

OWNER'S MANUAL —
Please read before using this equipment.

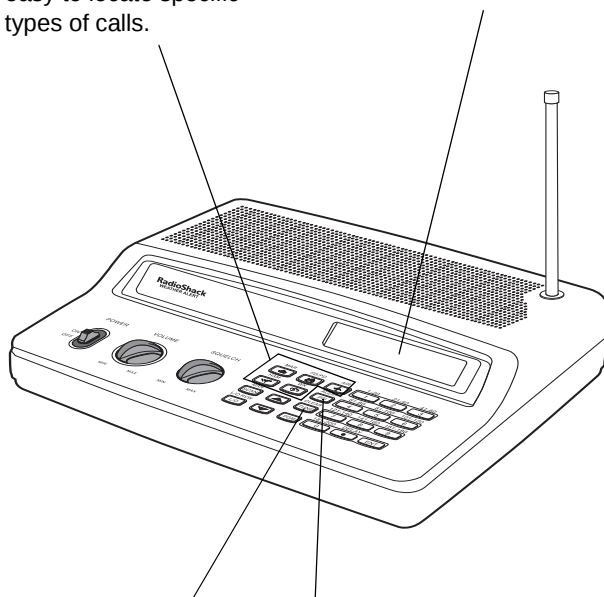
20-424

CONTENTS

Features	2
The FCC Wants You to Know	3
Scanning Legally	4
Preparation	4
Using AC Power	4
Using Vehicle Battery Power ...	5
Connecting an Antenna	5
Connecting an Earphone/Headphones	6
Connecting an Extension Speaker	7
About Your Scanner	7
A Look at the Keypad	8
A Look at the Display	9
Understanding Banks	12
Channel Storage Banks	12
One Touch Banks	12
Operation	15
Turning On the Scanner/Setting Volume and Squelch	15
Storing Known Frequencies Into Channels	15
Searching the	
One Touch Banks	16
Using Tune	17
Scanning the	
Stored Channels	18
Turning Channel-Storage Banks Off and On	18
Monitoring a Stored Channel .	18
Clearing a Stored Channel	19
Listening to the Marine Bank .	19
Listening to the Weather Band	19

One-Touch Search Banks — let you search preset frequencies in separate ham radio, police/fire/emergency, aircraft, weather, and marine banks, to make it easy to locate specific types of calls.

Liquid-Crystal Display — makes it easy to view and change programming information. The display backlight also makes the scanner easy to read in low-light situations.



Tune — lets you tune for new and unlisted frequencies starting from a specified frequency.

Priority Channel — lets you program a frequency into the priority channel. As the scanner scans, it checks the priority channel every 2 seconds so you do not miss transmissions on that channel.

! IMPORTANT !

If an icon appears at the end of a paragraph, go to the box on that page with the corresponding icon for pertinent information.

 — Warning
 — Caution

 — Important
 — Hint

 — Note

© 2002 RadioShack Corporation.
All Rights Reserved.
RadioShack and RadioShack.com
are trademarks used by
RadioShack Corporation.

CONTENTS

Special Features	20
Delay	20
Locking Out Channels or	
Frequencies	21
Using Priority	22
Turning the Key Tone	
On and Off	22
Avoiding	
Image Frequencies	22
Resetting/Initializing	
the Scanner	23
Wired Programming	23
A General Guide to Scanning ...	24
Guide to Frequencies	24
Guide to the Action Bands	25
Band Allocation	26
Frequency Conversion	30
Troubleshooting	31
Care	32
Service and Repair	32
Specifications	33
Parts and Accessories	35

FEATURES

Your RadioShack PRO-2018 200-Channel Desktop Scanner lets you in on all the action! This scanner gives you direct access to over 25,000 frequencies, including those used by police and fire departments, ambulance services, government agencies, air, and amateur radio services. You can select up to 200 channels to scan, and you can change your selection at any time.

The secret to your scanner's ability to scan so many frequencies is its built-in microprocessor. Your scanner also has these special features:

Two-Second Scan Delay — delays scanning for 2 seconds before moving to another channel, so you can hear more replies.

Ten Channel-Storage Banks — let you store up to 20 channels in each of 10 different banks, to group channels so you can more easily identify calls.

Memory Backup — keeps the channel frequencies stored in memory for about 1 hour during a power loss.

HyperSearch™ and HyperScan™ — let you set the scanner to search at up to 50 steps per second and to scan at up to 25 channels per second, to help quickly find interesting transmissions.

Duplicate Frequency Check — automatically notifies you if you are about to store a frequency you have already stored, to help avoid wasting storage space.

Weather Alert — automatically sounds the alarm tone to advise of hazardous weather conditions when the scanner detects an alert signal on the local NOAA weather channel.

Lock-Out Function — lets you set your scanner to skip over specified channels or frequencies when scanning or searching.

Supplied Telescoping Antenna — lets the scanner receive strong local signals.

External Antenna Terminal — lets you connect an external antenna (not supplied) to the scanner.

Your scanner can receive these bands: 

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

 NOTE

See "Specifications" on Page 33 for more information about the scanner's frequency steps.

THE FCC WANTS YOU TO KNOW

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.

WARNING

To prevent electric shock, do not use the AC adapter's polarized plug with an extension cord, receptacle, or other outlet unless you can fully insert the blades to prevent blade exposure.

CAUTION

 You must use a Class 2 power source that supplies 12V DC and delivers at least 300 mA. Its center tip must be set to positive and its plug must fit the scanner's **DC 12V** jack. Using an adapter that does not meet these specifications could damage the scanner or the adapter.

- Always connect the AC adapter to the scanner before you connect it to AC power. When you finish, disconnect the adapter from AC power before you disconnect it from the scanner.

2. This device must accept any interference received, including interference that may cause undesired operation.

Scanning Legally

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

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

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

This scanner has been designed to prevent reception of illegal transmissions. This is done to comply with the legal requirement that scanners be manufactured so 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 illegal to monitor. Doing so could subject you to legal penalties.

We encourage responsible, legal scanner use.

Mobile use of this scanner is unlawful or requires a permit in some areas. Check the laws in your area.

PREPARATION

USING AC POWER

You can power the scanner using the supplied 12V, 300 mA AC adapter. To power the scanner using an AC adapter, insert the AC adapter's barrel plug into the scanner's **DC 12V** jack. Then connect the other end of the adapter to a standard AC outlet.  

