WS1010

200 Channel VHF/Air/UHF
Handheld Radio Scanner

OWNER'S MANUAL

WHISTLER®

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WELCOME

Thank you for choosing a Whistler product. We are dedicated to providing products that represent both quality and value. Please read the user manual carefully before using this product.

Package Contents

- Scanner
- Belt Clip
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- AC Adapter
- User's Guide
- Quick Start Guide
- Alkaline Battery Holder
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Scanning Legally

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

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

According to the Electronic Communications Privacy Act (ECPA), as amended, you are subject to fines and possible imprisonment for intentionally listening to, using, or divulging the contents of such a transmission unless you have the consent of a party to the communication (unless such activity is otherwise illegal).

This scanner is designed to prevent reception of illegal transmissions, in compliance with the law which requires that scanners be manufactured in such a way as to not be easily modifiable to pick up those transmissions. Do not open your scanner's case to make any modifications that could allow it to pick up transmissions that are not legal to listen to. Doing so could subject you to legal penalties.

In some areas, mobile use of this scanner is unlawful or requires a permit. Check the laws in your area. We encourage responsible, legal scanner use.

Features

Your new WS1010 Handheld Scanner lets you scan conventional transmissions, and is preprogrammed with search banks for convenience. By pressing a one touch search key, you can quickly search those frequencies most commonly used by public service and other agencies without tedious and complicated programming.

This scanner gives you direct access to over 25,000 exciting frequencies, including those used by ambulance services, aircraft, and amateur radio services, marine, civil air patrol, VHF and UHF business bands, government frequencies and some police and fire departments.

Your scanner also has these special features:

Spectrum Sweeper – a powerful new tool for you to rapidly detect, monitor and store frequencies for nearby radio transmissions.

One-Touch Service Search Banks – Search preset frequencies in separate marine, fire/police, aircraft, ham and weather bands.

Display Backlight – Easy to read in low-light situations.

Lockout Function – Lets you skip specified channels or frequencies when scanning or searching.

Ten Channel-Storage Banks – You can store 20 channels in each bank (200 total channels), letting you group channels so you can more easily identify calls.

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SAME/FIPS Weather Alert – Displays weather events for the county or counties that you choose.

Memory Backup – Keeps the frequencies stored in memory for an extended time.

Scan Delay – Delays scanning for about 2 seconds, so that you can hear replies on the same channel.

Priority Channel – Lets you set the scanner to check one channel every 2 seconds so that you do not miss transmissions on that channel.

Data Cloning – Lets you transfer the programmed data to another WS1010 scanner.

Scanner Basics

After you familiarize yourself with your scanner's features you can then set up your scanner.

Frequencies

A frequency is the waveband of the transmitting signal (expressed in kHz or MHz). Your WS1010 receives a range of analog frequencies.

Also, you can use your scanner's search functions to find active frequencies in your area.

Your WS1010 scanner can receive these bands:

Frequency Range	Types of Transmissions
29–54 MHz	10-Meter Ham, VHF Lo, 6-Meter Ham
108–136.9875 MHz	Aircraft
137–174 MHz	Military Land Mobile, 2-Meter Ham, VHF Hi
380–512 MHz	UHF Aircraft, Federal Government, 70-cm Ham, UHF Standard, UHF "T"

📝 Note: See "Specifications" on page 30 for more information about frequency steps.

Channels
Channels are storage areas for frequencies saved in your scanner's memory. Each saved frequency is assigned a channel.

Banks
A bank is a storage area for a group of channels. Your scanner provides 10 banks (1 to 10) that can each store up to 20 channels, for a total of 200 channels. You can use the banks to group and organize frequencies. For example, you could program the frequencies used by your local police department starting with Channel 1 (the first channel in bank 1) and program the fire department frequencies starting with Channel 21 (the first channel in bank 2).

Setup

Connecting the Antenna
To attach the supplied flexible antenna to the antenna jack on top of your scanner, align the slots around the antenna's connector with the tabs on the antenna jack. Press the antenna down over the jack and turn the antenna's base clockwise until it locks into place.

Connecting an Outdoor Antenna
To connect an external antenna, follow the installation instructions supplied with the antenna. Use 50 Ohm coaxial cable, such as RG-58 or RG-8. For lengths over 50 feet, use RG-8 low-loss dielectric coaxial cable. If the antenna cable's connector does not have a BNC connector, you will also need a BNC adapter.

