PLUS are trademarks of Motorola Inc. EDACS is a registered trademark of the Ericsson Corporation. LTR is a registered trademark of E.F. Johnson Company.

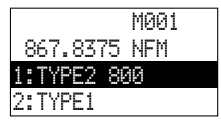
Programming and Receiving Digital and Trunked Systems

Selecting or Changing Trunking System Type

Before using the Trunk Tracking system, you must select the trunk type.



1. Press **MENU/BACK**.
2. Select SCAN OPTION-TRUNK by rotating the **VFO** and pressing **E**.
3. Select the bank number using the keypad and pressing **E**.
4. Select TRUNK TYPE and the system type you want to track by rotating the **VFO** and pressing **E**.



No.	LCD display	Icon	TrunkingType	Special requirements
1	Type 2 800	MOT	Motorola Type 2 800 MHz	
2	Type 1	MOT	Motorola Type 1	a. Must program a fleet map.
3	Type 2 900	MOT	Motorola Type 2 900 MHz	
4	Type 2 UHF	MOT	Motorola Type 2 UHF	b. Must program base, spacing, frequency and offset channel.
5	Type 2 VHF	MOT	Motorola Type 2 VHF	
6	EDCS WIDE	EDCS	EDACS Wideband 9600 baud	c. Must program frequencies in exact order and location.
7	EDCS NARROW	EDCS	EDACS Narrowband 4800 baud	
8	EDCS SCT.	LTR	LTR	
9	OFF			

Programming Trunking Frequencies

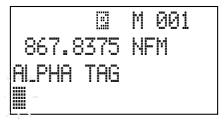
After you finish to selecting a trunked type you want to track, store the frequencies in one of the 10 available banks in your scanner. Remember that you can only store one trunking system in each bank.

Important: If you are programming an EDACS or LTR trunked system, you must enter the frequencies in a specific order. Check the frequency guide included with the scanner for the frequencies in your area. For additional frequencies, check the web sites listed on page 11.

1. Press **MENU/BACK**.
2. Select SCAN OPTION-TRUNK by rotating the **VFO** and pressing **E**.
3. Select the bank number by rotating the **VFO** and pressing **E**.
4. Select TRUNK CHANNEL and the channel number by rotating the **VFO** and pressing **E**.
5. Select FREQUENCY and enter a frequency for the trunked system using the keypad and press **E**.

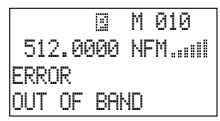
For example, enter 867.8375 (Type 2 800) or enter a frequency you are going to track.

6. Enter the alpha tag and press **E**. (See page 28).
7 You can also change the step size or the mode in this menu.(See page 101)
8. The following display appears, you select a location you want.



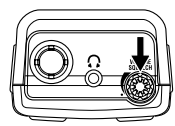
Note: • To clear a mistake while entering the frequency, press ⊖ (decimal key), and the display is cleared.

• If you enter a frequency which is out of the system's trunking range, a beep sounds and ERROR appears on the display.



Setting the Squelch

For trunked reception, a good setting for the **SQUELCH** control is in the center of the range with the red marker pointing up. See the illustration.



If it is set too high (CCW) in some cases it could prevent your scanner from locking to the Control Channel reliably. If it is set too low (CW) it will slightly delay finding the Control Channel. The best setting is the same as for conventional reception, and is not critical.

Receiving Trunked Systems

When you have properly programmed all the frequencies for a trunked system, you can receive the system in several

different ways. You will find that Search, Hold, Lockout and Scan, Delay are all similar to conventional scanning.

- ❖ TRUNKED SEARCH lets you hear all system talkgroup activity (unit-to-unit I-Calls may be received as well). This is the best way to get started.
- ❖ ID SEARCH HOLD works with Search mode to let you quickly freeze reception on an interesting transmission. Or you can manually specify a talkgroup with DIRECT ENTRY in ID HOLD.
- ❖ ID LOCKOUT works with Search and Scan to exclude talkgroups that you don't want to hear.
- ❖ ID SCAN lets you receive those talkgroups that you store in Scan Lists.
- ❖ ID SCAN HOLD lets you selectively listen to a talkgroup in your Scan Lists.
- ❖ ID DELAY works with each talkgroup to be delayed for 5 seconds when the communication ends.

When receiving EDACS systems, remember that Uniden's AFS talkgroups give you powerful flexibility. In a few key presses, you can specify a single talkgroup, a fleet, or an entire agency in all the above modes. Read the section "EDACS Reception" to understand how this works.

Note: To switch ID SCAN or ID SEARCH, press and hold **TRUNK** in the trunked system.

Trunked Search

Once you have programmed all the frequencies for a trunked system, SEARCH will let you immediately start hearing transmissions. It is suggested you try SEARCH mode first.

1. Press **SCAN**, and select the bank(s) you wish to receive, just as you select banks in conventional scanning.
2. Press **TRUNK** to enable trunked reception. The radio will seek and acquire the trunked system control channel. The scanner will now be in MONITOR mode. You will hear the control channel and see active talkgroups on the display. You will not hear the voice transmissions in MONITOR mode.

☞**Hint**: MONITOR mode is an excellent way to observe system activity and determine which talkgroups are most active. Locked out IDs display during MONITOR mode.

3. Press **SEARCH** to begin searching and receiving. You will hear talkgroups and see them on the display.

Talkgroups display differently in Motorola, EDACS and LTR systems. You should read the appropriate parts of this guide to understand the formats.

The display indicates the bank and the type of trunked system you are monitoring. You can change this to display a bank tag by using the System Option menu.

Regardless of the system, you won't know exactly who you are receiving until you listen for a while, or refer to frequency guides or internet sites such as **www.bearcat1.com**.
Of course, figuring out who each ID represents is half the fun of TrunkTracking.

Later, when you learn more about a system, you will want to store lists of talkgroups. Then you can scan specific agencies and users, and use the many other features your radio provides.

ID Search Hold and Direct Entry ID Hold Mode

Just like in Conventional Search, HOLD lets you pause ID Search on an interesting transmission without storing the talkgroup into memory.

If you hear an interesting ID during SEARCH mode, and want to continue listening to it --

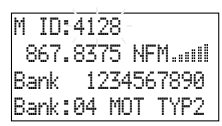
- Press **HOLD/MAN** to stop the search.

If you want to listen to a specific ID, while in HOLD --

- Use the keypad to enter the ID you want and press **SCAN**, **RSM** or **SEARCH** (**SEARCH** key can not be used for EDACS).

If you want to resume searching --

- Press **RSM** to return to Search mode.



Note: ID Hold feature is also applied to ID Scan mode.

ID Lockout

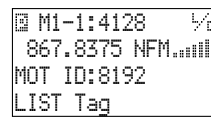
Like conventional scanning, it's possible to lockout unwanted traffic. This is particularly important in trunked systems because in many areas, water meters, door alarms, traffic signals, and other mechanical devices are assigned IDs just like other users. Also some departments scramble or encumber their communications, and you may want to lock out these unintelligible broadcasts.

To Lockout an ID, press **L/O** when the ID you want to lockout displays.

The ID is locked out. You can Lockout up to 200 IDs.

Note: If you Lockout an ID in Search mode, it is also locked out in Scan List mode.
Conversely, if you Lockout an ID while in Scan List mode, it is locked out in Search mode. For information about Scan Lists see page 55.

EDACS BLOCKOUT is a powerful form of ID LOCKOUT that can be used only with AFS and EDACS systems. This feature lets you lockout entire Agencies or Fleets, not just individual talkgroups. Using ID BLOCKOUT you can, for example, prevent Search from stopping on any of hundreds of talkgroups in the Utilities agency. You can do this with just a few key presses. To use ID BLOCKOUT just enter the Agency- part, or the Agency-Fleet part, of the talkgroup code and press **L/O**. For example, to Blockout Agency 4 in Trunk Search, press **HOLD/MAN**, **0**, **4**, ⊙ (decimal key), and then **L/O**. For other ways to use partial AFS entry, be sure to read the section "EDACS Reception".



Review ID Lockout

You can check all IDs already locked out.

1. Press **MENU/BACK**.

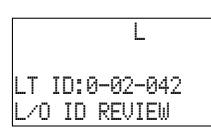
—— OR ——

1. When you press and hold **L/O** for 2 seconds in trunking, you can also check all IDs already locked out.
2. Select SCAN OPTION-TRUNK by rotating the **VFO** and pressing **E**.
3. Enter the bank number using the keypad and pressing **E**.
4. Select L/O REVIEW.

Restoring Locked-out IDs

To unlock a single ID, follow these steps:

1. Press **MENU/BACK**.
2. Select SCAN OPTION-TRUNK by rotating the **VFO** and pressing **E**.
3. Select the bank number by rotating the **VFO** and pressing **E**.
4. Select L/O ID REVIEW and the



locked out ID you want to unlock by rotating the **VFO**.

5. Press **L/O**. The ID is unlocked and the next locked ID displays.

To unlock all locked out IDs in a bank at once:

1. Press **L/O** for 2 seconds after selecting L/O ID REVIEW in step 4.

Scan Lists

Each bank of your BC250D can be a trunk tracking bank and it can be a conventional scanning bank. When you designate a bank as a trunking bank, your scanner sets up 10 Scan Lists, which are simply lists used to store your favorite IDs. Each list can contain up to 10 IDs, so you can store a total of 100 IDs 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#1 for police IDs, List#2 for fire department IDs, List#3 for emergency medical service IDs, etc. Once IDs are stored in lists, you can scan them like you scan conventional frequencies and you can lockout any one (and up to 9) of the 10 scan lists by pressing the corresponding numeric key. When an ID is active, the scan list number icon into which it is programmed will appear on the display. You can program your scan lists either manually or during trunking search mode.

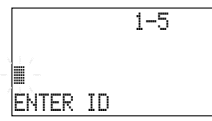
REVERSE *Key*

Use the **REVERSE** key while trunking to toggle between viewing the active banks and the active Scan Lists. To see which is currently active, check the display for either Bank or List.

Check the web site **www.bearcat1.com/free.htm** for a complete list of talkgroups for your area that you can program into your Scan Lists.