USING VEHICLE BATTERY POWER

You can power the scanner from a vehicle's 12V power source (such as a cigarette-lighter socket) using a 12V, 300 mA DC adapter and a size D Adaptaplug™ adapter (neither supplied). Both are available at your local RadioShack store. ⚡

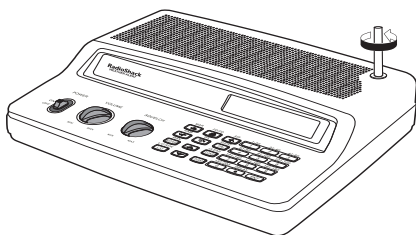
To power the scanner using a DC adapter, attach the Adaptaplug to the DC adapter so the tip reads positive (+) and set the adapter's voltage switch to 12V. Next, insert the Adaptaplug into the scanner's **DC 12V** jack. Plug the other end of the DC adapter into your vehicle's cigarette-lighter socket. ✓

CONNECTING AN ANTENNA

Connecting the Supplied Antenna

You must install an antenna before you can operate the scanner.

The supplied telescoping antenna helps your scanner receive strong local signals. To install the antenna, thread it clockwise into the hole on top of the scanner.



The scanner's sensitivity depends on its location and the antenna's length. For the best reception of the transmissions you want to hear, adjust the antenna's length according to the chart below.

Frequency Range (MHz)	Antenna Length
29 – 174	Extend fully
380 – 512	Extend 2 segments

Connecting an Outdoor Antenna

Instead of the supplied antenna, you can connect an outdoor base station or mobile antenna (neither supplied) to your scanner. Your local RadioShack store sells a variety of antennas. Choose the one that best meets your needs.

⚡ CAUTION ⚡

Always connect the DC adapter to the scanner before you connect it to a power source. When you finish, disconnect the adapter from the power source before you disconnect it from the scanner.

✓ 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.
- Mobile use of this scanner is unlawful or requires a permit in some areas. Check the laws in your area.

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.

CAUTION

Do not run the cable over sharp edges or moving parts that might damage it.

When deciding on an outdoor antenna and its location, consider these points:

- The antenna should be located as high as possible.
- The antenna and antenna cable should be as far as possible from sources of electrical noise (appliances, other radios, and so on).
- The antenna should be vertical for the best performance.

To connect an optional base-station or mobile antenna, first remove the supplied antenna from the scanner. Always use 50 Ohm coaxial cable, such as RG-58 or RG-8, to connect an outdoor antenna. For distances longer than 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 (not supplied, available at your local RadioShack store). Your local RadioShack store carries a wide variety of coaxial cable and connectors.

Once you choose an antenna, follow the mounting instructions supplied with the antenna. Then route the antenna's cable to the scanner and connect the cable to the ANT connector.  

CONNECTING AN EARPHONE/HEADPHONES

For private listening, you can plug a 1/8-inch (3.5-mm) mini-plug earphone or headphones (not supplied), available at your local RadioShack store, into  PC on the back of the scanner. This automatically disconnects the internal speaker.

Listening Safely

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

- Set the volume to the lowest setting before you begin listening. After you begin listening, adjust the volume to a comfortable level.
- Do not listen at extremely high volume levels. Extended high-volume listening can lead to permanent hearing loss.
- 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 initially cause discomfort might still damage your hearing.

Traffic Safety

Do not use an earphone or headphones with your scanner when operating a motor vehicle or riding a bicycle in or near traffic. Doing so can create a traffic hazard and could be illegal in some areas.

If you use an earphone or headphones with your scanner while riding a bicycle, be very careful. Do not listen to a continuous broadcast. Even though some earphones/headphones let you hear some outside sounds when listening at normal volume levels, they still can present a traffic hazard.

Connecting an Extension Speaker

In a noisy area, an extension speaker (not supplied) available at your local RadioShack store, might provide more comfortable listening. Plug the speaker cable's $\frac{1}{8}$ inch (3.5 mm) mini-plug into  PC.

ABOUT YOUR SCANNER

Once you understand a few simple terms used in this manual and familiarize yourself with your scanner's features, you can put the scanner to work for you. You simply determine the type of communications you want to receive, then set the scanner to scan them.

A *frequency* is the receiving signal location (expressed in kHz or MHz). To find active frequencies, you can use the search function.

You can also search the One Touch Search Banks, which are preset groups of frequencies categorized by type of service.

When you find a frequency, you can store it into a programmable memory location called a channel, which is grouped with other channels in a channel-storage bank. You can then scan the channel-storage banks to see if there is activity on the frequencies stored there. Each time the scanner finds an active frequency, it stays on that channel until the transmission ends.

A LOOK AT THE KEYPAD

MAR Lets you search the scanner's preprogrammed marine band.

HAM Lets you search the scanner's preprogrammed amateur radio band.

SCAN/MAN
Scans any preprogrammed channels; stops scanning and lets you directly enter a channel number.

L/O RVW/L/O
Reviews locked-out frequencies; lets you lock out selected channels or frequencies.

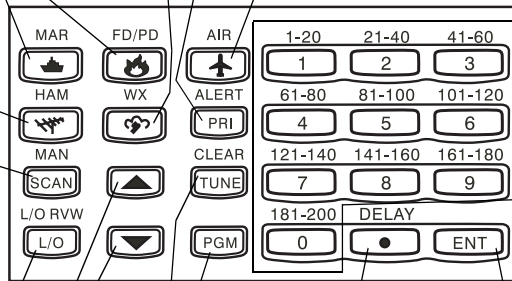
FD/PD Lets you search the scanner's preprogrammed fire/police band.

WX
Lets you search the scanner's preprogrammed weather channels.

PRI/ALERT Turns the priority feature and WX alert mode on and off.

AIR Lets you search the scanner's preprogrammed aircraft band.

Number Keys Each key has a single digit (0 to 9) and a range of numbers. Use the range of numbers above the key (21-40 for example) to select the channel in a channel-storage bank. See "Understanding Banks" on Page 12.



PGM
Programs frequencies into channels.

DELAY/•
Programs a 2-second delay for the selected channel; enters a decimal point.

ENT (enter) Enters frequencies into channels.

TUNE/CLEAR
Lets you tune a frequency along with ▲ or ▼; clears an incorrect entry.

▲ or ▼
Searches up or down for active frequencies or selects the direction when scanning channels.

A LOOK AT THE DISPLAY

The display has indicators that show the scanner's current operating status. This quick look at the display will help you understand how your scanner operates.

MARINE

Indicates that the scanner is searching the marine bank (see "Listening to the Marine Bank" on Page 19).

BANK

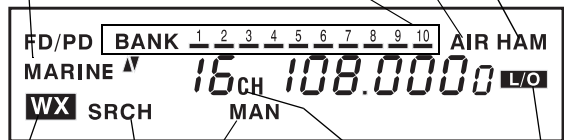
Appears with numbers (1-10) to indicate the scan bank. Bank numbers with a bar under them show which banks are turned on for scanning (see "Understanding Banks" on Page 12).

AIR

Indicates that the scanner is searching the aircraft bank.

HAM

Indicates that the scanner is searching the amateur radio bank.



WX

Indicates that the scanner is searching the weather channels.