⚠ **Warning:** Use extreme caution when installing or removing an outdoor antenna. If the antenna starts to fall, let it go! It could contact overhead power lines. If the antenna touches a power line, touching the antenna, mast, cable, or guy wires can cause electrocution and death. Call the power company to remove the antenna. DO NOT attempt to do so yourself.

Connecting a Speaker or Headphones

You can plug an amplified speaker or headphones (not supplied) with ⅛inch (3.5 mm) mini-plug into the **HEADPHONE** jack on the top of the scanner. This automatically disconnects the internal speaker.

Note: Use an amplified speaker with this scanner. Non-amplified speakers do not provide sufficient volume for comfortable listening.

Listening Safely

To protect your hearing, follow these guidelines:

• Do not listen at high volume levels. Extended high-volume listening can lead to permanent hearing loss.

• Set the volume to the lowest setting. Then turn on your audio device and adjust the volume to a comfortable level.

• Avoid increasing the volume. Your ears will adapt to the volume level, so a level that does not cause discomfort could still damage your hearing.

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Using the Belt Clip

You can use the belt clip attached to the back of the scanner for hands-free carrying when you are on the go. Slide the belt clip over your belt or waistband. To remove the belt clip, gently lift up the retaining catch at the top of the belt clip from the back of radio and slide the clip upward.

Powering Your Scanner

Using Batteries

Your scanner has a built-in charging circuit to maintain peak performance of your Nickel-Metal Hydride (Ni-MH) or Nickel Cadmium (Ni-CD) rechargeable batteries (not supplied) while they are in the scanner.

For the best performance, use alkaline batteries. For rechargeable battery holder, we recommend nickel-metal hydride (Ni-MH) batteries. You must charge rechargeable batteries before you use them the first time.

RECHARGEABLE BATTERY HOLDER   **ALKALINE BATTERY HOLDER**

When battery power is low **B** appears and the scanner beeps continuously.

1. Open the battery compartment.
2. Place four AA batteries (not supplied) into one of the battery holders as indicated by the polarity symbols (+ and –). For non-rechargeable batteries, use the black holder; for rechargeable batteries, use the yellow holder.

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3. Place the battery holder into the battery compartment and replace the cover.

Warning: Never install non-rechargeable batteries in the rechargeable yellow battery holder. Non-rechargeable batteries can get hot or explode if you try to recharge them.

Cautions:
- The battery holders fit only one way. Do not force them.
- Use only fresh batteries of the required size and recommended type.
- Remove old or weak batteries. Batteries can leak chemicals that destroy electronic circuits.
- Dispose of old batteries promptly and properly. Do not burn or bury them.
- Do not mix old and new batteries, different types of batteries (alkaline, or rechargeable), or rechargeable batteries of different capacities.
- If you do not plan to use the scanner with batteries for a month or longer, remove the batteries. Batteries can leak chemicals that can destroy electronic parts.

Using AC Power
Power the scanner using the supplied AC adapter. To disconnect, unplug the adapter first.

Caution: Only use the supplied AC adapter. You must use a Class 2 power source that supplies 9V DC and delivers at least 400mA. Its center tip must be set to positive and its plug must fit the scanner's **DC 9V** jack. Using an adapter that does not meet these specifications could damage the scanner or the adapter.

Note: If you use a cigarette-lighter power cable and your vehicle's engine is running, you might hear electrical noise from the engine while scanning. This is normal.

Turning on the Scanner

1. Turn the **SQUELCH** all the way down before you turn on the scanner.
2. Turn the **VOLUME** knob to turn **ON** the radio. A welcome message appears. After about 3 seconds, adjust **VOLUME** to a comfortable level.
3. Turn **SQUELCH** clockwise, just until the hissing sound stops. If you always hear a hissing sound, the scanner will not scan or search properly.
• To listen to a weak or distant station, turn **SQUELCH** counterclockwise.
• If reception is poor, turn **SQUELCH** clockwise to cut out weak transmissions.

Turning Off the Key Tone

The scanner is preset to sound a tone each time you press one of its keys.

To turn the key tone on and off:

1. Turn on the scanner. *WELCOME SCAnnInG rECEIVEr* appears.
2. While the welcome message is on the screen, press **1** to turn on the key tone or press **2** to turn it off.