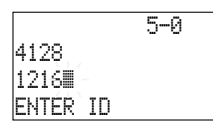
Programming ID Manually with the Menu Mode

1. Press **MENU/BACK**.
2. Select SCAN OPTION-TRUNK by rotating the **VFO** and pressing **E**.
3. Select the bank number by rotating the **VFO** and pressing **E**.
4. Select TALK GROUP by rotating the **VFO** and pressing **E**.
5. Select the ID location by rotating the **VFO** or using the keypad and then press **E**. (The first number represents the ID list number and second number represents the memory location number.) (Direct entry method example: enter "1-5" by pressing **1**, ⊙ (decimal key), **5**.)
6. Select ID by rotate the **VFO** and then press **E**.
7. Enter the ID number using the keypad and then press **E**.



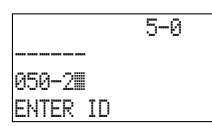
Note: After you have programmed the ID in a selected bank while still in the menu mode, you can set your alpha tag (see page 28), or turn on the beep alert for an individual talkgroup (see page 29).

a. Enter the Type 2 ID you want to store, and press **E**.



—— OR ——

To enter a Type 1 ID:



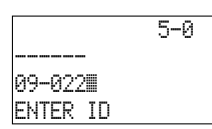
a. Enter the block number and fleet number.

b. Press ⊙ (decimal key).

c. Enter the sub fleet number, and press **E**.

—— OR ——

To enter an EDACS® ID:



a. Enter the ID you want to store. Use the ⊙ (decimal key) for the "dash".

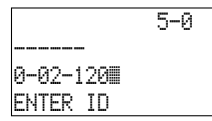
b. Press **E**.

Hint: Remember that Uniden's AFS format allows you to enter full or partial EDACS IDs for powerful flexibility in all modes. Be sure to read the section "EDACS Reception" on page 64 to learn how this works.

Note: The BC250D default to "AFS" talkgroup displays for EDACS® only.

—— OR ——

To enter a LTR ID:



a. Enter the Area code and then press ⊙ (decimal key)

b. Enter the Home Repeater number and then press ⊙ (decimal key).

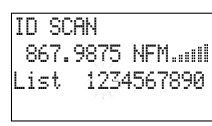
c. Enter the ID you want to store and then press **E**.

Note: To clear a mistake while entering an ID, press **0** and **E** successively, and start over.

4. Rotate the **VFO** to move up to select the next Scan List location.

ID Scan Mode

1. Press **SCAN** to begin scanning the lists you have programmed.



If you haven't programmed any IDs, ERROR appears on the display.

2. To remove a Scan List from active scanning, press the number of the Scan List on your keypad.

The Scan List indicator turns Off, and the IDs in that list are not scanned.

Note: One Scan List must always be active. If you try and deactivate all the Scan Lists, Scan List 1 will automatically be active.

3. To restore a Scan List to active scanning, press its number again.

4. Press **SEARCH** to return to Trunk Tracking Search mode.

For motorola and EDACS system; to change your display between the Scan List indicators and trunk bank display, press **REVERSE**.

For LTR systems only, the talkgroup must be active in order to change the Scan List and bank indicators. If the

talkgroup is not active, change the Scan List by using the Menu screen.

Note: • Once you press **SEARCH** or **SERVICE** in one bank, all trunking banks will change to that mode.

- Selecting a Scan List is also possible in the Menu mode. (LTR only)
- ID SCAN appears on the display during Trunk Scan instead of simply SCAN.

Setting the Delay Mode for Trunking Mode

The delay of 5 seconds is automatically set for each talkgroup for ID Scan mode and ID Search mode. To set the delay feature, enter into the Menu mode.

1. Press **MENU/BACK**.
2. Select SCAN OPTION-TRUNK by rotating the **VFO** and pressing **E**.
3. Select the bank number by rotating the **VFO** and pressing **E**.
4. Select DELAY and then press **E**.
5. Rotate the **VFO** to select ON or OFF and then press **E**.

Note: If you want to verify Delay mode setting, press and hold **MENU/BACK** for 2 seconds.

Setting Priority in Trunking Mode

You can set priority in your trunking lists, just as you do in your conventional ones. You can set the priority by pressing and holding **PRI** for 2 seconds in ID Scan Hold mode. After you've set up your Scan List, press **PRI** to activate it.

It's very similar to conventional priority although there is no "interrupt" during the transmissions. Priorities are checked in between transmissions.

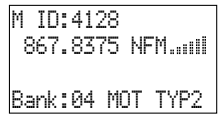
With Priority On, you can hold on an ID in your Scan List, such as Scan List 6, memory position 7, and the scanner will check all the priorities in all the active Scan Lists in between any transmissions on the ID on which you're holding. The lowest numbered priority will be checked first. For example, the priority ID in List 1 will be checked before the priority in List 2, etc.

Note: This function does not work in LTR tracking.

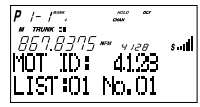
Programming Scan Lists During Search

To select a Scan List location and store an ID during Search mode, follow these steps:

1. When your scanner stops on an ID you want to store, press **HOLD/MAN**.



2. Press **TRNSFR** and the empty Scan List appears on the display, then press **E**. In case you want to change the memory location, you can change it by rotating the **VFO**.



3. Press **RSM** to return to Trunk Tracking Search mode.

Deleting a Stored ID

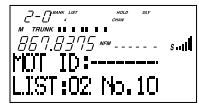
To delete a stored ID:

a. Press **HOLD/MAN**.

b. Rotate the **VFO** to select the Scan List location you want to delete.

c. Press **0**.

d. Then press **E**.



Moving between Scan List Memories

There are a number of ways to step and move through your Scan List memories:

1. Press **HOLD/MAN** and rotate the **VFO** to move to up or down.
2. Or, press **HOLD/MAN**, next press **0-9** (scan list number), then press **0-9** (memory position), for example. To move to Scan List 4, memory position 10, press: **HOLD/MAN**, **4**, **0**, **HOLD/MAN**

Set ACTIVITY ID to ON, when your scanner finds any other active ID during a transmission is received, the active ID appears every 0.5 seconds.

I-Call (Motorola/EDACS)

I-Calls are direct unit-to-unit transmissions that are not heard by other system users. Your BC250D can receive these transmissions. How you receive I-Calls depends on whether you are in Search or Scan mode.

During I-Call reception the display will show the Unit ID number of either the transmitting or receiving mobile unit, not a talkgroup. Unit IDs will display differently according to the type of trunked system, and will replace the n's shown here.

EDACS and MOTOROLA TYPE 1 ¡nnnnn

MOTOROLA TYPE 2 7nnnnn

Hint -- There are thousands of Unit IDs in typical systems, but relatively few I-Calls at a given moment, so it is normally best to let the scanner receive any I-Calls without trying to specify particular units.

I-CALLS IN SEARCH MODE

In SEARCH mode, the scanner default is that I-Call reception is OFF. This means that I-Calls will not be received until you program them to be ON. You have three choices for controlling I-Call reception. Through the Menu system, go to SCAN OPTION -TRUNK - select bank number - I-CALL, and make your selection. The menu choices are:

		I-CALLs	TALKGROUPS	
1	ON	YES	Received normally	Use this choice to receive I-Calls together with normal talkgroup traffic.
2	OFF	Not received	Received normally	This is the BC250D default
3	ONLY	YES	NOT RECEIVED	Use this setting to listen to I-Calls, and block all talkgroup reception. For quick access to this mode, press . (decimal) then **RSM**.

You can HOLD any I-Call IDs. Because you can only hold on one ID, and there are two IDs involved in any I-Call communication (the transmitting and the receiving units), you might not hear the full conversation, but you probably will.

☞ In SEARCH mode, when you hear an interesting I-Call, you can enter the instant shortcut . (decimal key) then **RSM** to enter I-Call ONLY mode. This blocks all talkgroup traffic and lets you hear just the I-Call. To return to normal reception, you must use the Menu system to select the ON or OFF option.

Note: When storing I-Call IDs, remember that the ID will be for only one of the units – either the transmitting or receiving unit. Unless you specifically want to receive a certain ID, it might be better to use the special code in the HINT below.

I-CALLS IN SCAN AND HOLD MODE

You can store I-Call IDs in Scan Lists, just like talkgroup IDs, for use by ID Scan and Manual modes. To program a specific I-Call Unit ID into a Scan Lists:

EDACS or Motorola Type 1
Enter ⊙ (decimal key) followed by the Unit ID digits, then **SCAN**.

Motorola Type 2
Enter 7 followed by the Unit ID digits, then E.

HINT - There is a special code to let you receive all I-Call IDs with a single Scan Lists entry.
Simply enter ⊙ (decimal key), **0**, **SCAN**. This will store the special code i0 in an EDACS Scan Lists, or 700000 in a Motorola Scan Lists or Digital. Then, whenever you SCAN this entry, or select it in HOLD mode, the scanner will receive any active I-Calls, regardless of the Unit IDs.

Note: Motorola I-CALL tracking performance may vary between systems.

Multi-Track

The BC250D allows you to track more than one system at a time. Here are some highlights of this feature:

- ❖ You can actually track up to 10 trunking systems at one time.
- ❖ You can trunk, scan, or search and scan conventional frequencies at the same time.
- ❖ You can program conventional frequencies in the same bank as trunking systems.
  After the scanner finishes checking a trunked system for activity, it will conventionally scan the other frequencies in the bank (remember, only trunking frequencies are programmed in TRUNK mode).

To scan a mix of trunking and conventional banks, select the banks you wish to be active with trunking Off, then press **TRUNK**. The scanner will instantly begin scanning. If you have not programmed a trunking bank with talkgroup ID's, you will receive NO ID (----) message for that bank. You can switch to SEARCH mode and the scanner will search for any active ID's on the system.

Multi-Track Operational Details

When more than one trunk system is active (for example two or more trunked systems or a trunked system and one or more conventional frequencies), the radio jumps between systems/frequencies as follows:

TRUNK SCAN: The scanner moves to a trunked system and looks for IDs in your Scan List(s) for up to 1 second. If it finds no activity on your programmed talkgroups, it

moves on to conventional channels in the same bank or to the next active bank.