MAN

Appears when you manually select a channel.

CH

Appears with digits (1-200) or P to show which channel the scanner is tuned to.

SRCH

Appears during service bank searches.

L/O (lockout)

Appears when you manually select a channel that was previously locked out during scanning or when you review a locked-out frequency.

FD/PD

Indicates that the scanner is searching the fire/police bank.

▲ or ▼

Indicates the search or scan direction.

SCAN

Appears when the scanner scans channels.

PGM

Appears when you program frequencies into the scanner's channels.

PRI

Appears when the priority feature is turned on.

DLY

Appears when you program a 2-second delay.

ALL CH Lo.-out

Appears when you lock out all frequencies in the marine bank.

b X -FULL

Appears when you try to enter a frequency during a search when all displayed bank's channels are full.

-dUPL-

Appears when you try to store a frequency that is already stored in another channel.

dFAULT

Appears when you remove all the lock-outs from the FD/PD, AIR, or HAM bank frequencies.

D-Error

Appears when the scanner receives a data error during wired programming.

End

Appears when the scanner has finished wired programming.

Error

Appears when you make an entry error.

FLo ALL-CL

Appears when you remove all the locked-out frequencies during a FD/PD, AIR, or HAM bank or tune search.

FLo-FULL

Appears when you try to lock out a frequency during a tune or search when 50 frequencies are already locked out.

F L-out

Appears when you start a tune from a locked-out frequency.

L-r

Appears when you review locked-out frequencies.

oFF tonE

Appears when you turn the key tone off.

on tonE

Appears when you turn the key tone on.

P

Appears when the scanner is tuned to the priority channel.

StRt

Appears when the scanner starts wired programming.

-t-

Appears when the scanner is tuning frequencies.

WirEd

Appears when you set the scanner to its wired programming mode to program frequencies into it.

mRr

Appears about 2 seconds after you press **MAR**.

FrE / PoLICE

Appears about 2 seconds after you press **FD/PD**.

Rr

Appears about 2 seconds after you press **AIR**.

HAmm

Appears about 2 seconds after you press **HAM**.

WErthEr

Appears about 2 seconds after you press **WX**.

Lo VHF

Appears when you turn on the low VHF sub-bank while searching in the fire/police bank.

Hi VHF

Appears when you turn on the high VHF sub-bank while searching in the fire/police bank.

UHF

Appears when you turn on the UHF sub-bank while searching in the fire/police bank.

10 m

Appears when you turn on the 10m sub-bank while searching in the ham bank.

6 m

Appears when you turn on the 6m sub-bank while searching in the HAM bank.

2 m

Appears when you turn on the 2m sub-bank while searching in the HAM bank.

70C m

Appears when you turn on the 70cm sub-bank while searching in the HAM bank.

UNDERSTANDING BANKS

Channel Storage Banks

A bank is a storage area for a group of channels. Channels are storage areas for frequencies. Whereas a channel can only contain one frequency, a bank can hold numerous channels. ✓

To make it easier to identify and select the channels you want to listen to, your scanner divides the channels into 10 banks (1 to 10) of 20 channels each, a total of 200 channels. You can use each channel-storage bank to group frequencies.

One Touch Banks

The scanner is preprogrammed with the frequencies allocated by marine, fire/police, aircraft, ham radio, and weather services. This is handy for quickly finding active frequencies instead of searching through an entire band (see "Searching the One Touch Banks" on Page 16). ✓

Marine ✓

NOTE

Channel Storage Banks

The scanner is preset so each bank is turned on (see "Turning Channel-Storage Banks Off and On" on Page 18).

One Touch Banks

The frequencies in the scanner's one touch banks are preset. You cannot change them.

Marine

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

Channel	Frequency (MHz)
01	156.0500
05	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

Channel	Frequency (MHz)
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

Fire/Police

Group	Frequency Range (MHz)	Step (kHz)
1	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	–
	45.940 – 46.060	40
	46.080 – 46.500	20
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	–
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

Air

Frequency Range (MHz)	Step (kHz)
108.000-136.9875	12.5

Ham Radio

Group	Frequency Range (MHz)	Step (kHz)
1	29.000 – 29.700	5
2	50.000 – 54.000	5
3	144.000 – 148.000	5
4	420.000 – 450.000	12.5

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

OPERATION

Turning On the Scanner/Setting Volume and Squelch

- 1. Turn **SQUELCH** until the indicator points to **MIN** before you turn on the scanner.
- 2. To turn on the scanner, slide **POWER** to **ON**.
- 3. Turn **VOLUME** clockwise until you hear a hissing sound.
- 4. Turn **SQUELCH** clockwise, just until the hissing sound stops.
- 5. To turn off the scanner when you finish, slide **POWER** to **OFF**.

Storing Known Frequencies Into Channels

Good references for active frequencies are the *RadioShack Police Call Guide including Fire and Emergency Services*, *Official Aeronautical Frequency Directory*, and *Maritime Frequency Directory*. We update these directories every year, so be sure to purchase a current copy.

Follow these steps to store frequencies into channels.

- 1. Press **PGM**. **PGM** appears. Then enter the channel number (1-200) where you want to store a frequency, then press **PGM** again.
- 2. Use the number keys and **•** to enter the frequency (including the decimal point) you want to store.
- 3. Press **ENT** to store the frequency into the channel.

Press **DELAY/•** if you want the scanner to pause 2 seconds on this channel before it proceeds to the next channel after a transmission ends (see “Delay” on Page 20). The scanner also stores this setting in the channel.



NOTE

Operation

- To listen to a weak or distant station, turn **SQUELCH** counterclockwise. If reception is poor, turn **SQUELCH** clockwise to cut out weak transmissions.
- If **SQUELCH** is adjusted so you always hear a hissing sound, the scanner will not scan or search properly.

Storing Known Frequencies into Channels

- If you made a mistake in Step 2, **Error** appears and the scanner beeps three times when you press **ENT**. Simply start again from Step 2.
- Your scanner automatically rounds the entered frequency down to the closest valid frequency. For example, if you enter a frequency of 151.473, your scanner accepts it as 151.470.
- If you entered a frequency that is already stored in another channel, the scanner beeps three times while displaying the lowest channel number and **-DUPL-** where the frequency is already stored. Then the frequency you entered flashes on the display. To store the frequency anyway, press **ENT** again. Press **TUNE/CLEAR** to clear the frequency.

**NOTE****Searching the One Touch Banks**

- You can use the scanner's delay feature while searching the banks (see "Delay" on Page 20).
- To reverse the search direction at any time, hold down ▲ or ▼ for about 1 second.
- To search up or down the band in small increments, repeatedly press ▲ or ▼. (See "One Touch Banks" on Page 12 for frequency steps).
- To pause the search while receiving a signal, press ▲ or ▼. To resume searching, hold down ▲ or ▼.
- To quickly move up or down through the frequencies, hold down ▲ or ▼. The scanner tunes through the frequencies until you release ▲ or ▼.
- If necessary, you can select search groups using the number keys.