Understanding the Keypad

▶️⅄ – Spectrum Sweeper.

PSE (Pause) – Stop and restart a search or tune.

MAR – Search the preprogrammed marine bank.

FD/PD – Search the preprogrammed fire/police bank.

AIR – Search the preprogrammed aircraft bank.

HAM – Search the preprogrammed amateur radio bank.

WX/ – Search the preprogrammed weather bank, or hold to jump to the Skywarn channel. (First, program your local Skywarn frequency into channel 200).

SCAN / MAN (Manual) – Press to scan programmed channels. Press again to monitor a single channel.

▲ ▼ – Select the direction for searching and scanning.

PRI / ALERT – Set the priority feature, or set SAME standby mode when monitoring a weather channel.

0–9 – Input numbers or select banks (**0** selects bank 10). The number range above the keys (1–20, 21–40, 41-60, etc.) indicates the channels stored in that bank.

• / DELAY – Input a decimal point or set a channel delay.

ENT (Enter) – Complete the entry of a frequency.

L/O / L/O RVW – Lock-out selected channels or frequencies. Review locked-out frequencies.
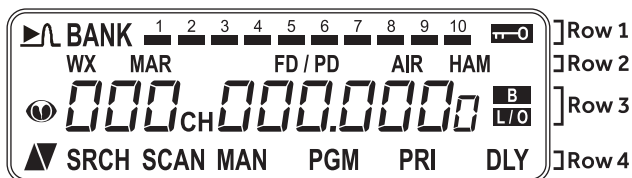
TUNE / CLEAR – Enter Tune search. Clear an incorrect entry.

PGM – Program frequencies into channels.

🔒 / ⚡ – Locks (and unlocks) the keypad to prevent accidental entries; turns the backlight on and off.

Understanding the Display

Row 1

▶⋀ – Spectrum Sweeper search is active.

BANK – Appears with numbers (1-10) to indicate the scan bank. The bar under the bank number shows banks that are turned on for scanning.

🔒 - Keypad locked.

Row 2

WX – Searching weather channels.

MAR – Searching the marine bank.

FD/PD – Searching the fire/police bank.

AIR – Searching the aircraft bank.

HAM – Searching the amateur radio bank.

Row 3

◉ - Skywarn channel active.

000 – Channel number the scanner is tuned to.

CH – Appears with channel number ($1–200$) or P (priority channel).

000.000 – Frequency the scanner is tuned to.

▣ - Batteries are low.

🔒 – A locked out channel/frequency is manually selected or reviewed.

Row 4

▲▼ **(Up/Down) –** Search or scan direction.

SRCH – Searching a service bank.

SCAN – Scan mode.

MAN – Manual mode.

PGM – Program mode.

PRI – Priority feature is active.

DLY – Two-second delay is active.

Display Messages

ALL CH L-out – All channels locked out during scan or marine band search.

b X Ch-FULL – All displayed bank channels are full.

b X StorE – Frequency programmed into displayed bank's channel.

CLOnE – Clone mode.

-dUPL- – Frequency is already stored in another channel.

Error – Entry error.

FLo ALL-CL – All the locked-out frequencies removed during a FD/PD, AIRCRAFT, or HAM bank search.

L-r – Review the locked-out frequencies.

L-O Fr-FULL – Maximum of 50 frequencies already locked out.

oFF tonE – Key tone deactivated.

On tonE – Key tone activated.

P – Scanner is tuned to the priority channel.

-t- – Tune mode.

Sub Bank Messages

Lo VHF – Sub-bank 1 of the fire/police bank.

Hi VHF – Sub-bank 2 of the fire/police bank.

UHF – Sub-bank 3 of the fire/police bank.

10 M – Sub-bank 1 of the HAM bank.

6 M – Sub-bank 2 of the HAM bank.

2 M – Sub-bank 3 of the HAM bank.

70CM – Sub-bank 4 of the HAM bank.

Preprogrammed Frequencies

Your scanner includes 153 preprogrammed frequencies, which you can load into Channels 1 to 153. For a list of these frequencies, see "Preprogrammed Frequency List" on page 26.

To load the preprogrammed frequencies:

1. Turn off the scanner and then turn it on again.
2. While *WELCOME* message appears, press **PGM.**
3. *Load -Fr-* appears, then *YES--Ent* and *No--CLEAr* appear alternately.
4. Press **ENT** to load frequencies or **CLEAR** to cancel.