If the scanner finds that a talkgroup in one of your active Scan Lists is on the air, you will begin to hear that communication and the scanner will of course display the proper talkgroup number and any alpha tag. When the communication ends, the scanner will wait for 5 seconds for any further replies and, if none, the scanner will move to the conventional channels in the same bank or to the next bank.
The scanner will not look for any other IDs within the same trunked system (as this would slow the scan process). Note that if you press **RSM** while you are listening to one ID, the scanner will check to see if another ID in your Scan List is active. It will disregard the ID to which you were just monitoring.

TRUNK SEARCH: This mode works similarly to TRUNK SCAN. If the scanner finds any (non-locked-out) ID when it checks the control channel, you will hear it. You will then hear any replies that follow within 5 seconds. After that the scanner will move on and not continuously search the system for additional IDs (on busy systems you would never leave the system if this were the case). Note that if you press the **RSM** key while monitoring one ID, the radio will check if any other IDs are active (it will disregard the ID you just left), and if none are active, it will move on.

SCAN & SEARCH Icons

For the first time on a Uniden scanner, you will see both the SCAN and the SEARCH icons active at the same time. This indicates that the radio is scanning conventional banks and Trunk searching trunking banks. When the radio is trunking, only the SEARCH icon will be illuminated. Note that to start a conventional search, you must place the radio in conventional hold mode and then press the **SEARCH** key.

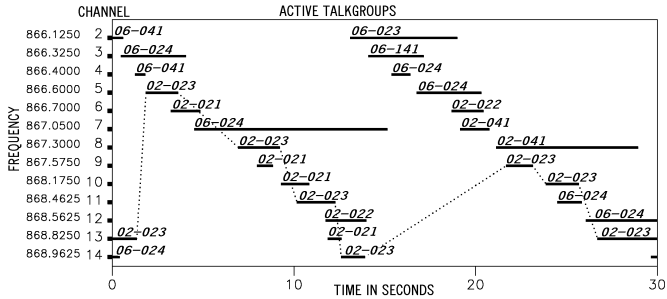
EDACS® Reception

EDACS® Tracking

TrunkTracker III now allows tracking of EDACS® trunked systems. Until now these widely used systems have been almost impossible to monitor with a conventional scanner. With your TrunkTracker III listening to EDACS(s) is remarkably easy, and perhaps even easier than conventional scanning.

EDACS systems use 'Transmission Trunking', which means that each transmission is assigned a new frequency. As the conversation moves through the system's frequencies, your TrunkTracker III automatically follows it.

This chart shows a 30 second sample of EDACS transmissions. Eight different talkgroups are using the system as their transmissions switch between the thirteen system frequencies.
Notice how the dotted line shows talkgroup 02-023 moving from channel to channel. Your BC250D can clearly and automatically follow this talkgroup, or any other, as you select.

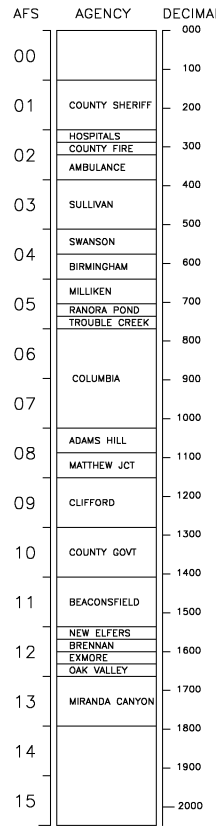


EDACS systems are organized in a logical way that keeps related talkgroups together. Your scanner is designed to take maximum advantage of this organization to make your scanning easy. It lets you zero in on just the part of the system you want to hear, whether it is an individual channel or an entire department or city.

Programming EDACS System Frequencies

When you program EDACS frequencies, it is critical that you store each one in the CORRECT LOCATION. By the nature of EDACS systems this is necessary for tracking. This often is not the frequency order, so you must be sure you have the right sequence. Sources for this information can be found at **scanner.uniden.com**.

An EDACS® Trunked system



This chart shows how talkgroups are organized within an EDACS system at the AGENCY level. The individual talkgroups cannot be shown at this scale because there are over 2000. However the chart can show the 16 Agencies in this example. The system is logical and easy to understand. EDACS systems are typically arranged in an outline structure.

The system users are given blocks of talkgroups. Sizes vary but most large cities and other agencies have blocks of 128 channels. Smaller cities have only 64 or 32 channels.

In this example, the County Sheriff is agency 01. The city of Sullivan is Agency 03. Adams Hill and Matthew Junction share Agency 08.

Your scanner shows EDACS talkgroups in AFS (Agency-Fleet-Subfleet) format. This helps you see, at a glance, who you are monitoring. And with the partial-entry feature you can easily include nearby, related channels in the same Fleet or Agency. You can just as easily exclude entire unwanted Fleets and Agencies.

When in Search mode, with the system frequencies programmed, and your scanner locked to the control channel, you can select a desired city by keying in the AGENCY part of the AFS talkgroup. For example, you can select the entire city of Sullivan with 4 key presses **0**, **3**, ⊙ (decimal key), **SEARCH**.

When you hear an interesting talkgroup, capture it to your scan list by pressing **E** during the transmission.

Or HOLD on it by pressing the **HOLD/MAN** key.
If you want to monitor the Sullivan Police Dispatch channel (which is talk group 03-062), press **0**, **3**, ⊙ (decimal key), **0**, **6**, **2**, **RSM**.

Your scanner can also work in DECIMAL format.
This talkgroup in decimal format is 434. But decimal format does not give you any information about the system hierarchy.
For example Sullivan, in decimal, uses channels from 384 to

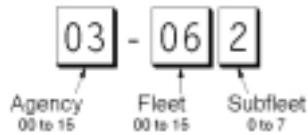
511. This is not as easy to remember as Agency 03. But decimal is useful if you need to work from decimal talkgroup lists.

Special EDACS® Features

AFS Partial Entry Feature

AFS is Uniden's method of encoding EDACS talkgroups. AFS stands for 'Agency-Fleet-Subfleet'.

AFS talkgroups are used in all EDACS reception -- in ID SEARCH, ID LOCKOUT and ID SCAN Scan Lists. The powerful AFS Partial Entry feature designed into the BC250D lets you use either a complete talkgroup code, or just the most significant part.



This feature lets you expand or narrow searching and scanning to one of 4 levels. By entering only the desired part of an AFS talkgroup, you can select 2048 talkgroups, 128 talkgroups, 8 talkgroups, or a single talkgroup. For example, you could program every talkgroup in a police department with just 4 key presses. You can use the AFS Partial Entry feature anywhere that you need to specify EDACS talkgroup.

Your BC250D can also enter or display EDACS talkgroups in decimal format (0-2047). Select SCAN OPTION - TRUNK - select bank Number - EDACS ID FORM by rotating the **VFO** and pressing **E**. And change it to DECIMAL and press **E**. You can use this feature to translate decimal talkgroups lists to the much more powerful AFS format.

Examples of how you might use AFS are shown above in the description of an EDACS trunked system, and elsewhere in this manual. It is very easy to use. Be sure to become familiar with AFS Partial Entry, and your scanning will become far more flexible and efficient.

Emergency Call Alert

Your BC250D alerts you when an EDACS Emergency transmission occurs.

EDACS systems often provide users with an 'Emergency' mode on their radios. Users in trouble can alert the dispatcher and other units and get priority access to the radio system. When a user activates Emergency mode, EMERGENCY will flash the display during the entire transmission. At the

beginning of each transmission it will sound a distinctive emergency alert tone three times.

Patch Tracking

The BC250D can follow EDACS patched talkgroups.

EDACS systems sometimes bring several talkgroups together in a 'Patch'. A patch might be used by a police agency at night to provide a single channel with a single dispatcher for a wide area. A patch is created when a single, temporary talkgroup substitutes for the original talkgroups. While the patch is running, which may be for hours or days, the original talkgroups cease to be used. If you were monitoring one of these talkgroups, you might think there was no traffic, but in fact the talkgroup was operating at the different temporary number.

If a talkgroup in your Scan List is patched, your scanner will continue to receive it under its new identity until the patch has ended. When a patch is being received, the radio will display PATCH ID, and will show the temporary common talkgroup plus all the included talkgroups in a cycling display.
The BC250D is limited to following one patch.

The temporary talkgroups used for patches are usually found in AFS code 15-xxx, and sometimes 00-xxx.

LTR® Reception

LTR® Tracking

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 trunking information as digital subaudible data that accompanies each transmission. Users on an LTR system are assigned to specific talkgroups, 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 talkgroup ID on the display. In the ID Scan mode, the scanner only stops on the transmission if the LTR data matches a talkgroup ID that you have stored in the bank's talkgroup ID list and have not locked out.

LTR systems are frequently programmed so that each radio has a unique ID code.

Motorola Reception

Motorola Tracking

There are really two types of Motorola trunking systems. These are usually referred to as Type I and Type II systems. Type I only occurs on some 800 MHz systems. All VHF, UHF and 900 MHz trunking systems use Type II.

One important distinction between these two systems is the amount of data transmitted by each radio when its push-to-talk button (**PTT**) is pressed. Every radio in a trunked system is assigned a unique ID so the central site computer can identify it when it's used. Both Type I and Type II systems place radios (or radio users) into groups, called talkgroups, and these talkgroups are also assigned unique IDs. Some radios have access to only one talkgroup, while others have access to many talkgroups. The talkgroup(s) each radio can access is called the radio's affiliation(s).

In a Type II system, when someone uses their radio, only the radio ID is transmitted when **PTT** is pressed, whereas in a Type I system the radio ID and its current affiliation are both transmitted when **PTT** is pressed.

Why the difference? Type II systems are slightly more advanced because the central computer maintains a database which is used to determine each radio's affiliation (s).

Changes to a Type II system are easier than Type I because the system manager only needs to update the database instead of reprogramming individual radios.

Another difference between the systems is that Type I systems are arranged in a Fleet-Subfleet hierarchy. For example, its possible for a city using a Type I system to designate 4 Fleets, each with 8 Subfleets. Their fleets might be the Police Department, the Fire Department, Utilities, and Administration. The Police may decide to further divide their fleet into subfleets such as Dispatch, Tactical Operations, Detectives, North, South, East and West Side Patrols, and Supervisors. All the available police radios would then be assigned to one of the police subfleets. Determining the exact Fleet-Subfleet hierarchy for a particular area is referred to as Fleet Map Programming, which is discussed further in this manual.

