20-424.fm Page 1 Monday, September 9, 2002 9:44 AM

RadioShack®
www.radioshack.com℠

# PRO-2018
## 200-Channel Desktop Scanner

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

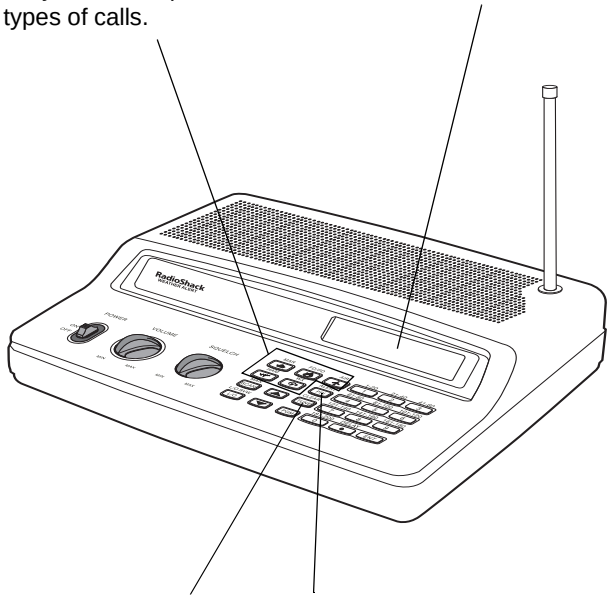
***20-424***

## 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** **!** — **Important** — **Note**
— **Caution** — **Hint**

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

Download from Www.Somanuals.com. All Manuals Search And Download.

## 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.



Download from Www.Somanuals.com. All Manuals Search And Download.

Your scanner can receive these bands:

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





Download from Www.Somanuals.com. All Manuals Search And Download.

20-424.fm Page 4 Monday, September 9, 2002 9:44 AM

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.

**⚠ 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.

# 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. ⚠





Download from Www.Somanuals.com. All Manuals Search And Download.

## 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.

**CAUTION**

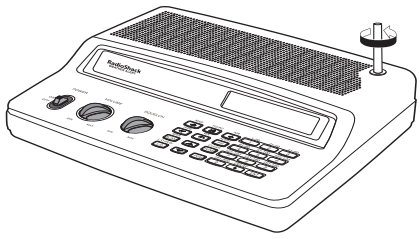
Always connect the DC adapter to the scanner before you connect it to a power source. When you finish, disconnect the adapter from the power source before you disconnect it from the scanner.

## 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 |

**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.

### 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.





Download from Www.Somanuals.com. All Manuals Search And Download.

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. ⚠ ✸

**⚠ 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.

## 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.





Download from Www.Somanuals.com. All Manuals Search And Download.

### 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 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.

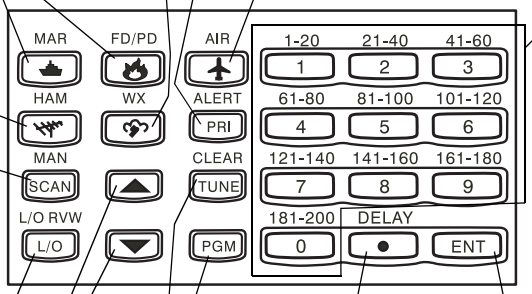
When you find a frequency, you can store it into a programmable memory location called a channel, which is grouped with other channels in a channel-storage bank. You can then scan the channel-storage banks to see if there is activity on the frequencies stored there. Each time the scanner finds an active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





Download from Www.Somanuals.com. All Manuals Search And Download.

# A LOOK AT THE KEYPAD




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

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

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

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

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

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

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

**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.

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

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

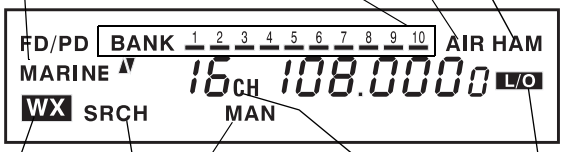
▲ or ▼ Searches up or down for active frequencies or selects the direction when scanning channels.