Programming Channels

If you do not have a list of frequencies in your area.

1. Press **PGM**. *PGM* appears.
2. Enter the channel number (1–200) where you want to store a frequency,
3. Press **PGM** again.
4. Use the number keys to enter the frequency,
5. Press **ENT**.
6. To program the next channel in sequence, press **PGM** and repeat Steps 4 and 5.
    - Your scanner automatically rounds down to the closest valid frequency. For example, if you enter 151.473, your scanner rounds it to 151.470.
    - If *Error* appears and the scanner beeps three times when you press **ENT**, start again from Step 2.
    - If the frequency is already stored in another channel, the scanner beeps three times and displays *-dUPL-* (duplicate) and the lowest channel number where the frequency is already stored. Press **TUNE/CLEAR** to cancel. Press **ENT** if you still want to store the frequency.

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Programming with a Computer

You can upload or download programmed data to or from a PC using a PC/IF cable.

Cloning Programmed Data

You can transfer the programmed data to and from a WS1010 scanner using an optional connecting cable with ⅛-inch (3.5mm) stereo phone plugs on both ends.

1. Turn on both scanners.
2. Connect the connecting cable to each scanner's **PC/IF** jack. *CLOnE* and *UP to SEnd* appears.
3. Press ▲ on the host scanner.
4. *SEndInG* appears at the host scanner.

To exit clone mode after the data transfer is complete, remove the cable.

No ConnEct appears if you try to connect to another model scanner. The WS1010 does not clone with other scanner models.

Searching for Frequencies

During a tune search, the scanner
tunes up or down starting from a
frequency you specify.

1. Press **TUNE**. The display
   alternates between *PSE* and
   –t–.
2. If you want to change the
   starting frequency, enter a
   new frequency and press
   ENT.
3. Press **PSE** to start tune
   search. *–t–* appears on the display.
4. To change the tuning direction, press ▲ or ▼ .

Service Bank Search

Your scanner contains groups of preset frequencies
called Service Banks. You can search for marine, fire/
police, aircraft, ham, and weather transmissions even if
you do not know the specific frequencies that are used
in your area.

Then you can store the frequencies you find into the
scanner's channels (except for weather and marine
banks, which are already stored as channels).

To start the search, press the button for the Service
Bank you would like to search (Marine, Fire/Police, Air,
Ham, or Weather).

Search Commands

- Press **PSE** to pause searching. Press **PSE** again to
  resume.
- Press **•/Delay** to turn the two-second delay
  feature on and off.
- Press **L/O** to lock-out a frequency (except Weather
  band).
- To reverse the search direction at any time, press
  ▲ or ▼.
- If necessary, you can select search groups using
  the number keys.

Storing Found Frequencies

You can save frequencies in channel-storage banks.

1. Press **ENT** when you find a
   frequency. The bank number
   and *StorE* appear.
2. To change banks, enter the
   new bank number.
3. Press **ENT**. The channel and
   frequency flash twice. To
   cancel the operation, press
   TUNE/CLEAR.
- The frequency is
  automatically stored in the
  first empty channel of the selected bank.
- If the scanner displays *-dUPL-*, the frequency is
  already stored in another channel. Press **ENT** to
  continue. Press **TUNE/CLEAR** to cancel.
- If there are no empty channels in the bank, *Ch-FULL*
  appears. Clear a channel or select another bank
  (see "Clearing a Stored Channel" on page 21).
- If the scanner displays *-dUPL-* or *CH-FULL*, you can
  store another channel location by pressing **PGM**.
  The channel number flashes and *000.0000* (or
  previous frequency) appears. Press the desired
  channel number then press **ENT**. Repeat if needed.
  Press **ENT** again when an empty channel is found.

Birdie Frequencies

All scanners have birdie frequencies, which are signals
created inside a scanner that can cause interference.
To find the birdies in your scanner:

1. Disconnect the antenna, and make sure that no
   other nearby radio or TV sets are turned on near
   the scanner.
2. Search every frequency range from its lowest
   frequency to the highest. Occasionally, the
   searching will stop as if it has found a signal,
   often without any sound. This is a birdie.
3. Make a list of all the birdies in your scanner for
   future reference.