The disadvantage of a Type I system is that when **PTT** is pressed, the brief burst of data must contain the radio's ID and its Fleet and Subfleet. This is three times the amount of data a Type II system radio sends, and as a result Type I

systems usually accommodate fewer users than Type II systems.

Even though there are many Type II systems, Type I systems are still in use. There are also Hybrid systems which are a combination of both Type I and Type II. Your scanner defaults to monitor Type II systems, but its possible to select a Preprogrammed Fleet Map or create a Custom Fleet Map for your area.

For VHF and UHF Type II trunking systems, you will need to know the base, spacing frequencies and offset channels. See page 72 for details.

Fleet Map Programming

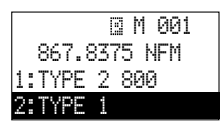
If you have programmed a trunk tracking bank for Motorola type and press **TRUNK** to start Multi-Track, you will see user IDs display on the display. Since the BC250D defaults to Type II systems, all the IDs will appear as numbers. However, if you notice a mix of odd and even user IDs, for example 6477, 2560, 6481, 6144, 1167, etc., then you are probably monitoring either a Type I or Hybrid systems.

You may also notice that you are missing responses when you hold on an active ID. Unlike Type II, Type I/Hybrid systems require a Fleet Map that sets specific Fleet-Subfleet parameters. It is easy to select a Fleet Map for your scanner; what is not 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/Hybrid 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 Preset Fleet Map

1. Select TYPE 1 for the Trunk Type. (Refer to "Selecting or Changing Trunking System Type" on page 50.)



2. Select the map you want to program by rotating the **VFO** and pressing **E**.

The scanner returns to the other programming items.

Note: You will now begin to see Type I Fleet-Subfleet IDs.

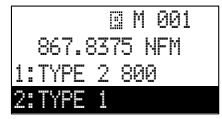
For example, 100-12, 100-9, 000-12, 400-8, etc. See "User Defined Fleet Maps in the Appendix" for more information about Type I IDs.

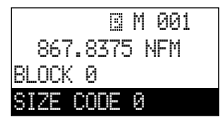
How do you know if the preset map is correct? You will have to listen to see if you're following complete conversations. If not, you should try another preset map.

Programming a Fleet Map

You may want to read "User Defined Fleet Maps" in the Appendix before programming a Fleet Map. It contains a detailed explanation of Scanner Fleet Map Programming, as well as a table listing the Fleet Map Size Codes.

1. Select TYPE 1 for the Trunk Type. (Refer to "Selecting or Changing Trunking System Type" on page 50.)
2. Select USER CUSTOM by rotating the **VFO** and pressing **E**.
3. Select the size code for the first block by rotating the **VFO**.
4. Press **E**.
   The next available block displays.
5. Repeat step 3 and 4 until you have selected a size code for each block. For details about each size code, see "Fleet Map Size Codes" in the Appendix.





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 a Fleet Map" in the previous section. 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 IDs. That is, Type II IDs usually appear as an even number without a dash; Type I IDs appear as a three or four digit number, followed by a hyphen, followed by a one or two digit number.

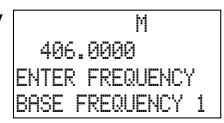
Setting the Base, Spacing Frequencies and Offset Channel for Motorola VHF/UHF Trunked Systems

To properly track Motorola VHF and UHF trunked systems you must enter what is known as the base, the spacing frequencies and offset channels for each system.

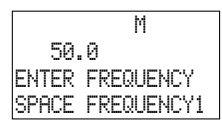
To find these out, check the **www.trunktracker.com** or **www.bearcat1.com/free.htm** and other web sites and frequency resources.

To enter the Base, Spacing Frequencies and Offset Channel: (You can set up to three sets of these, but almost all systems only use one set)

1. Press **MENU/BACK**.
2. Select SCAN OPTION-TRUNK by rotating the **VFO** and pressing **E**.
3. Select the bank number by rotating the **VFO** and pressing **E**.
4. Select TRUNK TYPE-TYPE 2 UHF or TYPE 2 UHF by rotating the **VFO** and pressing **E**.
5. Select BASE CONFIG from 1 - 3 by rotating the **VFO** and pressing **E**.



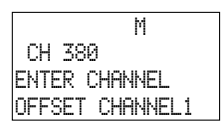
6. Enter a new Base Frequency with the keypad.
7. Press **E**.
   The display changes for entering the Spacing Frequency.



8. Enter a new Spacing Frequency with the keypad.

Note: You can only enter within a range of 5-100 kHz, and 5 or 7.5 or 12.5 kHz multiples.

9. Press **E**.
   The display changes for entering the Offset Channel.
10. Enter a new Offset Channel with the keypad.



Note: You can only input within a range of 380-759.

11. Press **E**.
    The display changes for entering the next Base Frequency.
12. To exit from this mode, press **MENU/BACK** repeatedly.

Note: • If the system is not tracking properly, you may need to try a new Base Frequency or Offset Channel or you may be missing frequencies from the system.

• You can set up to three Base, Spacing and Offsets for Motorola VHF/UHF trunked systems.

13. The Offset Channel for the first set should be CH380 (just press **MENU/BACK** to confirm this as the default).

14. After you have pressed **MENU/BACK** to confirm CH380, the display will change to allow you to set the second (of a maximum of three) Base/Space/Offset combinations. Since almost all systems only use one set, press **MENU/BACK** to exit the programming mode and return to scanning.

Toggling the Status Bit

On Type II trunking systems there is a method by which specialized types of communications utilize unique talkgroup numbers. An emergency call will occur on a unique talkgroup from its primary assignment, for example. Because the BC250D defaults to Status-Bit On mode, you never need to worry about missing these transmissions. If you have programmed talkgroup 33264 into Scan List memory, for example, and there is an emergency call within the group, you will hear it on 33264.

The only time you may wish to turn Status Bits Off is if you're trying to figure out the proper Fleet Map of a Type I trunking system. To turn Status Bits Off, enter into the Menu mode and select SCAN OPTION - TRUNK - select bank number - STATUS BIT. (This feature does not apply to EDACS and LTR operation within the scanner.) Then rotate the **VFO** to change the setting (ON to OFF) and press **E** to program your change.

Control Channel Only Mode

When this function is activated, trunking is performed using Control Channel data only. Voice channel (also known as "DATA channel") frequencies do not have to be programmed into memory. When using this feature, the scanner will display CC and channel activity indicator bars will not operate. This feature only applies to Motorola 800 MHz and 900 MHz systems.

To turn this function on, choose Motorola TYPE 2 800 MHz or 900 MHz or TYPE 1 in the Menu mode. Then set to the desired control plan by selecting SCAN OPTION - TRUNK - select bank number - CNTRL CH

ONLY.

You must choose one of 4 frequency plans before you begin to Control Channel Trunk. Note that the default, Plan 1, is the most common. Read the description of the Plans below for details on which may apply for you.

PLAN 1: Use Plan 1 if the last three digits of ALL the frequencies in use end in one of the following three digits: 125, 375, 625, or 875 (example: 856.1125, 860.7375, 859.6625, 855.8875).

PLAN 2: If the last three digits of frequencies are less than 869.0000 and end in one of the following three digits (125, 375, 625, or 875) AND if ANY other frequencies end in (000, 250, 500, or 750) use Plan 2.

PLAN 3: If the last three digits of ALL the frequencies in use end in one of the following three digits (000, 250, 500, or 750) use Plan 3.

PLAN 4: If the last three digits of frequencies are less than 866.0000 and end in one of the following three digits (000, 250, 500, or 750) AND if ANY other frequencies end in (125, 375, 625, or 875) use Plan 4.

Of course you will know the Control Channel frequency itself so that will help you determine the proper plan. If you try one plan and you receive errors (such as the scanner jumping to channels that are obviously not part of the system), you should try an alternate Plan.

Note: In chain search mode, Control Channel Trunk is activated in the menu mode (See page 18).

Note: You can assign a Fleet Map to TYPE 1 or Hybrid systems scanned in Control Channel Only mode by going into the Menu. You can also program IDs, set a delay, alpha tags and all the other parameters for systems scanned in this mode. You can then either search the system to find new IDs or you can program IDs into memory and then scan them.

Note: The Control Channel Only feature is an extremely powerful tool. You can use it to determine if systems you are familiar with may have added new frequencies or you can use it to discover new systems by simply finding active control channels (using Search) and then programming them for Control Channel operation only.
Remember that this feature only applies to Motorola 800 and 900 MHz systems, that you do have to set the Menu for the proper system type (800 MHz of Type 1 or Type 2 or 900 MHz) and you do have to

program the Control Channel frequency into Memory and press and hold the **TRUNK** key to identify the frequency as trunked.

Disconnect Tone Detect Option (End Code)

When this function is disabled, the radio looks for squelch before returning to the Control Channel instead of waiting for the Disconnect Tone. Only in rare instances will you need to adjust the default settings.

The condition to return to Control Channels depends on whether the signal is present or not.
To set this function to on/off, select SCAN OPTION - TRUNK - select bank number - END CODE (MOTOROLA).
Select DETECT or IGNOR you want to set.

EDACS SCAT

With the EDACS SCAT feature turned “ON”, the data stream transmissions will be eliminated allowing you to clearly monitor the voice communications on EDACS SCAT systems.

To monitor EDACS SCAT systems you only need to turn this feature EDCS SCT. “ON” with designated frequency. You do not need to enter group ID’s.

Note: As EDACS SCAT is different from the other tracking feature, and it is not a feature which the scanner tracks any ID, you do not need to program TALK GROUP ID in the menu mode.

APCO Project 25 Reception

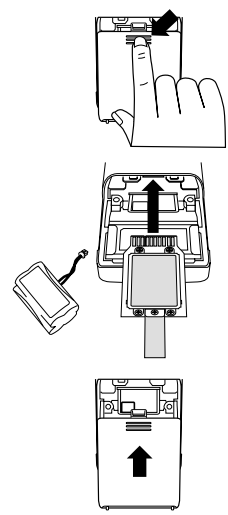
APCO Project 25 is a modulation process where Voice Communications are converted into Digital Communications. This conversion is similar to the technology used with digital mobile phones. There are several Types of Project 25 systems available!