Download from Www.Somanuals.com. All Manuals Search And Download.

# 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.

**SRCH**
Appears during service bank searches.

**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.

**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.





Download from Www.Somanuals.com. All Manuals Search And Download.

20-424.fm Page 10 Monday, September 9, 2002 9:44 AM



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.



Download from Www.Somanuals.com. All Manuals Search And Download.

on tonE
Appears when you turn the key tone on.

P
Appears when the scanner is tuned to the priority channel.

StArt
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.

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

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

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

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

WEAthEr
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.





Download from Www.Somanuals.com. All Manuals Search And Download.

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**

| 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 |



**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.



Download from Www.Somanuals.com. All Manuals Search And Download.

| 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 |





Download from Www.Somanuals.com. All Manuals Search And Download.

### 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 |





Download from Www.Somanuals.com. All Manuals Search And Download.

**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 |

# 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.





Download from Www.Somanuals.com. All Manuals Search And Download.

20-424.fm Page 16 Monday, September 9, 2002 9:44 AM



**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 Band” 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 |



Download from Www.Somanuals.com. All Manuals Search And Download.

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**.



Download from Www.Somanuals.com. All Manuals Search And Download.

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.

**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.



Download from Www.Somanuals.com. All Manuals Search And Download.

## 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 |



Download from Www.Somanuals.com. All Manuals Search And Download.

| 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.





Download from Www.Somanuals.com. All Manuals Search And Download.

## 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.





Download from Www.Somanuals.com. All Manuals Search And Download.

> **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.

3. 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.

1. Press **PGM**, then press **PRI/ALERT**. **PCH** and **000.0000** or the previously-stored frequency appear.
2. 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.

1. If the scanner is on, slide **POWER** to **OFF** to turn it off.
2. While you hold down **2** and **ENT**, turn on the scanner.
3. 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)<br>–21.400 |
| If the answer is the regular frequency then you have tuned to an image. | 453.275 |



Download from Www.Somanuals.com. All Manuals Search And Download.

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.





Download from Www.Somanuals.com. All Manuals Search And Download.

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 |





Download from Www.Somanuals.com. All Manuals Search And Download.

| | | |
|---|---|---|
| 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 |





Download from Www.Somanuals.com. All Manuals Search And Download.

**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<br>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 |





Download from Www.Somanuals.com. All Manuals Search And Download.

| 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





Download from Www.Somanuals.com. All Manuals Search And Download.

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





Download from Www.Somanuals.com. All Manuals Search And Download.

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





Download from Www.Somanuals.com. All Manuals Search And Download.

**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 (MHz) x 1000 = 30,620 kHz

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

127,800 (kHz) / 1000 = 127.8 MHz

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

300 / 50 MHz = 6 meters





Download from Www.Somanuals.com. All Manuals Search And Download.

# 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. | Be sure an antenna is properly connected to the scanner. |
| | Programmed frequencies are the same as "birdie" frequencies. | 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. | Turn **SQUELCH** clockwise. |
| | Only one channel or no channels are stored. | 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. |





Download from Www.Somanuals.com. All Manuals Search And Download.

# 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.



Download from Www.Somanuals.com. All Manuals Search And Download.

# 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 |





Download from Www.Somanuals.com. All Manuals Search And Download.

| | |
|---|---|
| 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) | $2^{1}/_{16} \times 8^{1}/_{4} \times 6^{7}/_{8}$ Inches ($52 \times 210 \times 175$ 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.





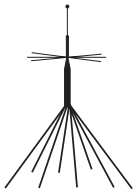
Download from Www.Somanuals.com. All Manuals Search And Download.

# 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.





Download from Www.Somanuals.com. All Manuals Search And Download.

20-424.fm Page 36 Monday, September 9, 2002 9:44 AM

## 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*

RadioShack Corporation
Fort Worth, Texas 76102

20-424
GE-02D-8130
09A02
Printed in China

Download from Www.Somanuals.com. All Manuals Search And Download.

Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com