Scanning and Monitoring

Press **SCAN/MAN** until *SCAN* appears to continuously scan through all channels with stored frequencies. If the scanner finds an active frequency, it pauses until the transmission ends. Press ▲ or ▼ to change the scanning direction. To monitor a channel, press **SCAN/MAN** so that *MAN* appears.

The scanner does not scan channels in banks that are turned off. To turn a channel-storage bank on or off, press the bank's number key (**1–0,** using **0** for bank 10) during scanning. The channel-storage banks that are ON have a bar underneath them.
- You cannot turn off all banks; there must be at least one active bank.
- You can manually select any channel in a bank, even if the bank is turned off.

Setting Delay

To avoid missing a reply in conversations, a two-second delay is automatically set for each channel. The scanner stops for two seconds after a transmission ends before it resumes scanning or searching. *DLY* appears on the display when the delay function is active.

To turn delay on:
- If the scanner is scanning and stops on an active channel, quickly press •**/DELAY** before it resumes.
- If the desired channel is not selected, manually select the channel, then press •**/DELAY**.
- If the scanner is searching, press •**/DELAY**. *DLY* appears and the scanner adds a two-second delay to every transmission it stops on in that bank.

To turn delay off:
Press •**/DELAY** while the scanner is monitoring a channel or frequency. *DLY* disappears.

Using the Priority Channel

The priority feature sets the scanner to check one channel every two seconds while scanning. You can program one frequency into the priority channel.

1. Press **PGM**.
2. Press **PRI/ALERT.** PCH and 000.000_0 (or the previously stored frequency) appear.
3. Enter the frequency you want stored in the priority channel, then press **ENT**.
4. To turn on the priority feature, press **PRI/ALERT** during scanning or searching. PRI appears. The scanner checks the priority channel every two seconds and stays on the channel if there is activity.

   To turn off the priority feature, press **PRI/ALERT.** PRI disappears.

Spectrum Sweeper

Spectrum Sweeper allows you to sweep a range of frequencies to detect, monitor and store frequencies for nearby radio transmissions.

The Spectrum Sweeper feature is more sensitive than portable frequency counters and detects transmissions at greater distances.

The Spectrum Sweeper can be set to watch for activity on all bands, or on Police/Fire, Aircraft, or Ham frequencies exclusively.

When the scanner is in manual, scan or tune mode, press ⏻ to watch for activity on all bands.

To watch for activity on Police/Fire, Aircraft, or Ham frequencies exclusively, press the button for the desired service bank and then press ⏻ .

NOTE: Priority mode is not available while using the Spectrum Sweeper.

Locking Out Channels

You can increase the scanning or search speed by locking out channels or frequencies that have a continuous transmission, such as control channels, weather channels, or birdie frequencies.

Press L/O when the scanner stops on a channel or frequency while scanning or searching. The scanner locks out the channel/frequency then continues scanning/searching.

To manually lock-out a channel, select the channel then press L/O. L/0 appears in the display.

- Your scanner automatically locks out empty channels.
- You can still manually select locked-out channels.
- You can lock-out a maximum of 50 frequencies during a search. If you try to lock-out more, *L-0 Fr-FULL* appears.

Managing Lock-outs

1. Set the scanner to manual by pressing SCAN/MAN until MAN appears
2. Hold down L/O/L/O RVW for about two seconds. The scanner pulls up a locked out channels.
3. Press and hold L/O/L/O RVW to show the next locked out channel. If an error beep sounds, there are no locked out channels.
4. To remove the lock-out, press L/O/L/O RVW until L/0 disappears.

Managing Service Bank Lock-outs

1. Hold down L/O/L/O RVW for about two seconds during a Service Bank search.
2. Press ▲ or ▼ repeatedly to scroll through the list of locked-out frequencies. *L-r* and L/0 appear in the display.
3. Press L/O/L/O RVW to remove the lock-out. The list scrolls to the next locked-out frequency.
- When you reach the highest locked-out frequency, the scanner beeps twice and rolls to the lowest locked-out frequency.
- If the Service Bank has no locked-out frequencies, *EMPty* appears.

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Unlocking All Service Bank Frequencies

1. Hold down **L/O/L/O RVW** for about two seconds during a Service Bank search. L-r appears.
2. While holding down **TUNE/CLEAR,** press **L/O/L/O RVW**. FLo ALL—CL appears for about two seconds. Then the display alternates with YES ---Ent and No --$CLEAr$.
3. Press **ENT**. L-r $EMPty$ appears. The scanner clears lock-outs from all frequencies in the Service Bank.