- Conventional – One frequency with Digital voice.
- Trunked with Analog Control Channel and Digital Voice – Many Frequencies shared by many Departments and the control channel is analog with digital voice. Control channel operates at 3600 Band.

Note: Do not install the APCO card with AC Adapter connected.

Installing the APCO card

1. Turn off the scanner, and open the cover.
2. Carefully unplug the battery pack.
3. Insert the APCO card.
4. Carefully plug the battery pack.
5. Replace the cover and press down until it clicks into place, and then turn On the scanner.
   APCO 25 CARD INSTALLED
   appears on the display.
   Installation is completed. You can use APCO Project 25.



Turn the APCO operation On

1. Press **MENU/BACK**.
2. Select SCAN OPTION – TRUNK by rotating the **VFO** and pressing **E**.
3. Select the bank number by rotating the **VFO** and pressing **E**.

4. Select APCO Card - ENABLE by rotating the **VFO** and pressing **E**, and exit from this menu mode and APCO 25 CARD INSTALLED appears on the display. You can use APCO Project 25.

Precautions for Installing the BCi25D Card

1. Do not touch the BCi25D card without first removing the static electricity from your body. Touch any metal to release static electricity build-up before you touch the BCi25D card.
2. Turn Off the scanner, before inserting the BCi25D card into the slot.
3. Hold the BCi25D card by its edges when inserting it into the slot.
4. Do not touch any of the terminals. The BCi25D is a sensitive electrical device.
5. Do not operate with an open battery compartment cover. This exposes the circuitry to dust and other environmental particles that cause the unit to function improperly.
6. When you remove the BCi25D card, pull out the ribbon.

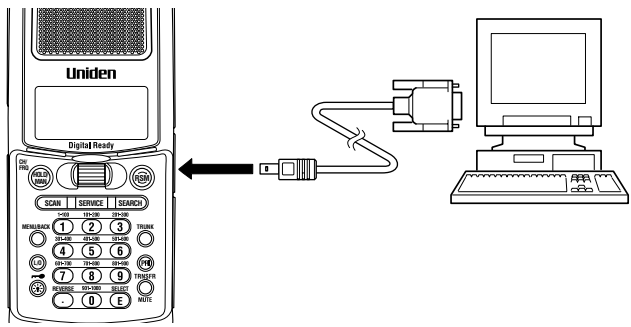
Remote Interface

You can communicate and program your BC250D in numerous ways with peripheral devices using the Remote Interface Cable port. This radio offers the following modes:

- PC Control MODE
  Program and control your scanner from a PC using third party software.
- CLONE MODE
  Clone all the frequencies, trunking talkgroups, and fleet maps programmed into your scanner to another BC250D scanner or BC785D.

PC Control Mode

To connect Scanner to PC:



Plug the smaller end of the supplied Remote Interface cable into the remote port which is on the right side of the scanner. Plug the other end of the cable (DB-9 serial connector) into a personal computer's serial port. A few PC's may require an adapter, most will not. Of course, make sure your PC is turned On.

To program your scanner:

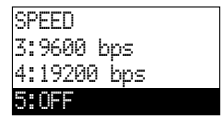
You can program and control your scanner remotely from a PC using third party software.

After connecting the scanner to a PC, turn the radio On.

To use the Remote (PC Control) mode, you must purchase third party software and use as directed. Make sure that your scanner is connected to the serial port of the PC using the REMOTE interface cable.

Start Remote Mode:

Through the Menu system, select SYSTEM OPTION-PC CONTROL by rotating the **VFO** and pressing **E**. To start Remote mode, select the transfer speed listed below except for OFF.



A unique feature of the BC250D is that all the front panel keys as well as the **VFO** on the radio remain operational in Remote mode.

For information on purchasing cables, connectors, and third party software to program and control your BC250D, you can contact the following:

Uniden Parts Department (800) 554-3988
(Hours are from 7:00 a.m. to 5:00 p.m. Central Time Monday through Friday)

scanner.uniden.com

Scanner Master (800) 722-6701
(Hours are from 10:00 a.m. to 5:00 p.m. Eastern Time Monday through Friday)

PC Control Parameter

For your information:

Transfer speed	: 2400/4800/9600/19200 bps (adjustable)
Start/Stop	: 1 bit, 1 bit
Data Length	: 8 bit
Parity bit	: None
Code	: ASCII code
Flow Control	: None
Return Code	: Carriage Return only

Change Transfer Speed

To change transfer speed, enter into the Menu mode.

1. Press **MENU/BACK**.
2. Select SYSTEM OPTION-PC CONTROL by rotating the **VFO** and pressing **E**.
3. To change the transfer speed, rotate the **VFO** and then press **E**

Clone Mode

You will need to purchase an GENDER CHANGER and a null modem adapter. GENDER CHANGER cables are available as male to male or male to female. Even if the GENDER CHANGER you buy already has the male to male connectors, you will still have to have the null modem adapter. On the

next page you will see the pin connections that are internal to a standard device. (These items are available at your local electronics stores.)

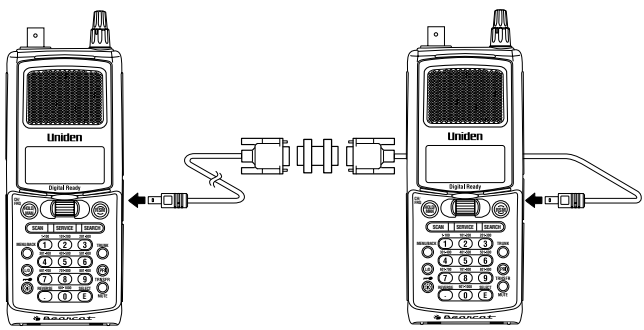
To connect the Scanner to Scanner:

Plug the smaller end of each of the supplied Remote interface cables into the remote ports which are on the right sides of each of the two scanners.

Plug the other ends of the cables (DB-9 serial connector) together using a DB-9 to DB-9 null modem adapter, and GENDER CHANGER available at most computer stores.

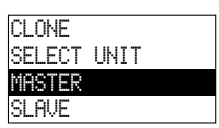
Null Modem Adapter
Pin connections

Female DB9	Male DB9
1	4
2	3
3	2
4	6 & 1
5	5
6	4
7	8
8	7
9	Not used

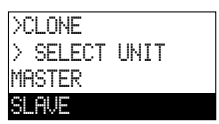


You can clone all of the programming of one BC250D into another, including frequencies, talkgroup IDs, alpha tags, delay settings, etc. After connecting the two scanners, turn the radios On. Prepare each scanner for clone mode as follows.

1. Press **MENU/BACK**.
2. Select SYSTEM OPTION - CLONE by rotating the **VFO** and pressing **E**.
3. Determine the scanner that has the frequency data that you want to transfer. This one must be set up as the "Master Unit", and the other must be set as the "Slave Unit".
4. On the scanner that is the "Master Unit", select MASTER, then press **E**.

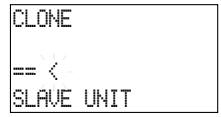


5. On the scanner that is the "Slave Unit", select SLAVE, then press **E**.

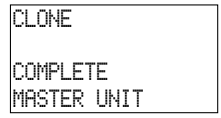


6. Press **SCAN** on both scanners. The data transfer is started from the Master Unit to the Slave Unit.

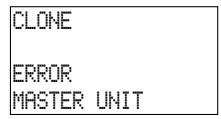
   During the data transfer, both scanners show the following displays.



   When the data transfer is complete, COMPLETE displays.



   If the data transfer is not successful, the following error message will appear.



Note: To clear ERROR, press ⊙ (decimal key). To exit the clone mode, press **MENU/BACK** repeatedly.

Note: Once you have completed the cloning of the scanners, reset the scanners by turning the scanners Off and then On again. This is particularly important to know if you wish to clone another scanner right away.

Additional Features

The following additional features are designed for you to customize your scanner. Once these features have been turned On or Off, they will remain as they are set until you reset them, even if you turn the scanner Off and then On again.

Dimmer

To change brightness of the display:

1. Press **MENU/BACK**.
2. Select SYSTEM OPTION -DIMMER by rotating the **VFO** and pressing **E**.
3. Select one from HIGH or MEDIUM or OFF by rotating the **VFO** and then press **E**.

To change lighting time:

1. Press **MENU/BACK**.
2. Select SYSTEM OPTION -DIMMER by rotating the **VFO** and pressing **E**.
3. Select 15 SECONDS or INTINATE by rotating the **VFO** and then press **E**.

Enter Lock

You can lockout the keypad to prevent re-programming of channels, talkgroups and tones (see page 90).

1. Press **MENU/BACK**.
2. Select SYSTEM OPTION-ENTER LOCK by rotating the **VFO** and pressing **E**.
3. Set to ON by rotating the **VFO** and then press **E**.

Key Lock

Key Lock prevents accidental key entries except the following keys (**KEYLOCK**, **HOLD/MAN** and **RSM**).

1. Press and hold for 2 seconds to turn ON or OFF , and then two beep tone sounds.

Key Beep Option

To choose beep sound ON or OFF:

1. Press **MENU/BACK**.
2. Select SYSTEM OPTION - KEY BEEP by rotating the **VFO** and pressing **E**.
3. Set to ON or OFF by rotating the **VFO** and then press **E**.

Screen Mask

The trunk, frequency, receiving mode, and signal meter indications on the display are masked when this feature is activated (except while in Search mode). This feature reduces the amount of displayed information.

1. Press **MENU/BACK**.
2. Select SYSTEM OPTION - SCREEN MASK by rotating the **VFO** and pressing **E**.

3. Set to ON or OFF by rotating the **VFO** and then press **E**.

Reverse Mode

This key will allow you to observe the reverse frequency of the repeater. While pressing **REVERSE**, the standard pair frequency will be displayed. For a list of the standard pair frequencies, refer to the table "Reverse List" in the Appendix. If the frequency that you have chosen does not have an offset frequency, the display will indicate ERROR and NO REVERSE. This feature does not work in the Weather Search mode.