To program the next channel in sequence, press **PGM** and repeat Steps 2 and 3.

SEARCHING THE ONE TOUCH BANKS

Your scanner contains groups of preset frequencies called One Touch Banks. Each one touch bank is associated with a specific activity (see "One Touch Banks" on Page 12). You can search for marine, fire/police, air, ham, and weather transmissions even if you do not know the specific frequencies that are used in your area.

The fire/police and ham one touch banks have separate groups of frequencies called *sub-banks*. This lets you search for and select only those frequencies that fall within a specific range within the fire/police and ham one touch banks.

To listen to the marine bank, see "Listening to the Marine Bank" on Page 19. To listen to the weather bank, see "Listening to the Weather Bank" on Page 19.

1. Press **FD/PD**, **AIR**, or **HAM**. **Fire POLICE**, **Air**, or **HAM** appears. After about 2 seconds, the scanner starts searching.
2. When the scanner finds an active frequency, it stops searching and displays the frequency's number.
3. To search for another active frequency in the selected band, hold down ▲ or ▼ for about 1 second. To search for an active frequency within a sub-band of the fire/police or ham band, press a number key to select the sub-band you want. To select a different band and search for another active frequency, repeat Steps 1 and 2.

Once you find interesting frequencies during the search, you can store them into the scanner's channel-storage banks. Frequencies found in the one touch banks are automatically assigned to specific channel-storage banks as shown below. You can quickly scan the channel-storage banks corresponding to the one touch banks by pressing a one touch bank key and **SCAN/MAN** successively.

Search Banks	Channel Storage Banks
Fire/Police	4, 5
Aircraft	6
Ham	7, 8

1. To store the displayed frequency in the lowest available channel in the assigned channel-storage banks, press **ENT** when you find a frequency. The channel number flashes.
2. Press **ENT** again to store the frequency. The channel and frequency flash twice. If you want to cancel the operation, press **TUNE/CLEAR** instead of **ENT**.

To scan the channel-storage banks, press the one touch bank key, then **SCAN/MAN** while **Fire/POLICE**, **Air**, or **HAM** appears. 

If there is no empty channel at an available bank, **b X -FULL** (where **X** is the bank number) appears after you press **ENT**. To store more frequencies, you must clear some channels. See "Clearing a Stored Channel" on Page 19. To continue searching after **b X -FULL** appears, press **TUNE/CLEAR**.

Using Tune

You can set the scanner to search through all receivable frequencies from a specified frequency. You can use the scanner's delay feature while using tune. 

1. Repeatedly press **SCAN/MAN** until **MAN** appears.
2. Enter the desired channel number you want to use as a starting point for the tune. Then press **SCAN/MAN** again.
3. Press **TUNE/CLEAR** to start tune. **-t-** appears.
4. Hold down **▲** or **▼** for about 1 second to tune up or down. **▲** or **▼** appear and the scanner searches the frequencies. 
5. When the scanner finds an active frequency, it stops searching and displays the frequency's number.
6. To search for another active frequency, hold down **▲** or **▼** for about 1 second.

Once you find interesting frequencies during the search, you can store them in the scanner's channel-storage banks. Frequencies found during tune search are automatically assigned to channel-storage banks 9 and 10.

1. To store the displayed frequency in the lowest available channel in the assigned banks, press **ENT**. The channel number flashes.



NOTE

Searching the One Touch Banks

If you entered a frequency that is already stored in another channel, **-dUPL-** (duplicate) and the lowest-numbered channel containing the duplicate frequency flash for about 3 seconds. If you want to store the frequency anyway, press **ENT** again. You can then delete the frequency later. See "Clearing a Stored Channel" on Page 19.

Using Tune

- To reverse the tuning direction at any time, hold down **▲** or **▼** for about 1 second.
- To tune up or down the selected band in small increments (5 or 12.5 kHz steps), repeatedly press **▲** or **▼**.
- To pause tuning, press **▲** or **▼**. To resume tuning, hold down **▲** or **▼**.
- To quickly move up or down through the frequencies, hold down **▲** or **▼**. The scanner tunes through the frequencies until you release **▲** or **▼**.
- If there is no empty channel, **b 9 10 -FULL** appears after you press **ENT**. To store more frequencies, you must clear some channels. See "Clearing a Stored Channel" on Page 19. To continue tuning after **b 9 10 -FULL** appears, press **TUNE/CLEAR**.

**NOTE****Scanning the Stored Channels**

- To reverse the scanning direction, press ▲ or ▼.
- To set the scanner to remain on the current channel for 2 seconds after the transmission ends, see “Delay” on Page 20.
- To set the scanner to remain on the current channel, even after the transmission stops, press **SCAN/MAN** at any time during the transmission. **MAN** appears and **SCAN** disappears (see “Monitoring a Stored Channel” on Page 18).
- To lock out channels so the scanner does not stop for a transmission on those channels, see “Locking Out Channels or Frequencies” on Page 21.

Turning Channel-Storage Banks Off and On

- The scanner does not scan any of the channels within the banks you have turned off.
- 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.
- When you turn on a bank during scanning, the scanner moves to the selected bank and scans it.

2. Press **ENT** again to store the frequency. The channel and frequency flash twice. If you want to cancel the operation, press **TUNE/CLEAR** instead of **ENT**. After storing the frequency, the scanner continues to search for frequencies.

Scanning the Stored Channels

To set the scanner to continuously scan through all channels with stored frequencies, repeatedly press **SCAN** until **SCAN** and ▲ appear. The scanner rapidly scans until it finds an active frequency.

If the scanner finds an active frequency, it stops and displays that channel and frequency number, then it automatically begins scanning again when the conversation on that frequency ends unless delay is set for the channel (see “Delay” on Page 20).

Turning Channel-Storage Banks Off and On

Channel-storage banks (1-10) are on when they have a bar underneath them and off when no bar appears underneath them. To turn off a channel-storage bank, press the bank's number key during scanning. The bar under the bank's number disappears.

To turn on a channel-storage bank (1-10) during scanning, press the bank's number key. A bar appears under the bank's number.

If no transmission is found, the scanner continues to scan through all selected banks.

Monitoring a Stored Channel

You can continuously monitor a specific channel without scanning. This is useful if you hear an emergency transmission on a channel and do not want to miss any details – even though there might be periods of silence – or if you simply want to monitor that channel.

Follow these steps to manually select a channel.

1. Repeatedly press **SCAN/MAN** until **MAN** appears.
2. Enter the channel number (1-200).
3. Press **SCAN/MAN** again.