Clearing a Stored Channel

To remove a frequency stored in a channel.

1. Press **SCAN/MAN** to stop scanning.
2. Press the number keys to enter the channel number (1–200).
3. Press **PGM**. PGM appears.
4. Press **0** then **ENT**. The frequency number changes to 000.000 to indicate the channel is cleared.
5. To clear another channel, use the number keys to enter that channel number then press **PGM** again. Or, repeatedly press **PGM** until the desired channel number appears. Repeat Step 4.

Weather Features

The NOAA and your local weather reporting agency broadcast local forecast and regional weather information on one or more channels allocated for use by weather reporting agencies.

Your scanner is an extremely sensitive high-quality receiver on the weather frequencies. However, the included antenna is optimized for general purpose scanning. To receive weather alerts, please make sure you are receiving a clear signal or switch to an external antenna.

Press 🔘 to hear your local forecast and regional weather information. *WEAthEr* appears for about two seconds, then the scanner starts searching the weather bank.

Press **PSE** to stop searching the channels. *SRCH* disappears and *MAN* appears. To change the channel manually, press ▲or ▼.

Receiving All Weather Alerts

To program the scanner to search for weather alerts every two seconds, set a weather channel as the priority channel. See **"Using the Priority Channel"** on page 19.

If the scanner detects a 1050 Hz weather alert tone on the programmed channel, the scanner sounds the alert tone and *ALErt* flashes. Press any key to turn off the alarm.

Receiving Alerts for Specific Areas

The National Weather Service precedes each weather alert with a digitally encoded SAME (Specific Area Message Encoding) signal, then a 1050 Hz tone. The SAME signal includes a FIPS (Federal Information Processing Standard) code and an event code.
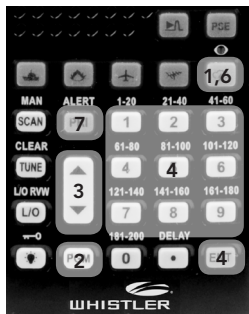
SAME Standby Mode

In SAME Standby mode, your scanner monitors weather channels for SAME alerts for up to seven areas you specify by entering the FIPS codes.

To program your scanner for SAME Standby mode:

1. Press 🔘.
2. Press **PGM** to access the FIPS code entry mode.
3. Use ▲ or ▼ to select the desired FIPS code storage location.
4. Use the number keys to enter the FIPS code, then press **ENT** to store the code.
5. Repeat steps 3-4 for all the FIPS codes that you wish to store.
6. Press 🔘 to exit FIPS code entry mode. The scanner displays *F* showing that FIPS codes are enabled.
7. Press **PRI/ALERT** to initiate SAME Standby mode. The scanner displays *F [1-7]ᴄʜ StAndby*.

The scanner will monitor weather channels for alerts with matching FIPS codes. To exit SAME Standby mode, press **PRI/ALERT** again.

- Press **L/O** during step 4 to lock-out FIPS entries; **L/0** appears in the display. Press **L/O** again to enable FIPS entries; **L/0** disappears.
- If you do not enter any FIPS codes, or if your FIPS codes are locked out, when you enter SAME Standby mode the scanner receives alerts and warning messages for all receivable areas.
- The scanner sounds an alert when it receives the SAME code. To stop the alert and ready the scanner to receive a new alert signal, press any key.
- If you do not stop the alert within five minutes, the alert stops and the scanner beeps every ten seconds. If the scanner receives a new weather alert after five minutes, it sounds the new alert.

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Testing the Weather Alert and Beep Tone

1. To test the weather alert, press and hold **ENT** for more than 2 seconds while *F [1-7] CH StAndby* appears on the display.
   The display indicates the type of message, and the scanner sounds an alert or series of beeps.
   The beeps automatically change every 3 seconds.
2. Press any key to stop testing.

Skywarn™

Many areas of the country have amateur radio repeaters that have been designated as "Skywarn" repeaters. During times of severe weather, these repeaters relay reports of severe weather directly to the local National Weather Service forecast office. Your scanner can easily jump to your local Skywarn frequency and monitor these reports.

Before using this feature, you must program the Skywarn frequency into channel 200.

To activate Skywarn, press and hold 🕙 for about two seconds. The scanner jumps to channel 200 to monitor the Skywarn frequency. If no frequency is programmed in the Skywarn channel, *No ProG* appears.