Channel Step Selection

You can set channel steps, 5 kHz - 100 kHz or Auto, in Conventional mode or Chain search mode. The default receive mode should be the proper mode setting in almost all cases. You may wish to set some VHF channels for NFM mode, depending on any adjacent channel interference problems. Note that WFM is typically only used for broadcast frequencies, such as TV audio or FM radio.

See STEPS in "Menu Description" for details.

Mute On/Off

To manually turn On the Mute function, press and hold **MUTE** for more than 1 second until MUTE ON is displayed.
You will not hear any audio. This feature does not function in the WX alert mode, because the audio is already muted. To turn it Off, press **MUTE** again.

Receiving Mode Selection

You can also set the receiving mode, AM or FM etc., in Conventional mode or Chain Search mode.

See MODE in "Menu Description" for details.

Frequency and Channel Tuning with the VFO Control

The **VFO** knob can be used for changing frequencies or changing memory channels (for Conventional channels or talkgroup ID Scan Lists).

1. In Conventional mode, when the setting for **VFO** is channel, rotate the **VFO** to move up (to step up through channels) or down (to step down through channels). If you are in Trunk Manual mode, you will step through Scan List memory locations (whether the CHAN or the FREQ icon is active).
2. In Chain Search mode, when the setting for **VFO** is frequency, rotate the **VFO** to move up to step up through frequencies sequentially or to down to step down through frequencies. To change the step, you will need to go into the Chain Search menu and adjust the step for the desired memory location.

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, unless you have turned OFF the KEY BEEP in the menu system.

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, may 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 may be receiving a birdie. Birdies are internally generated signals inherent in the electronics of the receiver.

  Press **L/O** to lockout the channel, and then press **RSM** to resume scanning.

Troubleshooting

If your BC250D is not performing properly, try the following steps.

Problem	Suggestion
Scanner won't work.	1. Check the connections at both ends of the AC Adapter. 2. Turn ON the wall switch of your room. You could be using an outlet controlled by the wall switch. 3. Move the AC Adapter to another wall outlet.
Improper reception.	1. Check the antenna connection or move and reposition the antenna. 2. Move the scanner. 3. You may be in a remote area which could require an optional multi-band antenna. Check with your dealer or local electronics store.
Scan won't stop.	1. Adjust squelch threshold - refer to page 15, "Setting the Squelch". 2. Check the antenna connection. 3. Check to see if many of the channels are Locked Out. If so, the scanner has less chance of finding an active channel. 4. Review each channels frequency to see if it is still stored in Memory and is correct. 5. Its possible that none of the programmed frequencies are currently active.
Scan won't start.	1. Press the **SCAN** key again. 2. Adjust the **SQUELCH** control. 3. Check to see if all channels are Locked Out.
Weather Scan won't work.	1. Adjust squelch threshold - refer to page XX,"Setting the Squelch". 2. Check the antenna.

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

Problem	Suggestion
Scanner won't track.	1. May not be a system which can be tracked by your scanner. Make sure you press and hold **TRUNK** for 2 seconds to enter into Trunk mode. 2. Missing the Data Frequency 3. Change to a Type 1 Scanner setup. Review Fleet Map Programming on page 70.
Scanner won't stop during Scan List mode.	1. No IDs have been programmed. 2. The IDs you have stored are not active.
Scanner will not acquire data channel.	1. Adjust the squelch for Trunking mode See page 51. 2. Missing the frequency used for the data channel. Check your frequency list.
Missing replies to conversations.	1. Change to a Type 1 scanner setup. Review Fleet Map Programming on page 71. 2. Try another Preset Fleet Map or Program your own Fleet Map. 3. Check to see that all of the systems frequencies have been entered.
Channel Activity Indicators are flashing but no sound is heard.	1. May be a telephone interconnect call, which are intentionally blocked by your scanner. 2. The ID on your display is not active.
Scanner not tracking an EDACS system properly.	1. Logical channel numbers (frequencies) for the system are not programmed in the correct order. Check frequency resources and reprogram. 2. Not all frequencies for the system are programmed. Check frequency resources.

Problem	Suggestion
APCO 25 CARD INSTALLED screen does not appear when the scanner is turned ON.	1. Check to see if the BCi25D is properly installed. 2. Check to see if the P25 Mode is ***ON*** or ***DISABLE*** in the Menu mode (See page 76-77).
Scratchy or robotic sound is heard during communications.	1. Move to a location where the signal strength is strong. 2. Modulation accuracy of transmissions sent can be low.
Digital communication is not heard.	1. Verify the accuracy of the frequencies of the P25 system you are trying to monitor. 2. You might be in a dead-spot for the P25 system you are trying to monitor. Check other locations in the area.
DATA sound is heard at the beginning of digital communications.	1. APCO project 25 systems can send data before voice communication. 2. Data sound can be heard when signal strength is weak.
Robotic sound is heard.	1. Check to see if the ENCRYPTION message appears on the display. The scanner doesn't monitor encrypted voice communications.

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 **scanner.uniden.com** for additional information.

Specifications

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

Channel:	1000	
Banks:	10 (100 channels each)	
Service Bands:	12 preprogrammed search bands (including the NOAA Weather Service band)	
Frequency Range:	25.0 - 27.995 MHz	AM
	28.0 - 53.99 MHz	FM
	54.0 - 71.95 MHz	WFM
	72.0 - 75.995 MHz	FM
	76.0 - 87.95 MHz	WFM
	88.0 - 107.9 MHz	WFM
	108.0 - 136.975 MHz	AW
	137.0 - 161.995 MHz	FM
	162.0 - 173.9875 MHz	FM
	174.0 - 215.95 MHz	WFM
	216.0 - 224.995 MHz	FM
	225.0 - 399.95 MHz	AM
	400.0 - 512.0 MHz	NFM
	806.0 - 823.9875 MHz	NFM
	849.0125 - 868.9875 MHz	NFM
	849.0125 - 956.0 MHz	NFM
	1240.0 - 1300.0 MHz	NFM
Operating Temperature:	–20 °C to +60 °C	
Scan Rate:	100 channels per second MAX. (conventional mode)	
Search Rate:	100 steps per second MAX. (Normal Search) 300 steps per second MAX. (Turbo Search)	
Scan Delay:	2 seconds	
Audio Output:	240 mW nominal (8Ω internal speaker) 38 mW nominal (32Ω stereo headphone) 9 mW nominal (64Ω earphone)	
Internal Speaker:	8 ohms (36 mm outer diameter)	
Power Requirements:	AD600U AC Adapter (4.8V DC, 1500mA) or 4.8V DC 1500mAh (internal battery) 12V DC (AD600U AC Adapter)	
Antenna:	Rubber Antenna (included)	
Antenna Jack:	BNC type	
External Jacks:	DC 12 V Power Jack (center is positive) Remote Jack (DB-9) Earphone Jack	

Size:	65mm (W) x 45mm (D) x 153mm (H)
Weight:	350 g (11-1/4 oz.)

Features and specifications are all subject to change without notice.

Glossary of Terms

Alpha tag - This term refers to an alphanumeric text tag that you can enter to describe the individual frequencies that you have programmed. Rather than having to associate a specific frequency to the individuals that are using it, you can enter the actual name of the group. This will eliminate the need for memorizing the group's frequency.

Attenuator - This scanner comes with a feature to attenuate or reduce the signal strength. The built-in attenuator can be turned on specific frequencies to prevent strong signals from overloading the scanner input, possibly damaging the scanner or missing other transmissions due to the repeated stopping on the stronger signal.

Clone - This term identifies the ability to set up a duplicate scanner. This function allows you to clone all the programming information, including frequencies, talkgroups and alpha tags as well as bank settings and other parameters from one BC250D to another or BC785D.

Control Channel - This is the frequency within a trunking system that runs the system. On Control Channels (sometimes called Data Channels) you will hear a buzz saw sound. For the most part, it is the sound of the system's central computer directing talkgroups to particular voice (working) frequencies within the system.

CTCSS - (Continuous Tone Controlled Squelch System) refers to a system where the radio receivers are equipped with tone responsive devices which allow audio signals to appear at the audio output, select voice processing such as scrambling or control repeater functions only when a carrier modulated with a specific tone is received. This method may be used to restrict access to the repeater or receiver, or reduce interference where several stations with output frequencies in close proximity of each other make it difficult to hear the conversation you are interested in. With CTCSS squelching, you can eliminate the possibility of hearing unwanted conversations by selecting one of the 38 standard subaudible tones. You will only hear those transmissions that have been programmed on specific frequencies with the specific subaudible tone that you have selected.

DCS - (Digital Controlled Squelch) refers to a system where the radio receivers are equipped with data burst responsive devices which allow audio signals to appear at the audio output, select voice processing such as scrambling or control repeater functions only when a carrier modulated

with specific data burst is received. This method may be used to restrict access to the repeater or receiver, or reduce interference where several stations with output frequencies in close proximity of each other make it difficult to hear the conversation you are interested in. With DCS squelching, you can eliminate the possibility of hearing unwanted conversations by selecting one of the 104 standard data burst subaudible tones. You will only hear those transmissions that have been programmed on specific frequencies with the specific subaudible tone that you have selected.

Enter Lock - This is the term used for locking the keypad. This prevents accidental re-programming of channels and talkgroups entered into memory. The default setting is OFF.

When ENTER LOCK is enabled, the following functions will be disabled:

- Enter or modify the Memory Channel frequency
- Enter or modify the Tone information
- Enter or modify the Trunking ID. (this can be modified through the menu screen.)

FIPS codes - For the purpose of broadcasting weather information, the NWS (National Weather Service) has divided the United States into regions by state and county (or parish, where applicable) then assigned a 6 digit FIPS code to identify each county or parish. The first digit represents the county subdivision, the next two represents the state, and the last three digits represent the county or parish. Your scanner can receive all SAME alert signals broadcasted within about a 50-mile radius of where you install it. So if you only want to hear the counties that are nearest to your area, you can choose specifically the FIPS code of areas that you want. This lets you avoid hearing warnings that apply to an area within a 50-mile radius but not necessarily in your county or parish.

I-Call - Most communications within a trunked system are group calls where one unit (such as a dispatcher) communicates with all the units within her group (all the patrol vehicles on the east side of town, for example). The units within this group comprise what is typically known as a talkgroup. There are some communications which are direct unit-to-unit conversations where one individual converses with another individual. The call is initiated by a radio and is directed to another single radio. Within the system, no one outside of these two users hears the conversation. This call is referred to as I-Call.