Clearing a Stored Channel

If you no longer want a frequency stored in a channel (and you do not want to replace that frequency with a different one), follow these steps to clear the stored frequency.

1. Hold down **SCAN/MAN** until **MAN** appears to stop scanning.
2. Use the number keys to enter the channel number (1-200) you want to clear.
3. Press **PGM**. **PGM** appears.
4. Press **0** then **ENT**. The frequency number changes to **000.0000** to indicate the channel is cleared.

Listening to the Marine Bank

To listen to the marine bank, press **MAR**. **MAR** appears for about 2 seconds, then the scanner starts searching from marine channel 16.

To stop searching the channels, hold down **▲** or **▼** for about 2 seconds. **SRCH** disappears and **MAN** appears.

To change the channel manually, press **▲** or **▼**.

To search through the marine bank again, hold down **▲** or **▼** for about 2 seconds. **MAN** disappears and **SRCH** appears. To change the searching direction, press **▲** or **▼**.

You can select a marine channel directly. When the scanner stops searching the marine bank, use the number keys to enter the two-digit channel number.

Listening to the Weather Band

To hear your local forecast and regional weather information, press **WX**. Your scanner begins to scan through the weather band.

Your scanner should stop within a few seconds on your local weather broadcast. If the broadcast is weak, you can press **WX** again to resume scanning.

Channel	Frequency (MHz)
1	162.400
2	162.425
3	162.450
4	162.475
5	162.500

Channel	Frequency (MHz)
6	162.525
7	162.550

WX ALERT

Your scanner's WX alert warns you of serious weather conditions by sounding an alarm if a National Weather Service broadcaster in your area broadcasts a weather alert tone.

To set the scanner so it sounds an alarm when a weather alert tone is broadcast, press **PRI/ALERT** while you are listening to the WX channel. **ALERT** appears.

If the scanner detects the weather alert, it sounds an alarm. The scanner sounds the alert for five minutes after it receives a weather alert signal. After five minutes the alert stops and the scanner beeps every ten seconds. Press any key to turn off the alarm. To cancel the weather alert operation, press **PRI/ALERT** again. 

NOTE

- WX alert is only for receiving a weather alert.
- When the scanner detects a 1050 Hz alert tone, WX alert activates and you hear a weather alert.

SPECIAL FEATURES

Delay

Many agencies use a two-way radio system that has a period of several seconds between a query and a reply. To avoid missing a reply, you can program a 2-second delay into any channel or frequency. When your scanner stops on a channel or frequency with a programmed delay, **DLY** appears and the scanner continues to monitor that channel or frequency for 2 seconds after the transmission stops before it resumes scanning, searching, or tuning.

You can program a 2-second delay in any of these ways:

- If the scanner is scanning and stops on an active channel, quickly press **DELAY/•** before it resumes scanning.
- If the desired channel is not selected, manually select the channel, then press **DELAY/•**.
- If the scanner is searching or tuning, press **DELAY/•**. **DLY** appears and the scanner automatically adds a 2-second delay to every transmission it stops on in that band.

To turn off the 2-second delay in a channel or for all frequencies, press **DELAY/•** while the scanner is monitoring that channel or frequency. **DLY** disappears.

Locking Out Channels or Frequencies

You can increase the effective scanning or search speed by locking out individual channels or frequencies that have a continuous transmission, such as a weather channel (see “National Weather Frequencies” on Page 24) or a birdie frequency (see “Birdie Frequencies” on Page 24).

To lock out a channel while scanning or a frequency during one-touch search or while tuning, press **L/O/L/O RVW** when the scanner stops on the channel or frequency. If you locked out a frequency, the scanner locks it out then continues searching.

To manually lock out a channel, select the channel then hold down **L/O/L/O RVW** until **L/O** appears.

To remove the lockout from a channel, manually select that channel again, then press **L/O/L/O RVW** until **L/O** disappears. See “Removing Lockouts From All Frequencies in a One Touch Search Bank” and “Removing Lockouts From All Frequencies” for more information about removing lockout from frequencies. ✓

REVIEWING LOCKED-OUT FREQUENCIES

To review the frequencies you locked out, hold down **L/O/L/O RVW** for about 2 seconds during a search, then repeatedly press **▲** or **▼**. The scanner beeps if there are no locked-out frequencies, or **L-r** appears and the scanner displays all locked out frequencies as you press **▲** or **▼**. When you reach the highest locked-out frequency, the scanner beeps twice and returns to the lowest locked-out frequency.

REMOVING LOCKOUTS FROM ALL FREQUENCIES IN A ONE TOUCH SEARCH BANK

1. Hold down **L/O/L/O RVW** for about 2 seconds during a search or while tuning. **L-r** appears. ✓
2. While holding down **TUNE/CLEAR**, press the one-touch search key where you locked out frequencies. **DEFAULT** appears.
3. Press **ENT**. The scanner clears any lockouts from all frequencies in a one touch bank. Or, if you do not want to clear the lockouts, press **TUNE/CLEAR**.

REMOVING LOCKOUTS FROM ALL FREQUENCIES

1. Hold down **L/O L/O RVW** for about 2 seconds during a search or tune. **L-r** appears.
2. While holding down **TUNE/CLEAR**, press **L/O L/O RVW**. **FLo ALL-CL** appears.



NOTE

Locking Out Channels or Frequencies

- Your scanner automatically locks out empty channels.
- You can still manually select locked-out channels.
- You can lock out as many as 50 frequencies during a search. If you try to lock out more, **FLo - FULL** appears (see “Reviewing Locked-Out Frequencies” and “Removing Lockouts From All Frequencies” on Page 21).

Removing Lockouts From All Frequencies in a One Touch Search Bank

- These steps do not clear any lockouts in the marine and weather bank.
- If you locked out frequencies which are within the range of any of the one touch search banks during tune, the scanner also removes those locked-out frequencies when you use these steps. For example, if you locked out 29.000 MHz while tuning, the scanner removes it, since 29.000 MHz is one of the frequencies in the ham radio service bank.

NOTE

If you program a weather frequency into the priority channel and the scanner detects a WX alert tone on that frequency (see "WX Alert" on Page 20), the scanner sounds the alert tone and **ALert** flashes. Press any key to turn off the alarm.

- Press **ENT**. The scanner clears any lockouts from all frequencies (except in the marine bank). Or, if you do not want to clear the lockouts, press **TUNE/CLEAR**.

Using Priority

The priority feature lets you scan through channels and still not miss important or interesting calls on a frequency you select. You can program one frequency into the priority channel. As the scanner scans, if the priority feature is turned on, the scanner checks the priority channel for activity every 2 seconds. ✓

- Press **PGM**, then press **PRI/ALERT**. **PCH** and **000.0000** or the previously-stored frequency appear.
- Enter the frequency you want to enter into the priority channel, then press **ENT**. The display flashes twice.