Additional Information

Care

Your scanner is not waterproof. Do not expose it to rain, moisture, or extremely high humidity. If the scanner gets wet, wipe it dry immediately. Use and store the scanner only in normal temperature environments. Handle the scanner carefully; do not drop it. Keep the scanner away from dust and dirt, and wipe it with a damp cloth occasionally to keep it looking new.

Initializing the Scanner

If the scanner's display locks up or does not work properly after you connect a power source, you might need to initialize the scanner.

Important: This procedure clears all information you stored in the scanner's memory. Only initialize the scanner when you are sure the scanner is not working properly.

Important: Do not turn off the scanner until the initialization is complete. When the initialization is complete, *1CH 000.000₀* appears on the display.

1. Turn off the scanner, then turn it on again. *WELCOME SCAnnInG rECEIVEr* appears.
2. Press **0,** then press **1** while the welcome message is on the screen. *InItIAL* appears for about two seconds, then *YES —Ent* and *No —CLEAr* appear alternately.
3. Press **ENT**. *WAIt* appears for about two seconds.

PREPROGRAMMED FREQUENCY LIST

Channel   **Frequency(MHz)**

Bank 1		Bank 3	
1	40.5000	41	154.3250
2	52.5250	42	154.3400
3	121.5000	43	154.3550
4	122.0000	44	154.3700
5	122.2000	45	154.3850
6	122.7000	46	154.4000
7	122.7500	47	154.4150
8	122.8000	48	154.4300
9	122.9000	49	154.4450
10	122.9500	50	154.5700
11	123.0000	51	154.6000
12	123.1000	52	155.1600
13	123.4500	53	155.1750
14	131.4500	54	155.2050
15	131.6750	55	155.2200
16	146.5200	56	155.2350
17	146.7600	57	155.2650
18	146.8800	58	155.2800
19	146.9400	59	155.2950
20	148.1500	60	155.3250
Bank 2		**Bank 4**	
21	151.6250	61	155.3400
22	151.8200	62	155.3550
23	151.8800	63	155.3700
24	151.9400	64	155.3850
25	151.9550	65	155.4000
26	154.0100	66	155.4750
27	154.0700	67	156.4250
28	154.1300	68	156.4500
29	154.1450	69	156.4750
30	154.1600	70	156.5750
31	154.1750	71	156.6250
32	154.1900	72	156.8000
33	154.2050	73	156.9250
34	154.2200	74	157.0500
35	154.2350	75	157.1000
36	154.2500	76	157.1250
37	154.2650	77	157.4250
38	154.2800	78	162.3000
39	154.2950	79	163.2000
40	154.3100	80	415.2000

Bank 5

81	415.7000
82	446.0000
83	450.8000
84	454.0000
85	460.0250
86	460.0500
87	460.0750
88	460.1000
89	460.1250
90	460.1500
91	460.1750
92	460.2000
93	460.2250
94	460.2500
95	460.2750
96	460.3000
97	460.3250
98	460.3500
99	460.3750
100	460.4000

Bank 6

101	460.4250
102	460.4500
103	460.4750
104	460.5000
105	460.5250
106	460.5500
107	460.5750
108	460.6000
109	460.6250
110	460.6500
111	460.7000
112	460.7500
113	460.8000
114	460.8500
115	460.9000
116	460.9250
117	460.9500
118	460.9750
119	462.5500
120	462.5625

Bank 7

121	462.5750
122	462.5875
123	462.6000
124	462.6125
125	462.6250
126	462.6375
127	462.6500
128	462.6625
129	462.6750
130	462.6875
131	462.7000
132	462.7125
133	462.7250
134	462.9500
135	462.9750
136	464.5000
137	464.5500
138	464.8750
139	467.0625
140	467.5625

Bank 8

141	467.5875
142	467.6125
143	467.6375
144	467.6625
145	467.6875
146	467.7125
147	467.7625
148	467.8125
149	467.8500
150	467.8750
151	467.9000
152	469.5000
153	469.5500

Service Banks

The scanner is preprogrammed with the frequencies allocated to marine, fire/police, aircraft, ham radio broadcast and weather services. This is handy for quickly finding active frequencies instead of searching through an entire bank (see **"Service Bank Search"** on page 16).