Key Beep - This is another term for the tone you hear as a keypad acknowledgement beep. The default setting is on. If you have turned the Key Beep off, you now have a silent keypad. You will not hear a tone each time you press a key.

NWR S.A.M.E. Weather Alert - In 1994, the National Oceanic and Atmospheric Administration (NOAA) began broadcasting coded signals called FIPS (Federal Information Processing System) codes along with the standard weather broadcasts for stations in your area. These codes identify an emergency and the specific geographic area (such as your county) affected by the emergency. The scanner was developed with SAME (Specific Area Messaging Encoding) technology. This allows you scanner to receive, interpret, and display the information about the codes so you can determine if the emergency might affect you area.Each FIPS code identifies a specific geographic area (defined by the National Weather Service) so your scanner sounds an alert only when a weather emergency is declared in those locations. This helps you more efficiently track the weather conditions in and around your area.

PC Control - This term is associated with the ability to program frequencies and other useful information via a computer by means of the Uniden national database or third party software. You can change the transfer speed on the scanner needed to be compatible with your PC. (See page XX)

Scan List - When you designate a bank to be a trunking bank, your scanner sets up 10 Scan Lists, which are simply list of your favorite IDs. Each list can contain up to 10 IDs, so you can store a total of 100 IDs for each trunk bank. These lists are designed to help you organize the trunking system users into categories.

Screen Mask - Screen Mask reduces the amount of information that appears on the display. Alpha tags that you have set for a channel along with a few function icons will appear only on the display. This mode is particularly useful in public safety vehicles where that are already overloaded with information. Screen Mask does not work in Search mode.

Status Bit - This term refers to Motorola Type II systems. There is a method by which special types of communications utilize unique talk group numbers. For example, if all emergency calls are set to occur on a specific talk group number then you will not miss the transmission even if you have not programmed all the talk group numbers. With the Status Bit on and you have

programmed the unique number, then you don't have to worry what the rest of the groups numbers are. The topic of interest will be picked up.

Talkgroup - A group of users within a trunked system that communicates with one another.

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 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 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 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 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 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 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 16

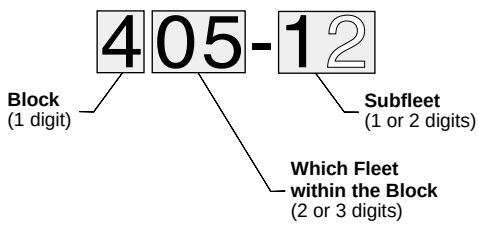
Block	Size Code
0	SIZE CODE 3
1	SIZE CODE 10
2	SIZE CODE 10
3	SIZE CODE 11
4	SIZE CODE 0
5	SIZE CODE 0
6	SIZE CODE 12
7	(SIZE CODE 12)

User Defined Fleet Maps

Type I Programming Information

When a Type I system is designed, the address information for all the IDs are divided into 8 equal sized blocks. 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 have defined the Fleet Map for the system you're tracking. Each size code determines the number of Fleets, Subfleets, and IDs each block will have. For example, a size code of "4" has one Fleet, which is divided into 16 separate Subfleets, and it has a total of 512 individual IDs.

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 IDs display on your scanner depends on the block number and the blocks size code. When a Type I ID displays, the left most digit represents the block which contains the ID. The next two or three 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 systems users. Some organizations may want many subfleets with only a few radios each, while another organization may 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 IDs 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. SIZE CODE 3 and SIZE CODE 4 are probably the most common, followed by SIZE CODE 10, SIZE CODE 11, and SIZE CODE 12.

Fleet Map Size Codes

Size	Fleets	Subfleets	IDs	Blocks Used
0	Reserves block for Type II IDs			+
1	128	4	16	1
2	16	8	64	1
3	8	8	128	1
4	1	16	512	1
5	64	4	32	1
6	32	8	32	1
7	32	4	64	1
8	16	4	128	1
9	8	4	256	1
10	4	8	256	1
11	2	16	256	1
12	1	16	1024	2
13	1	16	2048	4
14	1	16	4096	8

Size Code Restrictions

If you select SIZE CODE 12, 13, or 14, there are some restrictions as to which blocks can be used for these codes.

- SIZE CODE 12 can only be assigned to Blocks 0, 2, 4, or 6.
- SIZE CODE 13 can only be assigned to Blocks 0 and 4.
- SIZE CODE 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 SIZE CODE 12, you will be prompted for Block 2, the next block available, instead of Block 1. And if you assign Block 0 as SIZE CODE 14, you would not see another prompt because all available blocks have been used.

NWR-SAME EVENT CODE

Event Code	Standard	Event Level (Siren Type)				LCD Display
		Warning	Watch	Statement	Test	
Emergency Action Notification	EAN	0				EMG NOTIFY
Emergency Action Termination	EAT	0				EMG TERMINATE
National Information Center	NIC	0				NATIONAL INFO
Tornado Warning #	TOW(or TOR)	0				TORNADO
Service Thunderstorm Warning #	SVW(or SVR)	0				THUNDERSTORM
Flash Flood Warning	FFW	0				FLASH FLOOD
Flash Warning	FLW	0				FLOOD
Winter Storm Warning	WSW	0				WINTER STORM
Blizzard Warning	BZW	0				BLIZZARD
High Wing/ Dust Storm Warning	HWW	0				HIGH WIND
Radio logical Hazard Warning	RHW	0				RADIOLOGICAL
Civil Danger Warning	CDW	0				CIVIL DANGER
Local Area Emergency	LAE	0				LOCAL EMG
Hazardous Material Warning	HMW	0				HAZARDOUS
Civil Emergency Message	CEM	0				CIVIL EMG
Immediate Evacuation Warning	IEW	0				EVACUATION
Immediate Evacuation Notice	EVI	0				EVACUATE NOTE
Law Enforcement Warning	LEW	0				LAW ENFORCEMENT
Fire Warning	FRW	0				FIRE

Event Code	Standard	Event Level (Siren Type)				LCD Display
		Warning	Watch	Statement	Test	
Hurricane/Tropical Storm Warning	HUW	0				HURRICANE
Tsunami Warning	TSW	0				TSUNAMI
Coastal Flood Warning	CFW	0				COASTAL FLOOD
Special Marine Warning	SMW	0				SPECIAL MARINE
Avalanche Warning	AVW	0				AVALANCHE
Volcano Warning	VOW	0				VOLCANO
Shelter In Place Warning	SPW	0				SHELTER
Civil Danger Watch	CDA		0			CIVIL DANGER
Radiological Hazard Watch	RHA		0			RADIOLOGICAL
Hazardous Material Watch	HMA		0			HAZARDOUS
Winter Storm Watch	WSA		0			WINTER STORM
High Wing/ Dust Storm Watch	HWA		0			THUNDERSTORM
Tornado Watch	TOA		0			HIGH WIND
Service Thunderstorm Watch	SVA		0			THUNDERSTORM
Flash Flood Watch	FFA		0			FLASH FLOOD
Flood Watch	FLA		0			FLOOD
Hurricane/ Tropical Storm Watch	HUA		0			HURRICANE
Tsunami Watch	TSA		0			TSUNAMI
Coastal Flood Watch	CFA		0			COASTAL FLOOD
Avalanche Watch	AVA		0			AVALANCHE
Volcano Watch	VOA		0			VOLCANO

Event Code	Standard	Event Level (Siren Type)				LCD Display
		Warning	Watch	Statement	Test	
Service Weather Statement	SVS			0		SERVICE WX
Special Weather Statement	SPS			0		SPECIAL WX
Flash Flood Statement	FFS			0		FLASH FLOOD
Flood Statement	FLS			0		FLOOD
Hurricane Statement	HLS			0		HURRICANE
National Periodic Test	NPT				0	NATION PERIOD
Required Monthly Test	RMT				0	MONTHLY
Required Weekly Test	RWT				0	WEEKLY
System Demonstration/ Practice	DMO				Note	SYSTEM DEMO
National Hazard Warning	NHW	0				NATION HAZARD
Unknown Emergency Tune TV	**E	0				UNKNOWN TV
Unknown Warning Tune TV	**W	0				UNKNOWN TV
Unknown Watch Tune TV	**A		0			UNKNOWN TV
Unknown Statement Tune TV	**S			0		UNKNOWN TV

REVERSE LIST

Range	Offset	Range	Offset
29.520 - 29.580	+0.1 MHz	445.000 - 449.9875	-5 MHz
29.620 - 29.680	-0.1 MHz	450.000 - 454.9875	+5 MHz
52.010 - 52.990	+1 MHz	455.000 - 459.9875	-5 MHz
53.010 - 53.990	-1 MHz	460.000 - 464.9875	+5 MHz
143.750	+4.375 MHz	465.000 - 469.9875	-5 MHz
143.900	+4.25 MHz	470.000 - 472.9875	+3 MHz
144.510 - 144.890	+0.6 MHz	473.000 - 475.9875	-3 MHz
145.110 - 145.490	-0.6 MHz	476.000 - 478.9875	+3 MHz
146.010 - 146.385	+0.6 MHz	479.000 - 481.9875	-3 MHz
146.415 - 146.505	+1 MHz	482.000 - 484.9875	+3 MHz
146.595	+1 MHz	485.000 - 487.9875	-3 MHz
146.610 - 146.985	-0.6 MHz	488.000 - 490.9875	+3 MHz
147.000 - 147.390	+0.6 MHz	491.000 - 493.9875	-3 MHz
147.415 - 147.505	-1 MHz	494.000 - 496.9875	+3 MHz
147.595	-1 MHz	497.000 - 499.9875	-3 MHz
147.600 - 147.990	-0.6 MHz	500.000 - 502.9875	+3 MHz
148.125	-4.375 MHz	503.000 - 505.9875	-3 MHz
148.150	-4.25 MHz	506.000 - 508.9875	+3 MHz
222.120 - 223.380	+1.6 MHz	509.000 - 511.9875	-3 MHz
223.720 - 224.980	-1.6 MHz	806.000 - 823.9875	+45 MHz
420.000 - 424.9875	+5 MHz	851.000 - 868.9875	-45 MHz
425.000 - 429.9875	-5 MHz	896.000 - 901.000	+39 MHz
440.000 - 444.9875	+5 MHz	935.000 - 940.000	-39 MHz