To turn on the priority feature, press **PRI/ALERT** during scanning or searching. **PRI** appears. The scanner checks the priority channel every 2 seconds and stays on the channel if there is activity. **PCH** and the frequency appear whenever the scanner is set to the priority channel.

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

TURNING THE KEY TONE ON AND OFF

The scanner is preset to sound a tone each time you press one of its keys. You can turn the key tone off or back on.

- If the scanner is on, slide **POWER** to **OFF** to turn it off.
- While you hold down **2** and **ENT**, turn on the scanner.
- When **oFF tonE** or **on tonE** appear, release **2** and **ENT**.

AVOIDING IMAGE FREQUENCIES

You might hear one of your regular stations on another frequency that is not listed. For example, you might find a service that regularly uses a frequency of 453.275 also on 474.675 MHz. Do the following to determine if you are listening to an image frequency:

Note the new frequency	474.675
Double the intermediate frequency of 10.7 MHz and subtract it from the new frequency	(21.400) -21.400
If the answer is the regular frequency then you have tuned to an image.	453.275

Occasionally, you might get interference on a weak or distant channel from a strong transmission 21.4 MHz above or below the tuned frequency. This is rare, and the image signal is usually cleared whenever there is a transmission on the actual frequency.

RESETTING/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 reset or initialize the scanner. !

Resetting the Scanner !

1. Turn off the scanner, then turn it on again.
2. Insert a pointed object, such as a straightened paper clip, into the reset opening on the back of the scanner. Then gently press the reset button inside the opening.

Initializing the Scanner

1. Turn off the scanner, then turn it on again.
2. Hold down **TUNE/CLEAR**.
3. While holding down **TUNE/CLEAR**, insert a pointed object (such as a straightened paper clip) into the reset opening on the back of the scanner, then gently press the reset button inside the opening. The display should turn off.
4. When the display turns on again, release **TUNE/CLEAR**. ✓

WIRED PROGRAMMING

You can transfer programming data to your scanner using your home computer and an optional scanner PC programming kit (Cat. No. 20-048, available at your local RadioShack store). The programming kit includes a CD-ROM with the software you need and a connecting cable. ✓

1. Make sure your scanner is turned off.
2. Follow the steps provided with the programming kit to connect the cable to your computer and load the software into your computer, then connect the other end of the cable to **PC** on the back of the scanner.
3. Using the software supplied with the programming kit, configure the software to work with your scanner by

! IMPORTANT !

Resetting/Initializing the Scanner

If you have problems, first try to reset the scanner (see "Resetting the Scanner !"). If that does not work, you can initialize the scanner (see "Initializing the Scanner"); however, this clears all information stored in your scanner's memory.

Resetting the Scanner

If the scanner still does not work properly, you might need to initialize the scanner (see "Initializing the Scanner").

✓ NOTE ✓

Initializing the Scanner

You must release the reset button before releasing **TUNE/CLEAR**; otherwise the memory might not clear.

Wired Programming

- If the scanner receives no data from the PC for more than 20 seconds or if you press any key, wired programming stops.
- If the scanner did not receive a start bit from the PC, **Start** does not appear.
- Wired programming stops if the scanner receives an empty channel number.

clicking on **Tools**, selecting **Configuration**, then selecting **PRO-79** or **PRO-2017**.

4. While pressing **ENT** and **9**, turn on the scanner. **Pgm** and **WirEd** appear. Then send the data from the PC. **StArt** and the data being received by the scanner appears in the order it is received. ✓
5. When the scanner successfully receives all data, the last channel and frequency number appear. If the scanner received a checksum error while receiving data, **C-Err** and a number shown next to **C-Err** indicates the packet number where the error occurred. ✓

A GENERAL GUIDE TO SCANNING

If you use the scanner with its supplied antenna, reception of the frequencies covered by the scanner is mainly "line-of-sight." That means you usually cannot hear stations that are beyond the horizon.

GUIDE TO FREQUENCIES

National Weather Frequencies

162.400	162.425	162.450
162.475	162.500	162.525
	162.550	

BIRDIE FREQUENCIES

Every scanner has birdie frequencies. Birdies are signals created inside the scanner's receiver. These operating frequencies might interfere with transmissions on the same frequencies. If you program one of these frequencies, you hear only noise on that frequency. If the interference is not severe, you might be able to turn **SQUELCH** clockwise to cut out the birdie. This scanner's birdie frequencies (in MHz) are:

29.800	30.735	31.985
38.400	39.970	40.980
47.980	51.200	51.225
111.9250	115.2000	119.9500
127.8375	128.0000	128.1125
135.8250	140.800	149.400
151.940	159.940	167.935
384.7500	388.3875	391.7375

396.9375	399.5125	407.8375
413.7250	416.8125	426.7875
429.2375	431.8375	437.2375
439.7125	448.3750	453.7500
455.7000	460.8625	

To find the birdies in your individual scanner, begin by disconnecting the antenna and moving it away from the scanner. Make sure that no radio or TV sets are turned on near the scanner. Use the search function and search every frequency range from its lowest frequency to the highest. Occasionally, the searching will stop as if it had found a signal, often without any sound. That is a birdie. Make a list of all the birdies in your scanner for future reference.

Guide to the Action Bands

TYPICAL BAND USAGE (MHz)

VHF Band	
Low Range	29.00 – 50.00
6-Meter Amateur	50.00 – 54.00
Aircraft	108.00 – 136.00
U.S. Government	137.00 – 144.00
2-Meter Amateur	144.00 – 148.00
High Range	148.00 – 174.00

UHF Band	
Military Aircraft	380.00 – 384.00
U.S. Government	406.00 – 420.00
70-Centimeter Amateur	420.00 – 450.00
Low Range	450.00 – 470.00
FM-TV Audio Broadcast, Wide Band	470.00 – 512.00

PRIMARY USAGE

As a general rule, most of the radio activity is concentrated on the following frequencies:

VHF Band	
Activities	Frequencies (MHz)
2-Meter Amateur Band	144.000 – 148.000
Government, Police, and Fire	153.785 – 155.980
Emergency Services	158.730 – 159.460
Railroad	160.000 – 161.900

NOTE

Remote control stations and mobile units operate at 5 MHz higher than their associated base stations and relay repeater units.

UHF Band	
Activities	Frequencies (MHz)
70-Centimeter Amateur Band	420.000 – 450.000
FM Repeaters Land-Mobile "Paired" Frequencies	450.000 – 470.000
Base Stations	451.025 – 454.950
Mobile Units	456.025 – 459.950
Repeater Units	460.025 – 464.975
Control Stations	465.025– 469.975

Band Allocation

To help decide which frequency ranges to scan, use the following listing of the typical services that use the frequencies your scanner receives. These frequencies are subject to change, and might vary from area to area. For a more complete listing, refer to the *Police Call Radio Guide including Fire and Emergency Services*, available at your local RadioShack store.