Fire/Police

Group 1

Frequency Range (MHz)	Step (kHz)
33.420-33.980	20
37.020-37.420	20
39.020-39.980	20
42.020-42.940	20
44.620-45.860	40
45.880	
45.900-46.060	40
46.080-46.500	20

Group 2

153.770-154.130	60
154.145-154.445	15
154.650-154.950	15
155.010-155.370	60
155.415-155.700	15
155.730-156.210	60
158.730-159.210	60
166.250	
170.150	

Group 3

453.0375-453.9625	12.5
458.0375-458.9625	12.5
460.0125-460.6375	12.5
465.0125-465.6375	12.5

Aircraft

Group 1 – 108.000-118.000 .... 12.5
Group 2 – 118.0125-136.9875 .... 12.5

Amateur Radio

Group 1 – 29.000-29.700 5
Group 2 – 50.000-54.000 5
Group 3 – 144.000-148.000..........................5
Group 4 – 420.000-450.000 .... 12.5

Weather

Channel	Frequency (MHz)
1	162.400
2	162.425
3	162.450
4	162.475
5	162.500
6	162.525
7	162.550

Marine

Channel	Frequency (MHz)
01	156.0500
02	156.2500
06	156.3000
07	156.3500
08	156.4000
09	156.4500
10	156.5000
11	156.5500
12	156.6000
13	156.6500
14	156.7000
15	156.7500
16	156.8000
17	156.8500
18	156.9000
19	156.9500
20	157.0000 / 161.6000
21	157.0500
22	157.1000
23	157.1500
24	157.2000 / 161.8000
25	157.2500 / 161.8500
26	157.3000 / 161.9000
27	157.3500 / 161.9500
28	157.4000 / 162.0000
63	156.1750
64	156.2250 / 160.8250
65	156.2750
66	156.3250
67	156.3750
68	156.4250
69	156.4750
70	156.5250
71	156.5750
72	156.6250
73	156.6750
74	156.7250
77	156.8750
78	156.9250
79	156.9750
80	157.0250
81	157.0750
82	157.1250
83	157.1750
84	157.2250 / 161.8250
85	157.2750 / 161.8750
86	157.3250 / 161.9250
87	157.3750 / 161.9750
88	157.4250

NOTE: Both frequencies (transmission and reception) are shown for marine channels used for duplex transmission.

NOTE: The frequencies in the scanner's one-touch service bands are preset. You cannot change them.

Specifications

Frequency Coverage

29-54 MHz	(5 kHz steps)/FM
108-136.9875 MHz	(12.5 kHz steps)/AM
137-144 MHz	(12.5 kHz steps)/FM
144-148 MHz	(5 kHz steps)/FM
148-150.8 MHz	(12.5 kHz steps)/FM
150.8-162 MHz	(5 kHz steps)/FM
162-174 MHz	(12.5 kHz steps)/FM
380-512 MHz	(12.5 kHz steps)/FM

Sensitivity (S+N)/N 20 dB

29-54 MHz	0.5 uV
108-136.9875 MHz	1.0 uV
137-174 MHz	0.5 uV
380-512 MHz	0.7 uV
Spurious Rejection (FM @154 MHz)	50 dB

Selectivity

±8 kHz/±17kHz (FM/AM)	-6dB/-50dB
Search Speed	Up to 80 Steps/Sec
Scan Speed	Up to 40 Channels/Sec
Delay Time	2 Seconds

IF Frequencies

1st IF	10.7 MHz
2nd IF	455 kHz
IF Interference Ratio (10.7 MHz)	70 dB at 154 MHz

Squelch Sensitivity

Threshold (FM/AM)	Less than 0.5 uV
Tight (FM)	(S + N)/N 25 dB
Tight (AM)	(S+N)/N 20 dB
Antenna Impedance	50 Ohms
Audio Output Power (10% THD)	180mW Nominal
Built-In Speaker	1.37 Inches (36 mm), 8 Ohms
Operating Temperature	14° to 140°F (-10° to 60°C)
Power Requirements	9V AC Adapter
	9V DC Adapter (not supplied)
	4 AA Batteries (not included)
Dimensions (HWD)	5.68 x 2.37 x 1.56 In
	(145 x 63 x 40 mm)
Weight (without antenna)	7.8 oz (220 g)

Specifications and depictions are subject to change and improvement without notice. Actual product may vary from the images found in this document.

FCC Notice

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

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

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

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