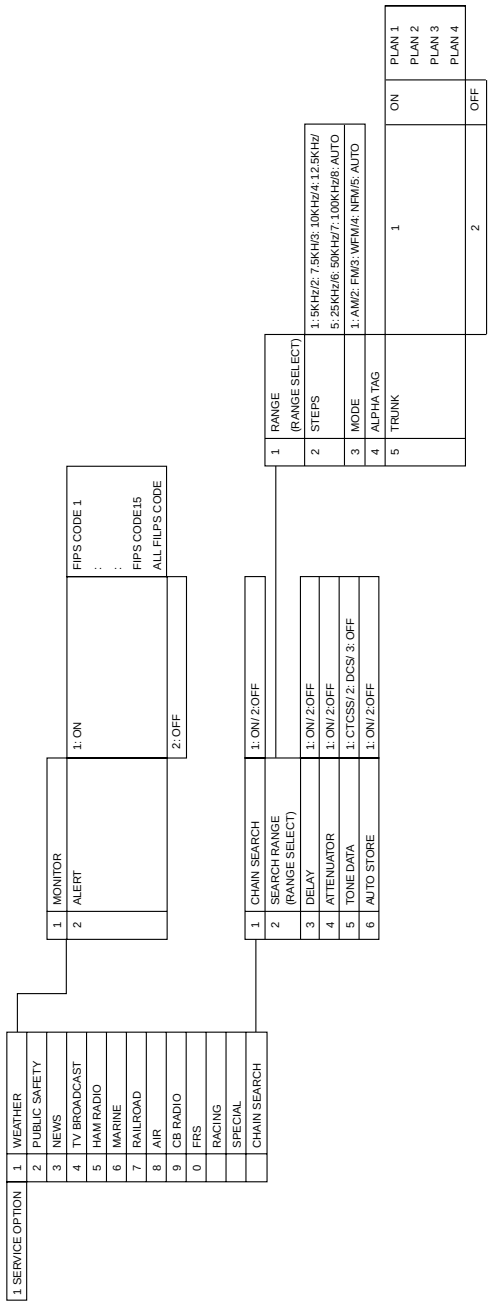
CTCSS Frequency List (Hz)

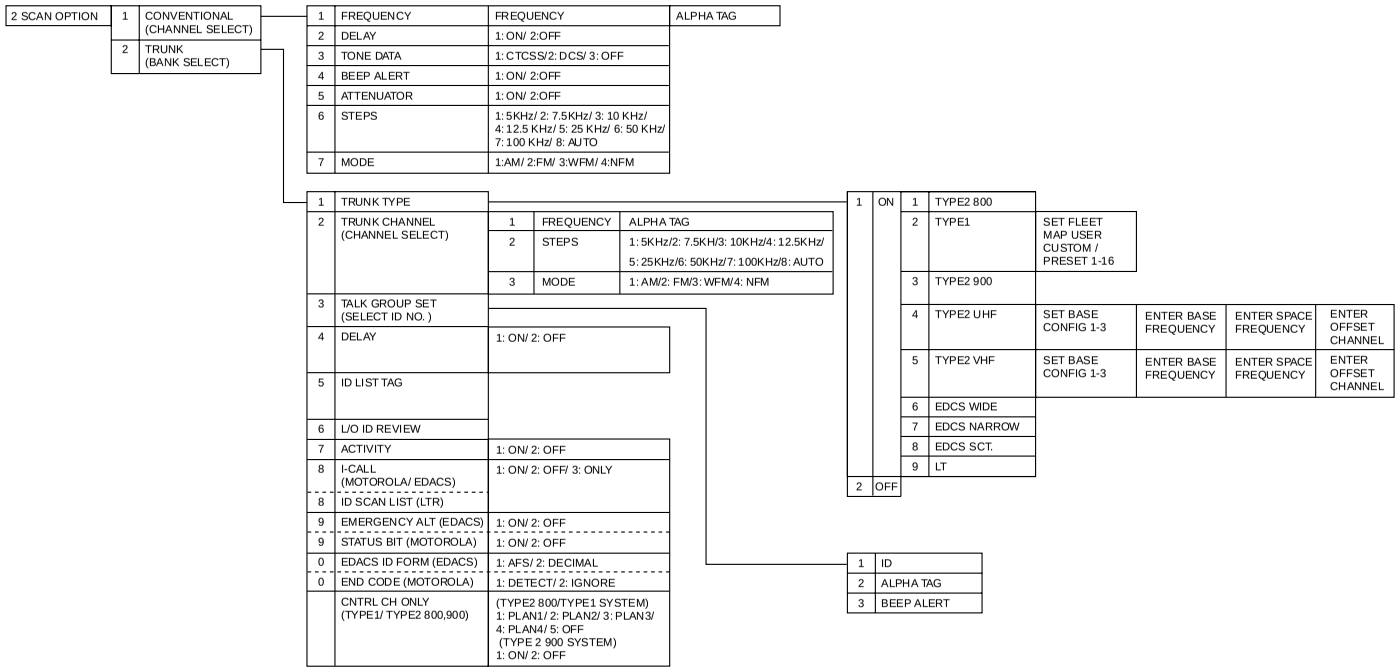
67.0	71.9	74.4	77.0	79.7	82.5	85.4	88.5
91.5	94.8	97.4	100.0	103.5	107.2	110.9	114.8
118.8	123.0	127.3	131.8	136.5	141.3	146.2	151.4
156.7	162.2	167.9	173.8	179.9	186.2	192.8	203.5
210.7	218.1	225.7	233.6	241.8	250.3		

DCS Tone Code

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

BC250D Flow Charts




2 SCAN OPTION
1 CONVENTIONAL (CHANNEL SELECT)
2 TRUNK (BANK SELECT)
1 FREQUENCY FREQUENCY ALPHA TAG
2 DELAY 1: ON/ 2:OFF
3 TONE DATA 1: CTCSS/2: DCS/ 3: OFF
4 BEEP ALERT 1: ON/ 2:OFF
5 ATTENUATOR 1: ON/ 2:OFF
6 STEPS 1: 5KHz/ 2: 7.5KHz/ 3: 10 KHz/ 4: 12.5 KHz/ 5: 25 KHz/ 6: 50 KHz/ 7: 100 KHz/ 8: AUTO
7 MODE 1:AM/ 2:FM/ 3:WFM/ 4:NFM
1 TRUNK TYPE
2 TRUNK CHANNEL (CHANNEL SELECT)
1 FREQUENCY ALPHA TAG
2 STEPS 1: 5KHz/2: 7.5KH/3: 10KHz/4: 12.5KHz/ 5: 25KHz/6: 50KHz/ 7: 100KHz/8: AUTO
3 MODE 1: AM/2: FM/3: WFM/4: NFM
3 TALK GROUP SET (SELECT ID NO.)
4 DELAY 1: ON/ 2: OFF
5 ID LIST TAG
6 L/O ID REVIEW
7 ACTIVITY 1: ON/ 2: OFF
8 I-CALL (MOTOROLA/ EDACS) 1: ON/ 2: OFF/ 3: ONLY
8 ID SCAN LIST (LTR)
9 EMERGENCY ALT (EDACS) 1: ON/ 2: OFF
9 STATUS BIT (MOTOROLA) 1: ON/ 2: OFF
0 EDACS ID FORM (EDACS) 1: AFS/ 2: DECIMAL
0 END CODE (MOTOROLA) 1: DETECT/ 2: IGNORE
CNTRL CH ONLY (TYPE1/ TYPE2 800,900) (TYPE2 800/TYPE1 SYSTEM) 1: PLAN1/ 2: PLAN2/ 3: PLAN3/ 4: PLAN4/ 5: OFF (TYPE 2 900 SYSTEM) 1: ON/ 2: OFF
1 ON
1 TYPE2 800
2 TYPE1 SET FLEET MAP USER CUSTOM / PRESET 1-16
3 TYPE2 900
4 TYPE2 UHF SET BASE CONFIG 1-3 ENTER BASE FREQUENCY ENTER SPACE FREQUENCY ENTER OFFSET CHANNEL
5 TYPE2 VHF SET BASE CONFIG 1-3 ENTER BASE FREQUENCY ENTER SPACE FREQUENCY ENTER OFFSET CHANNEL
6 EDCS WIDE
7 EDCS NARROW
8 EDCS SCT.
9 LT
2 OFF
1 ID
2 ALPHA TAG
3 BEEP ALERT

3 SYSTEM OPTION	1	DIMMER	DIMMER LIGHT	HIGH/MEDIUM
			DIMMER TIME	15SECONDS/INFINITE
	2	SCREEN MASK	1: ON/ 2:OFF	
	3	KEY BEEP	1: ON/ 2:OFF	
	4	ENTER LOCK	1: ON/ 2:OFF	
	5	PC CONTROL	1: 2400 bps / 2: 4800 bps / 3: 9600 bps/ 4: 19200 bps/ 5: OFF	
	6	CLONE	MASTER / SLAVE	
	7	DATA SKIP	1: ON/ 2:OFF	
	8	SQ MODE	1: CSQ/ 2: TONE SQ/ 3: TONE SEARCH	
	9	BANK TAG (SELECT BANK)		
	0	APCO CARD	ENABLE/DISABLE	
		BATTERY SAVE	1: ON/ 2: OFF	

One Year Limited Warranty

Important: Evidence of original purchase is required for warranty service.

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

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

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

LEGAL REMEDIES: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This warranty is void outside the United States of America.
PROCEDURE FOR OBTAINING PERFORMANCE OF WARRANTY: If, after following the instructions in the owners manual you are certain that the product is defective, pack the Product carefully (preferably in its original packaging). The product should include all parts and accessories originally packaged with the Product. Include evidence of original purchase and a note describing the defect that has caused you to return it. The Product should be shipped freight prepaid, by traceable means, to warrantor at:

UNIDEN AMERICA CORPORATION
Parts and Service Division
4700 Amon Carter Boulevard
Fort Worth, TX 76155
(800) 554-3988, 7 a.m. to 5 p.m. Central Time, Monday through Friday