Abbreviation	Service
AIR	Aircraft
BIFC	Boise (ID) Interagency Fire Cache
BUS	Business
CAP	Civil Air Patrol
CCA	Common Carrier
CSB	Conventional Systems
CTSB	Conventional/ Trunked Systems
FIRE	Fire Department
HAM	Amateur (Ham) Radio
GOVT	Federal Government
GMR	General Mobile Radio
GTR	General Trunked
IND	Industrial Services (Manufacturing, Construction, Farming, Forest Products)
MAR	Military Amateur Radio
MARI	Maritime Limited Coast (Coast Guard, Marine Telephone, Shipboard Radio, Private Stations)
MARS	Military Affiliate Radio System
MED	Emergency/Medical Services
MIL	U.S. Military

Abbreviation	Service
MOV	Motion Picture/Video Industry
NEW	New Mobile Narrow
NEWS	Relay Press (Newspaper Reporters)
OIL	Oil/Petroleum Industry
POL	Police Department
PUB	Public Services (Public Safety, Local Government, Forestry Conservation)
PSB	Public Safety
PTR	Private Trunked
ROAD	Road & Highway Maintenance
RTV	Radio/TV Remote Broadcast Pickup
TAXI	Taxi Services
TELM	Telephone Maintenance
TOW	Tow Trucks
TRAN	Transportation Services (Trucks, Tow Trucks, Buses, Railroad, Other)
TSB	Trunked Systems
TVn	FM-TV Audio Broadcast
USXX	Government Classified
UTIL	Power & Water Utilities
WTHR	Weather

HIGH FREQUENCY (HF) — (3 MHz-30 MHz)

10-Meter Amateur Band (28.0-29.7 MHz)

29.000-29.700 HAM

VERY HIGH FREQUENCY (VHF) — (30 MHz-300 MHz)

VHF Low Band (29.7-50 MHz-in 5 kHz steps)

29.700-29.790 IND
 29.900-30.550 GOVT, MIL
 30.580-31.980 IND, PUB
 32.000-32.990 GOVT, MIL
 33.020-33.980 BUS, IND, PUB
 34.010-34.990 GOVT, MIL
 35.020-35.980 BUS, PUB, IND, TELM
 36.000-36.230 GOVT, MIL
 36.230-36.990 Oil Spill Cleanup, GOVT, MIL
 37.020-37.980 PUB, IND
 38.000-39.000 GOVT, MIL
 39.020-39.980 PUB
 40.000-42.000 GOVT, MIL, MARI
 42.020-42.940 POL

42.960-43.180	IND
43.220-43.680	TELM, IND, PUB
43.700-44.600	TRAN
44.620-46.580	POL, PUB
46.600-46.990	GOVT
47.020-47.400	PUB
47.420	American Red Cross
47.440-49.580	IND, PUB
49.610-49.990	MIL

6-Meter Amateur Band (50-54 MHz)

50.00-54.00	HAM
-------------------	-----

Aircraft Band (108-136 MHz)

108.000-121.490	AIR
121.500	AIR Emergency
121.510-136.000	AIR

U.S. Government Band (137-144 MHz)

137.000-144.000	GOVT, MIL
-----------------------	-----------

2-Meter Amateur Band (144-148 MHz)

144.000-148.000	HAM
-----------------------	-----

VHF High Band (148-174 MHz)

148.050-150.345	CAP, MAR, MIL
150.775-150.790	MED
150.815-150.980	TOW, Oil Spill Cleanup
150.995-151.475	ROAD, POL
151.490-151.955	IND, BUS
151.985	TELM
152.0075	MED
152.270-152.480	IND, TAXI, BUS
152.870-153.020	IND, MOV
153.035-153.725	IND, OIL, UTIL
153.740-154.445	PUB, FIRE
154.490-154.570	IND, BUS
154.585	Oil Spill Cleanup
154.600-154.625	BUS
154.655-156.240	MED, ROAD, POL, PUB
156.255-157.425	OIL, MARI
157.450	MED
157.470-157.515	TOW
157.530-157.725	IND, TAXI
157.740	BUS
158.130-158.460	BUS, IND, OIL, TELM, UTIL
158.730-159.465	POL, PUB, ROAD
159.480	OIL
159.495-161.565	TRAN
161.580-162.000	OIL, MARI, RTV
162.0125-162.35	GOVT, MIL, USXX

162.400-162.550.....	WTHR
162.5625-162.6375.....	GOVT, MIL, USXX
162.6625.....	MED
162.6875-163.225.....	GOVT, MIL, USXX
163.250.....	MED
163.275-166.225.....	GOVT, MIL, USXX
166.250.....	GOVT, RTV, FIRE
166.275-169.400.....	GOVT, BIFC
169.445-169.505.....	Wireless Mikes, GOVT
169.55-169.9875.....	GOVT, MIL, USXX
170.000-170.150.....	BIFC, GOVT, RTV, FIRE
170.175-170.225.....	GOVT
170.245-170.305.....	Wireless Mikes
170.350-170.400.....	GOVT, MIL
170.425-170.450.....	BIFC
170.475.....	PUB
170.4875-173.175.....	GOVT, PUB, Wireless Mikes
173.225-173.5375.....	MOV, NEWS, UTIL, MIL
173.5625-173.5875.....	MIL Medical/Crash Crews
173.60-173.9875.....	GOVT

ULTRA HIGH FREQUENCY (UHF) — (300 MHz-3 GHz)

U. S. Government Band (406-420 MHz)

406.125-419.975.....	GOVT, USXX
----------------------	------------

70-Centimeter Amateur Band (420-450 MHz)

420.000-450.000.....	HAM
----------------------	-----

Low Band (450-470 MHz)

450.050-450.925.....	RTV
451.025-452.025.....	IND, OIL, TELM, UTIL
452.0375-453.00.....	IND, TAXI, TRAN TOW, NEWS
453.0125-454.000.....	PUB, OIL
455.050-455.925.....	RTV
457.525-457.600.....	BUS
458.025-458.175.....	MED
460.0125-460.6375.....	FIRE, POL, PUB
460.650-462.175.....	BUS
462.1875-462.450.....	BUS, IND
462.4625-462.525.....	IND, OIL, TELM, UTIL
462.550-462.925.....	GMR, BUS
462.9375-463.1875.....	MED
463.200-467.925.....	BUS



NOTE

Some cities use the 470-512 MHz band for land/mobile service.

FM-TV Audio Broadcast, UHF Wide Band (470-512 MHz)

(Channels 14 through 20 in 6 MHz steps)

475.750	Channel 14
481.750	Channel 15
487.750	Channel 16
493.750	Channel 17
499.750	Channel 18
505.750	Channel 19
511.750	Channel 20

Frequency Conversion

The tuning location of a station can be expressed in frequency (kHz or MHz) or in wavelength (meters). The following information can help you make the necessary conversions.

1 MHz (million) = 1,000 kHz (thousand)

To convert MHz to kHz, multiply the number of megahertz by 1,000:

$$30.62 \text{ (MHz)} \times 1000 = 30,620 \text{ kHz}$$

To convert from kHz to MHz, divide the number of kilohertz by 1,000:

$$127,800 \text{ (kHz)} / 1000 = 127.8 \text{ MHz}$$

To convert MHz to meters, divide 300 by the number of megahertz:

$$300 / 50 \text{ MHz} = 6 \text{ meters}$$

TROUBLESHOOTING

Problem	Possible Cause	Remedy
Scanner is totally inoperative.	The AC or DC adapter is not connected.	Be sure the adapter's barrel plug is fully inserted into the DC 12V jack.
Poor or no reception.	An antenna is not connected or is connected incorrectly. Programmed frequencies are the same as "birdie" frequencies.	Be sure an antenna is properly connected to the scanner. Avoid programming frequencies listed under "Birdie Frequencies" on Page 24 or only listen to them manually.
The keypad does not work.	The scanner might need to be reset or initialized.	Turn the scanner off then on again, or reset/initialize the scanner (see "Resetting/Initializing the Scanner" on Page 23).
The scanner is on but will not scan.	SQUELCH is not correctly adjusted. Only one channel or no channels are stored.	Turn SQUELCH clockwise. Store frequencies into more than one channel.
During scanning, the scanner locks on frequencies that have an unclear transmission.	Programmed frequencies are the same as "birdie" frequencies.	Avoid programming frequencies listed under "Birdie Frequencies" on Page 24, or only listen to them manually.

CARE

Keep the scanner dry; if it 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.

SERVICE AND REPAIR

If your scanner is not performing as it should, take it to your local RadioShack store for assistance. Modifying or tampering with the scanner's internal components can cause a malfunction and might invalidate its warranty and void your FCC authorization to operate it.

SPECIFICATIONS

Frequency Coverage (MHz):

10 Meter Amateur Radio.....	29-30 (in 5 kHz steps)
VHF Lo.....	30-50 (in 5 kHz steps)
6 Meter Amateur Radio	50-54 (in 5 kHz steps)
Aircraft	108–136.9875 (in 12.5 kHz steps)
Government.....	137–144 (in 5 kHz steps)
2 Meter Amateur Radio.....	144-148 (in 5 kHz steps)
VHF Hi	148-174 (in 5 kHz steps)
Amateur Radio/Government.....	380-450 (in 12.5 kHz steps)
UHF Standard.....	450-470 (in 12.5 kHz steps)
UHF "T".....	470-512 (in 12.5 kHz steps)
Channels of Operation	200 channels

Sensitivity (20 dB S/N):

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

Selectivity:

±10 kHz.....	–6 dB
±18 kHz.....	–50 dB
Search Speed	Up to 50 Steps/Sec
Scan Speed	Up to 25 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.....	Less than 0.5 µV
Tight (FM)	(S + N)/N 25 dB
Tight (AM)	(S + N)/N 20 dB
Antenna Impedance.....	50 Ohms
Audio Output Power (10% THD)	0.8W Nominal
Built-In Speaker	3 Inches (77 mm), 8 Ohms

Operating Temperature	32° to 110°F (0° to 43°C)
Power Requirements.....	120V AC, 60 Hz, 8W (with supplied AC adapter), vehicle's 12V power source (with optional DC adapter)
Dimensions (HWD)	2 ¹ / ₁₆ × 8 ¹ / ₄ × 6 ⁷ / ₈ Inches (52 × 210 × 175 mm)
Weight (without antenna):	Approx. 25 oz (700 g)
Supplied Accessories	Telescoping Antenna, AC Adapter
Optional Accessories	PC Cable

Specifications are typical; individual units might vary. Specifications are subject to change and improvement without notice.

PARTS AND ACCESSORIES

Parts and accessories are available at your local RadioShack store. Accessories are also available online at www.radioshack.com. Parts and accessories are available but not limited to the following. Visit your local RadioShack store or obtain a RadioShack catalog for a more complete listing of available accessories.

RG-8/RG-58 50-Ohm Coaxial Cable

Use to connect your scanner to an external antenna.



External Antenna



Connect to your scanner's external antenna jack for clear, crisp reception.

Scanner PC Programming Kit

Use with your home computer to program your scanner.

Limited One-Year Warranty

This product is warranted by RadioShack against manufacturing defects in material and workmanship under normal use for one (1) year from the date of purchase from RadioShack company-owned stores and authorized RadioShack franchisees and dealers. EXCEPT AS PROVIDED HEREIN, RadioShack MAKES NO EXPRESS WARRANTIES AND ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE DURATION OF THE WRITTEN LIMITED WARRANTIES CONTAINED HEREIN. EXCEPT AS PROVIDED HEREIN, RadioShack SHALL HAVE NO LIABILITY OR RESPONSIBILITY TO CUSTOMER OR ANY OTHER PERSON OR ENTITY WITH RESPECT TO ANY LIABILITY, LOSS OR DAMAGE CAUSED DIRECTLY OR INDIRECTLY BY USE OR PERFORMANCE OF THE PRODUCT OR ARISING OUT OF ANY BREACH OF THIS WARRANTY, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES RESULTING FROM INCONVENIENCE, LOSS OF TIME, DATA, PROPERTY, REVENUE, OR PROFIT OR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, EVEN IF RadioShack HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

In the event of a product defect during the warranty period, take the product and the RadioShack sales receipt as proof of purchase date to any RadioShack store. RadioShack will, at its option, unless otherwise provided by law: (a) correct the defect by product repair without charge for parts and labor; (b) replace the product with one of the same or similar design; or (c) refund the purchase price. All replaced parts and products, and products on which a refund is made, become the property of RadioShack. New or reconditioned parts and products may be used in the performance of warranty service. Repaired or replaced parts and products are warranted for the remainder of the original warranty period. You will be charged for repair or replacement of the product made after the expiration of the warranty period.

This warranty does not cover: (a) damage or failure caused by or attributable to acts of God, abuse, accident, misuse, improper or abnormal usage, failure to follow instructions, improper installation or maintenance, alteration, lightning or other incidence of excess voltage or current; (b) any repairs other than those provided by a RadioShack Authorized Service Facility; (c) consumables such as fuses or batteries; (d) cosmetic damage; (e) transportation, shipping or insurance costs; or (f) costs of product removal, installation, set-up service adjustment or reinstallation.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

RadioShack Customer Relations, 200 Taylor Street, 6th Floor,
Fort Worth, TX 76102

12/99